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INVENTIONS PATENTED.

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

No. 36,059. Track or Road Scraping Machine. (*Grattoir de chemin.*)

Seth Griffin, Poughkeepsie, New York, U.S.A., 2nd March, 1891; 5 years.

Claim.—1st. In a track or road scraping machine, a metal shoe for attachment to a scraper blade, consisting of a downwardly-projecting scraping plate, with cutting edge, having its upper surface provided with alternate rounded elevations and depressions in the metal, as and for the purpose specified. 2nd. In a track or road-scraping machine, two independent parallel obliquely running scraper blades, having downwardly-projecting metal shoes, the forward shoe consisting of teeth with bevelled cutting edges to serve as a harrow, and the shoe of the second scraping blade being provided with alternate rounded elevations and depressions in the metal to serve as a scraper, substantially as described. 3rd. A track or road scraper, consisting of a frame work upon wheels for supporting parallel obliquely-running scraper-blades, a raising and lowering mechanism, as described, for adjusting the height of the scrapers independently, and the downwardly projecting metal shoes, one being a toothed harrow, with bevelled cutting edges, the other being a scraper with alternate rounded elevations and depressions in the metal, all substantially as and for the purpose specified. 4th. In a track or road scraper, a metal shoe for attachment to an obliquely-running scraper blade, consisting of downwardly and backwardly-projecting teeth, provided each with two cutting edges, having round and straight bevels respectively, as specified. 5th. In a track or road scraper, metal shoes for scraper-blades having cutting edges formed by the union of round and straight bevels, as described, and being inclined downward from the scraper blades at an angle equal to about five-eighths of an inch in every four inches, for the purpose of better rendering them self-sharpening by use, as specified. 6th. A track or road-scraping machine, consisting of obliquely-running scraper blades and a raising and lowering mechanism, operated as described, in combination with a frame A, resting upon wheels C, C', and supported from the hind axle by the bars P and Q, and from the forward axle by the fifth wheel I and H, having a high upper portion *q* attached to A', substantially as described. 7th. In a track or road scraping machine, parallel scraping blades, a raising and lowering mechanism and a frame for supporting them, in combination with a fifth-wheel, as described, and a backward projecting hook *j*, for coupling the thills *L* at a point on the top of the axle *K*, for equalizing the draft strain, as specified.

No. 36,060. Sign. (*Enseigne.*)

Thomas James O'Brien, of Buffalo, New York, U.S.A., 2nd March, 1891; 5 years.

Claim.—1st. A sign for streets or other purposes, consisting of a series of separate plate letters, each having extensions 11 and 12, and side projections 13 and 14 put together and secured in a grooved frame, substantially as and for the purposes described. 2nd. A sign for streets or other purposes, consisting of a frame having two longitudinal grooved slide-ways, a series of plate letters forming the sign, provided with extensions which extend far enough from the top and bottom of the letter to fill the grooved slideways, and far enough each side of the letter to fill the space between the letters when in the slideways, and a means for securing them in place, substantially as described. 3rd. A sign frame for street lamp posts, consisting of an angular frame, having two grooved slideways extending horizontally at right angles from their point of junction, arms connecting them to a central holding piece adapted to fit part way around the post, a cap adapted to embrace the other side of the post and a means for securing them together, substantially as described. 4th. A plate letter for signs, having extensions 11 and 12 at the top and bottom, and having projections 13 and 14 extending from

each side, as and for the purposes described. 5th. A sign for-streets or other purposes, consisting of a series of plate letters adapted to slide in the slideways of the frame, each having extensions from the bottom and top, and projections extending from each side, a vertically grooved plate for filling the space at the end of a word, also adapted to slide into the slideway, and a means for securing the whole in place, substantially as described. 6th. A sign frame for street lamp or other posts, consisting of a frame having double grooved letter-receiving frame, extending from a point where the two are connected, substantially at right angles to each other, arms extending therefrom to one-half of a clamping or holding piece located centrally and having the outer faces of the portions by which it is fastened directly in a line between the two free ends of the grooved frame, whereby two of such side frames may be put together to form four side frames, substantially as described.

No. 36,061. Band Cutter and Feeder for Thrashing Machines. (*Coupe-hart et alimentateur pour machines à battre.*)

Albert Naylor, assignee of Addison A. Naylor, both of New Sharon, Iowa, U.S.A., 2nd March, 1891; 5 years.

Claim.—In a band cutter and feeder for thrashing machines, the combination, with a slotted vibrating table, the lower end of which is elevated above the plane of the remaining parts thereof, forming a shoulder extending across the face thereof, of a plate, having teeth thereon mounted on the said elevated lower portion of the table, and to the rear of the said shoulder, a drum upon which the table rests, carrying rearwardly-extending radial cutting knives passing through the slotted table, the said knives being rotated in such a direction that their cutting stroke is toward the thrasher, and also toward the shoulder *f*, a crank-shaft carrying the said drum, a band-wheel mounted on the said shaft, and a connecting rod connected with the cranked shaft and with the table, whereby the latter is given a longitudinal vibratory motion, as and for the purposes described.

No. 36,062. Fly Wheel. (*Roue volante.*)

Neil A. Cameron and Stephen Alexander Chenaut, both of Blossom, Texas, U.S.A., 2nd March, 1891; 5 years.

Claim.—1st. The improved fly or balance wheel herein shown, the same being provided with a series of radiating notched arms, and a corresponding series of tangential weighted bars, in combination with the rollers B and C, substantially as set forth. 2nd. In combination with a wheel D, carrying a series of radiating spring arms having notches, a series of tangential weighted spring bars F, and oppositely arranged rollers B and C, having central recesses and hubs of different diameters for locking and releasing the weighted spring bars, substantially as set forth. 3rd. A fly-wheel D, provided with a series of radiating spring arms, having notches on their faces, tangential weighted spring bars F adapted to abut against the peripheries of the rollers B and C, so as to be alternately engaged with and released from the radiating spring arms E, and balls or loops *f*, for limiting the upward movement of the weighted spring bars, substantially as shown and for the purpose set forth. 4th. In combination, with a wheel B, having secured to the periphery thereof spring arms E, with notched ends, spring bars F, having transverse weights which engage with the spring arms E, rollers B, and C, centrally recessed, as shown, and provided with hubs of different diameters, so that the spring arms E can pass one of said bars without engaging therewith, whilst they engage with the opposite hub and are held out of engagement with the weighted spring bars, substantially as shown and for the purpose set forth. 5th. The combination of a fly-wheel, spring catch arms, weighted spring bars, means, substantially as shown, for causing automatically the engagement and release of the weighted spring bars from the catch bars, so that the weighted bars will be held near the center of the wheel while on one side, and a considerable distance beyond, when released, for the purpose set forth.

No. 36,063. Paste Box. (*Boîte à pâte.*)

Walter Armstrong MacLeod, Almonte, Ontario, Canada, 2nd March, 1891; 5 years.

Claim.—1st. A box for holding paste and similar materials, con-

sisting, in part, of a body having a bottom B and rim *b*¹, and having the two connected integrally by a large intermediate portion, which forms a gradual transition from the horizontal direction of the bottom to the vertical direction of the side or rim, substantially as set forth. 2nd. In a box for holding paste and similar materials, the combination of the bottom B, rim *b*¹, large curved portion *b*², connecting bottom and ring bead *b*³, on said rim and cover C, c, with bead *c*¹ substantially as set forth.

No. 36,064. Stove Pipe. (*Tuyau de poêle.*)

Charles Jourdan Stuart, Montreal, Quebec, Canada, 3rd March, 1891; 5 years.

Claim.—1st. A curved stove pipe blank, the meeting edges of which are provided with locking devices, and adapted upon being pressed inwardly towards the centre and towards each other, to become partially locked together, and, when freed from such pressure to spring outward and be completely locked by such devices, as shown and described. 2nd. A curved stove pipe blank, one of the meeting edges of which carries inwardly-projecting studs or locking devices, and the opposite edge is provided with a seat and apertures to receive such studded edge, as shown and described. 3rd. A stove pipe length, one of the meeting edges of which carries inwardly projecting studs and the opposite edge has a depression containing apertures and lips struck up from it, the said depression and lips forming a recess for the studded edge, and the said apertures serving to fit over the studs on same, for the purpose set forth.

No. 36,065. Gas Apparatus. (*Appareil à gaz.*)

Archibald Farmer, Toledo, Ohio, U.S.A., 3rd March, 1891; 5 years.

Claim.—1st. In a gas apparatus, in combination with a suitable closed chamber or tank, a steam pipe connected with a source of supply of steam, and opening within the chamber at or near the bottom thereof, an air pipe connected with a source of supply of air under pressure, opening within the lower part of the chamber, and a suitable gas draw-off pipe, substantially as and for the purposes specified. 2nd. In a gas apparatus, in combination with the closed chamber, a body of water within the same, and a hydro-carbon layer above such water, a steam pipe connected with a source of supply of steam, having its open end immersed in the water, an air pipe connected with a source of supply of air under pressure, adapted to discharge the air within the lower part of the chamber, and a gas draw-off pipe connected with the interior of the chamber, above the liquids therein, substantially as and for the purpose shown. 3rd. In a gas apparatus, in combination, with a suitable closed tank or chamber, a body of water within the same, and a hydrocarbon layer above such water, a steam pipe connected with a source of supply of steam and discharging into the body water, an air-pipe opening at a point within the lower part of the chamber, means for supplying air under pressure to such pipe, a suitable draw-off device connected with the lower part of the chamber, and a gas conduit leading from a point above the liquid, substantially as and for the purpose set forth. 4th. In a gas apparatus, in combination with a suitable closed chamber, a body of water within the same, and a layer of kerosene and gasoline above the water, a steam pipe connected with a source of supply of steam and discharging into the body of water, a pipe connected with a source of supply of air under pressure, and adapted to conduct air into the lower part of the chamber, and a gas conduit or pipe communicating with the upper portion of the chamber, substantially as and for the purpose set forth. 5th. In a gas apparatus, in combination with a suitable closed chamber, a steam pipe to be connected with a source of supply of steam, having its discharge end situated within the chamber, at or near the bottom of the latter, a suitable regulating valve on such pipe to regulate the pressure of steam admitted to the chamber, a pipe, having its open inner end situated within the lower part of the chamber, a pump connected with such pipe, adapted to pump air and liquid, as desired, and means whereby the inlet part of the pump can be connected with the atmosphere or with a receptacle for liquids at will, substantially as and for the purpose specified.

No. 36,066. Die for Forming Auger Bits.

(*Etampe pour faire les mèches des tarières.*)

Josiah Bailey, Wilmington, Ohio, U.S.A., 3rd March, 1891; 5 years.

Claim.—1st. A set of dies for forming an auger, with a single main spiral blade, each of which dies has a zig-zag recess of constantly varying cross-section, said recess being so shaped that, when at any point it is measured along a line perpendicular to the blade of the main spiral, which would be formed therein, the recess is thickest at that portion which forms the axis of the spiral, and grows thence constantly thinner out toward that portion of the recess, or of the corresponding recess in the other die that forms the edge of the main spiral blade, substantially as described. 2nd. A set of dies, made in one or more transverse sections for forming an auger with a single main spiral blade, each of which dies has a zig-zag recess of constantly-varying cross-section, said recess being so shaped that when at any point it is measured along a line perpendicular to the blade of the main spiral which would be formed therein, the recess is thickest at that portion which forms the axis of the spiral, and grows thence constantly thinner out toward that portion of the recess or of the corresponding recess in the other die that forms the edge of the main spiral blade, said dies having also the corresponding recesses E, E¹ for forming the stock of the auger, the recesses G, G¹ for forming the point, the recesses I, I¹ for forming the cutter, the recesses H, H¹ for forming the auxiliary supporting spiral for said cutter, and the recesses F, F¹ forming the chip-removing edge and lip, substantially as described.

No. 36,067. Tweezers for Soldering.

(*Brucelles pour souder.*)

Moses Greer, Jr., Knoxville, Tennessee, U. S. A., 3rd March, 1891; 5 years.

Claim.—Soldering tweezers, constructed with a pair of legs, one of which is provided with an elongated tapering slot for receiving and holding stems of different diameters in opposition to the article held between said legs, substantially as described.

No. 36,068. Wringer for Mops.

(*Essoreuse de torchon.*)

Eldridge H. Noble and John William Ward, both of Postville, Iowa, U.S.A., 3rd March, 1891; 5 years.

Claim.—1st. In a mop-wringer, the combination, with the roller-carrying frame open at one end, a fixed roller and an adjustable roller, of a mop-guide pivoted at said open end of the frame and provided with a slot or recess engaged by one of the bearing-arms of the adjustable roller, said arm operating the guide to open or close the end of the frame, substantially as set forth. 2nd. In a mop-wringer, the combination, with an approximately U-shaped frame, a roller mounted in stationary bearings upon one arm thereof, and an adjustable roller mounted in pivotal bearings on the other arm of said frame, of a mop-guide pivoted to the latter arm and provided with a slot engaging one of the bearing-standards of the adjustable roller, whereby said guide is caused to turn and close the open end of the frame during the adjustment of the latter roller, substantially as set forth. 3rd. In a mop-wringer, the combination, with a frame having an open end, of a fixed and adjustable roller carried thereby, a lever for adjusting the latter roller, and a crank-handle rigidly secured to one end of its shaft, and stationary and movable mop-guides mounted on the frame, said movable guide being adapted to automatically turn and close the open end of the frame during the adjustment of the latter roller, substantially as set forth. 4th. In a mop-wringer, the combination, with a frame, of a fixed and an adjustable roller, an operating-lever forming a bearing for the latter and provided with an approximately right-angular extension pivoted at the angle thereof to a rod carrying the other bearing for said roller, and mechanism for returning the latter in its normal position (free from contact with the fixed roller) consisting of a rod pivoted at the outer end of said lever-extension and playing in a bracket upon the frame, and a coil-spring disposed upon said rod between its upper shouldered end and said bracket, substantially as set forth. 5th. In a mop-wringer, the combination, with supporting-standards, and a folding platform of means for pivoting and locking said platform in adjusted position, consisting of clutch-plates secured respectively to the platform and standards, a rod passing through the latter, and perforations in the plates, said rod being headed at one end and provided with screw-threads at the other, and a thumb-nut disposed upon said screw-threaded end and adapted to be adjusted to lock said plates together, substantially as set forth. 6th. In a mop-wringer, the combination, with standards provided upon their inner sides with plates having diametrical grooves at right angles to each other, of a folding platform having its bearing-plates provided each upon its outer side with a diametrical rib, adapted when the platform is either folded or open to coincide with said grooves, and means for locking said plates together, substantially as set forth. 7th. In a mop-wringer, the combination, with the frame and folding platform, of a fixed and an adjustable roller carried by the former, a lever for operating said adjustable roller, and a treadle mounted upon an extension of one of the bearing-plates of the platform, and connected with the lever by a pitman, said treadle being adapted to fold under the platform when the latter is folded, substantially as set forth. 8th. In a mop-wringer, the combination, with the main frame and a roller-carrying frame mounted thereon, and provided with flanges forming water-guides, of a fixed and an adjustable roller carried by the latter frame, a lever for adjusting the latter roller, a folding platform at the lower end of the main frame and adapted to be locked thereto in adjusted position, and a treadle mounted upon an extension of one of the platform-bearings, and connected with the lever by a pitman, substantially as set forth. 9th. The herein described mop-wringer, comprising the main frame carrying a folding platform, a roller-carrying frame mounted on the main frame and provided with flanges forming water-guides, a fixed and an adjustable roller carried by said roller-frame, a lever for adjusting the latter roller, and a crank-handle for rotating the same, a treadle mounted upon a bearing projecting from the platform, and connected with the lever by a pitman, and a supplementary water-guide having upturned ends secured between the roller-frame, supporting-brackets, and the main frame-standards all arranged and adapted to operate, substantially as and for the purpose set forth.

No. 35,069. Jack for Waggons.

(*Chèvre de carrosserie.*)

David W. Benjamin, Henry H. Holton and Solomon H. Amidon, (assignees of Alson Lee Weatherhead), all of Miller's Falls, Massachusetts, U.S.A., 3rd March, 1891; 5 years.

Claim.—In combination, the post A, and rack B, secured to said post, the guard B¹ secured to said rack, the supporting-strap held against the post A, by the loop f, the supporting block D, secured to said strap lever C, having fulcrum-pin a, and the link E, connecting the supporting-strap D¹, and the lever C, as and for the purpose set forth.

No. 36,070. Foot Bath Tub.

(*Cuvette pour bain de pied.*)

Mary Lydia White Martinot, New York, State of New York, U.S.A., 4th March, 1891; 5 years.

Claim.—1st. As an improved article of manufacture, a foot-bath

receptacle constructed of a water-proof material and shaped to approximate the contour of a foot, substantially as shown and described. 2nd. A foot bath receptacle, constructed of a water-proof material, approximating the form of a foot and provided with a roughened inner surface, substantially as shown and described. 3rd. A foot-bath receptacle constructed of rubber, approximating the shape of a foot and having its entire inner surface roughened, as and for the purpose specified.

No. 36,071. Brush for Cleaning Windows.

(*Brosse pour nettoyer les chassiss.*)

Mary L. W. Martinot, New York, State of New York, U. S. A., 4th March, 1891 : 5 years.

Claim.—1st. As an improved article of manufacture, a window-cleaning brush having an adjustable handle, an adjustable pole and a connecting plate, the brush handle and the pole being attached at opposite ends of the plate, substantially as and for the purpose specified. 2nd. In a window-cleaning brush, the combination, with a sectional, adjustable pole, of a brush facing the said pole and provided with an extension handle, and a connecting bar or plate detachably attached to the brush handle and pole, as and for the purpose specified. 3rd. In a window-cleaning brush, the combination, with a pole, consisting of a series of adjustable sections having a threaded connection, of a brush facing in the direction of the pole, and provided with a handle comprising sections having a threaded connection, and a horizontal tie-plate connecting the brush handle and the pole, as and for the purpose set forth.

No. 36,072. Frog for Railroads.

(*Rail de croisement.*)

James Baird, Chignecto Mines, Nova Scotia, Canada, 4th March, 1891 : 5 years.

Claim.—1st. In a railroad frog, the combination, with a bed supporting upon opposite ends the converging rails of the railroad track, and a rail pivoted upon the bed, of a pronged lever attached to opposite ends of the rail and extending beneath the opposite rail, a locking device directly engaging the lever, and a bar connecting the pronged lever with the switch rod, substantially as described. 2nd. In a railroad frog, the combination, with a bed supporting on opposite ends the converging rails of the track, the rails being horizontally slotted as shown, and a rail pivoted on the bed and provided at the ends with lugs extending into the slots of the track rails, of a pronged lever attached to opposite ends of the movable rail and extending through a slot in the opposite rail, and a lever mechanism connecting the end of the pronged lever with the switch rod, substantially as described. 3rd. In a railroad frog, the combination, with a bed and a rail pivoted on the bed, of a pronged lever attached to opposite ends of the pivoted rail and extending through a slot in the opposite rail, a horizontal strip extending below the slot and having notches to receive the end of the pronged lever, a bar connecting the end of the pronged lever with the switch rod, and a dog pivoted above the pronged lever and adapted to hold it in engagement with the notched strip, substantially as described. 4th. In a railroad frog, the combination, with a bed and a rail pivoted on the bed, of a pronged lever attached to opposite ends of the pivoted rail and extending through a slot in the opposite rail, a curved horizontal strip extending beneath the slot and provided with notches and a laterally-extending lug, a strip extending horizontally above the slot and provided with a laterally-extending arm having a dog pivoted thereon, a sliding bar loosely connected with the end of the pronged lever, said bar having on its under side a projection to engage the lug of the curved strip and upon its upper side notches to engage the dog, and an elbow lever pivoted upon a support and having one member connected with the sliding bar and the other with a switch rod, substantially as described. 5th. A railroad frog, comprising a bed supporting at opposite ends the converging rails of the track, the rails being horizontally slotted at the ends, a rail pivoted upon the bed and provided at the ends with horizontal lugs to engage the slots in the track rails, stops fixed to the bed to limit the movement of the pivoted rail and support the same, a pronged lever fixed to opposite ends of the pivoted rail and extending through a horizontal slot in the opposite rail, a curved strip extending horizontally beneath the slot, the strip having notches therein to engage the pronged lever, and a laterally-extending lug, a strip extending horizontally above the slot and provided with a laterally-extending arm having a dog pivoted thereon, a sliding bar loosely connected with the pronged lever and extending between the lug of the curved strip and the dog, said bar having upon its under side a projection to engage the lug and upon its upper side notches to engage the dog, and an elbow lever having one member pivoted to the sliding bar and the other connected with a switch, all substantially as described.

No. 36,073. Apparatus for Sinking Shafts.

(*Appareil de creusage des puits.*)

Richard Pennfather Rothwell, New York, State of New York, U.S. A., 4th March, 1891 : 5 years.

Claim.—1st. For use in shaft-sinking, the movable caisson having a water-tight connection with the shaft-tubing, and provided with the interior tube rigidly connected to and movable with said caisson, said tube being in free communication with the open air, substantially as set forth, whereby workmen can safely descend in wet situations to great depths, and the lining or tubing be built on at the bottom. 2nd. For use in shaft sinking, the combination, of the caisson having water-tight connection with the tube rigidly connected thereto, and extending upwardly, said tube being in free communication with the open air, and a drill or boring tool, substantially as set forth, whereby a shaft can be sunk below water-level and water excluded from the space between the tube and tub-

ing while standing at the same level within the tube and outside the caisson and tubing, and the drill operated, and mud sand or rock removed while the hydrostatic pressure on the outside of the caisson, and shaft-lining is undisturbed and objectionable movement of the sand or soil prevented. 3rd. For use in sinking shafts, a caisson provided with a tube extending upwardly and in free communication with the open air and forming a rigid continuation of the wall of the caisson, the latter having a water-tight connection with the tubing of the shaft, whereby water will stand at the same level in the tube, and outside the caisson and tubing, in combination with jacks or other means of pushing down the caisson and tube, substantially as set forth, whereby water can be excluded from the caisson, a hydrostatic column maintained, a drill or other tool be used and the caisson lowered. 4th. In an apparatus for sinking shafts, a water-tight caisson having a water-tight connection with the shaft tubing, and having its floor continuous with an interior tube open to the air, said floor being provided with ports through which jets of water may be forced under heavy pressure to cut away the material through which the shaft is being sunk, and through which bars or other tools or electric lights may be passed to facilitate the work, substantially as set forth. 5th. In an apparatus for sinking shafts, a water-tight caisson provided with an inner tube, in combination with a boring-tool secured to the foot of a hollow rod, substantially as set forth. 6th. In an apparatus for sinking shafts, a water-tight caisson provided with an inner water-tight tube, and an interior hollow tool rod provided with means for producing an upward current through said hollow rod, substantially as set forth. 7th. In an apparatus for sinking shafts, a water-tight caisson provided with an inner tube, a tool-rod located in said tube, and a pipe for introducing a fluid under pressure immediately below the tool, substantially as set forth. 8th. In an apparatus for sinking shafts, a water-tight caisson provided with an inner tube, and strengthening-plates bolted to the caisson and tube, substantially as set forth.

No. 36,074. Apparatus for Removing Scale and Incrustations from Tubes, etc.

(*Appareil pour enlever les incrustations dans les tubes des chaudières à vapeur.*)

John Platt and Thomas Thorp, both of Manchester, England, 4th March, 1891 : 5 years.

Claim.—1st. The combination, with a cylinder, to which fluid under pressure is admitted, of a piston within said cylinder, and arranged to be forced outward against the pressure of a spring, until exhaust ports having been uncovered and the fluid pressure in said cylinder sufficiently reduced, the spring forces the piston inward, the reciprocating motion of the piston thus set up being transmitted by the means herein shown and described, or their mechanical equivalents, to the chipping tools or cutters. 2nd. The combination, with the cylinder *b*, provided with exhaust ports *b'*, the piston *d*, spring *f*, piston rod *e* and tappet *g*, of the chipping tools *h*, supported on spring pieces *i*, secured to the cylinder *b*, and provided with projections *i'*, all substantially as and for the purposes herein set forth.

No. 36,075. Apparatus for Cleaning the Interior of Tubes.

(*Appareil pour nettoyer l'intérieur des tubes des chaudières à vapeur.*)

John Platt and Thomas Thorp, both of Manchester, England, 4th March, 1891 : 5 years.

Claim.—1st. The improved tube cleaner, having a series of cutters or scrapers supported on an elastic foundation, capable of expansion by the application of fluid under pressure, substantially as and for the purposes herein set forth. 2nd. The combination, with the cutters *a* supported between metal collars *c*, *c'*, on a hollow stem or handle, such as *d*, of the elastic bed or foundation *b*, substantially as and for the purposes herein set forth.

No. 36,076. Chemical Fire Engine.

(*Machine chimique à incendie.*)

William Morrison, Toronto, Ontario, Canada, 6th March, 1891 : 5 years.

Claim.—1st. A chemical fire engine, having a track rigidly fastened to its frame, and designed to support the wheels of a hose-reel, in combination with a supplemental track with its end arranged to hinge or pivot on the end of the rigid track, and designed to form a continuation thereof for the purpose of lowering the hose-reel onto the ground and reloading it onto the engine, substantially as and for the purpose specified. 2nd. A track *C*, rigidly fastened to the frame of a chemical engine, and having a supplemental track *D* hinged to it, in combination with the brace *F*, provided with a hook *G*, and means for shortening and lengthening the said brace, substantially as and for the purpose specified.

No. 36,077. Material for Treatment of Walls

(*Composition plastique.*)

Jose Berre King, West Brighton, New York, U.S.A., 6th March, 1891 : 5 years.

Claim.—The herein described compound, consisting of a re-strainer, composed of powdered stone and glue, combined with ground stone, and a fibrous material, substantially in the proportions and for the purposes set forth.

No. 36,078. Combined Bath and Wash Tub.*(Cuve et bain combinés.)*

Mary Lydia White Martinot, New York City, N.Y., U.S.A., 6th March, 1891; 5 years.

Claim.—1st. The combination, with a bath tub, of a wash tub held to slide thereon, substantially as shown and described. 2nd. The combination, with a bath tub, of a wash tub having a sliding connection with the bath tub, and a stop limiting the movement of one tub upon the other, as and for the purpose specified. 3rd. The combination, with a bath tub, of a wash tub held to slide thereon and adapted to extend at one end over the bath tub, a main waste pipe, a waste pipe connected with the wash tub and having a detachable connection with the main waste pipe, and a support for the overhanging end of the wash tub, substantially as shown and described. 4th. The combination, with a bath tub, of a wash tub having a sliding connection therewith and provided with downwardly-extending legs at one end, a main waste pipe connected with the bath tub, an auxiliary waste pipe connected with the wash tub and having a telescopic connection with the main waste pipe, and an overflow located in the wash tub and having a connection with the auxiliary waste therefor, substantially as and for the purpose set forth. 5th. The combination, with a bath tub, having flanges at both sides and at one end, of a wash tub held to slide upon the flanged surfaces of the bath tub, a stop device attached to the wash tub, legs attached to the said wash tub at one end, a main waste pipe, a connection between the said main waste pipe and the bath tub, an auxiliary pipe connected with the wash tub, having a detachable connection with the main waste pipe, and an overflow located in the bath tub, and connected with the auxiliary waste pipe, substantially as shown and described.

No. 36,079. Guard for Key-Holes.*(Entrée de serrure à protection.)*

Charles David Williams, Philadelphia, Pennsylvania, U.S.A., 6th March, 1891; 5 years.

Claim.—A lock having a throat in the periphery of its casing, an inwardly-extending guard at the wall of said throat, an oscillating guard with a shoulder adapted to abut against said inwardly-extending guard, a tooth adapted to enter an opening in a key, and a spring adapted to close said shoulder against said inwardly-extending guard, said parts being combined, substantially as described.

No. 36,080. Folding Step Ladder.*(Echelle pliante.)*

Nehemiah Goldberg, Philadelphia, Pennsylvania, U.S.A., 6th March, 1891; 5 years.

Claim.—1st. The cross-piece K, with the integral shoulder L. 2nd. A folding step ladder, consisting of legs and steps hinged thereto, and a diagonally arranged brace hinged at one end, and having an automatically acting locking device at the opposite end, substantially as described. 3rd. In a folding step ladder, a pin connected with the same, and a brace having an opening to receive said pin, and a spring for automatically causing the engagement of said brace and pin, and the retention of said brace in its locking position, substantially as described. 4th. A folding step ladder, having a brace, a keeper which receives said brace and permits lateral play of the same therein, and means connected with said keeper, whereby the brace automatically engages with the pin, and is retained in contact with the same, substantially as described. 5th. A folding step ladder, having legs with steps hinged thereto, cross bars which support said steps having shoulders formed therein, a brace J and a diagonal brace hinged at one end, and having an automatically locking device in connection therewith, substantially as described.

No. 36,081. Diaper. (Linge ouvert.)

Collins Arnold, Albany, New York, U.S.A., 6th March, 1891; 5 years.

Claim.—As an improved article of manufacture, a diaper made of a flattened section of tubular knitted fabric, each ply of the fabric having a separate diagonal seam formed by cutting a piece from the middle portion of the ply, and securing the cut edges by a seam line of stitching on the inner side, and a row of zig-zag stitches severally placed transversely of the seam line, substantially as described.

No. 36,082. Drill. (Drille.)

John Muirhead, Pittston, Pennsylvania, U.S.A., 6th March, 1891; 5 years.

Claim.—1st. A drill, having a stem with enlarged portions, forming a tool holder, one of said portions being provided with a tapering opening, and another with a groove leading from said opening, in combination with a bit having a tapering neck adapted to fit in said opening, and a back adapted to fit in said groove, substantially as and for the purpose set forth. 2nd. A drill, having a stem with enlarged portions forming a tool-holder, one of said portions being provided with a tapering opening, and another with a grooved head from said opening, in combination with a bit having a thickened front or outer portion, and a tapering neck or shank forming a shoulder with said outer portion, and thereby providing a cutting edge of greater width than the neck or shank, substantially as described. 3rd. A drill, having on its stem a screw-threaded portion at or near one end thereof, a movable block on said screw-threaded portion of the stem, and a key seated in a slot in said stem, and in a recess in said block, substantially as described. 4th. A drill, having a stem with an enlarged portion with an opening therein, and a smaller portion having a groove therein, and a bit with a neck fitting in said opening, and a back in said

groove, substantially as described. 5th. A drill bit, having a tapering neck with a shoulder, a thickened front or outer portion, and a cutting edge of greater width than the shank thereof, substantially as and for the purpose set forth. 6th. A drill, having on its stem a guiding block, substantially as and for the purpose described.

No. 36,083. Composition for Waterproofing*(Composition imperméable à l'eau.)*

John Smith, Melbourne, Victoria, Australia, 7th March, 1891; 5 years.

Claim.—As a composition of matter, white lead, linseed oil, whitening, sulphate of lime, crushed alum, glue, patent drier, cold water and pigments, combined in substantially the proportions specified.

No. 36,084. Skate. (Patin.)

Gedeon Rohoczy, Budapest, Hungary, 7th March, 1891; 5 years.

Claim.—A skate, consisting of a runner with two saddle-shaped supports e^1 and e^2 , riveted or brazed thereto, these supports being made in one piece with threaded studs f , ending in pins g , provided with heads g^1 and g^2 , which are introduced into the recesses a , arranged in the sole and the heel of the shoe, through the plates b and c covering said recesses, and which heads are then placed in these recesses, so that by tightening the winged nuts h , arranged on the studs f , a secure fastening of the skate to the shoe is obtained, substantially as hereinbefore described and set forth.

No. 36,085. Leather Handle. (Poignée en cuir.)

William Robertson, Hamilton, Ontario, Canada, 7th March, 1891; 5 years.

Claim.—In a tool handle, the leather layers A, cemented and pressed together, in combination with one or more metallic bars B, substantially as and for the purpose hereinbefore set forth.

No. 36,086. Car Coupling. (Attelage de chars.)

Edward B. Govelet, New Orleans, Louisiana, U.S.A., 7th March, 1891; 5 years.

Claim.—1st. In a coupling, the combination, with a draw head having a longitudinal cavity therein, and a pin hole formed vertically therein, of a pin adapted to pass through the pin hole, and a spring connected with the pin and adapted to limit the extent of its withdrawal and prevent accidental removal from the drawhead, substantially as set forth. 2nd. In a car coupling, the combination, with a draw head having a longitudinal cavity therein, and a pin hole formed vertically therein, of a link curved from end to end, and a pin adapted to secure the link in the cavity, substantially as set forth. 3rd. In a car coupling, the combination, with a draw head having a longitudinal cavity therein, of a spring actuated clutch block and a set screw beneath the block for regulating the vertical position of the latter within the cavity, substantially as set forth. 4th. In a car coupling, the combination, with a draw head having a longitudinal cavity in its center, the bottom of said cavity sloping downward, and a shoulder and lip at or near the outer end of the cavity, of a link, a pin, a spring and means for raising the pin, substantially as set forth. 5th. The combination, with a draw head, of a spring actuated clutch block having a concave recess extending transversely and horizontally in the outer face, and a recess in its top, of a pin adapted to be seated in the top recess, a spring for holding the pin down, and means for raising the pin, substantially as set forth. 6th. The combination, with an ordinary draw head, of a spring cushioned clutch block having a shank projecting rearwardly therefrom, a check block against which the spring abuts, and means for securing said check block in an ordinary draw head, substantially as set forth. 7th. In a car coupler, a clutch-block consisting of a block, bar or rod with a concave mouth formed transversely in its forward end for engaging the inner end of a link to hold said link in a horizontal position by preventing its outer or disengaged end from dropping, substantially as set forth. 8th. In a car coupling, an adjustable clutch block having a concave mouth formed transversely therein to receive and hold one end of a link, substantially as set forth. 9th. In a car coupling, the combination, with a draw head, of a clutch block located in the mouth of the latter and formed with a concave mouth therein, substantially as set forth. 10th. The combination, with a draw head, of an adjustable and yielding clutch block therein, substantially as set forth.

No. 36,087. Ledger Leaf. (Page et feuille d'index.)

Cassius Martin Wilson, Fairchild, Wisconsin, U.S.A., 7th March, 1891; 5 years.

Claim.—1st. A ledger leaf or sheet having rulings for one or more accounts, each account being provided with two daily date columns, one of which is for a debit and the other for a credit entry, whereby debit and credit entries of different dates as well as those of the same date, can be entered on the same horizontal line, substantially as described. 2nd. A ledger leaf or sheet provided with rulings for one or more accounts, each account being provided with two daily date columns, one of which is for a debit and the other for a credit entry, a single year column and a single month column, substantially as described. 3rd. A ledger leaf or sheet provided with rulings for one or more accounts, each account being provided with two daily date columns, one of which is for a debit and the other for a credit entry, a single year column and a single month column, two item or commodity columns, one of which is for debit and the other for credit entry, and two amount columns, one of which is for debit and the other for credit entries, substantially as described.

No. 36,088. Apparatus for Heating Water, etc., on a Lamp. (*Appareil pour réchauffer l'eau, etc., sur une lampe.*)

John Ptolemy, Winnipeg, Manitoba, Canada, 9th March, 1891; 5 years.

Claim.—1st. The shell *a*, open top and bottom secured to the cup *b*, with stays *e, e*, handle *d*, and lid *c*, substantially as and for the purpose hereinbefore set forth. 2nd. An appliance for heating water, food or other substance over an ordinary lamp, having the receptacle supported by stays from the outer shell so as to form a space for the heated air to pass around the cup, substantially as and for the purpose hereinbefore set forth.

No. 36,089. Compound for Dressing and Preserving Leather. (*Composition pour le traitement et la préservation du cuir.*)

John Moorhead Jolly, Marlin, Texas, U.S.A., 9th March, 1891; 5 years.

Claim.—The herein described composition of matter to be used as a leather dressing, consisting of neat's foot oil, water, beeswax, extract of logwood, gum-arabic, petrolatum, borax, oil of citronella, and castile-soap, mixed in the proportions named.

No. 36,090. Bearing Plate for Trucks.

(*Cousinet de tourillon.*)

Edward William Mackenzie Hughes, Chicago, Illinois, U.S.A., 9th March, 1891; 15 years.

Claim.—1st. The combination of the pressed-steel center plates *A*, and *B*, having contact wearing-surfaces *E, C*, and cylindrical portions *F, D*, the said cylindrical portions being separated by the space *G*, so as to allow the rocking of the plate *A*, upon the plate *B*, in any direction, substantially as described. 2nd. Journals for bolster-beams and fifth-wheels of vehicles, consisting of plates of pressed steel the upper journal having a central cup-shaped portion with a cylindrical elevation in its bottom, and the lower journal having an outer cylindrical portion, the top of which is inclined inward to correspond with and bear against the cup-shaped portion of the upper journal, and an inner cylindrical portion rising from said inclined top, fitting within and engaging with the elevation of the upper journal, said inner cylindrical portion and elevation being each provided with a hole registering with each other for the reception of a bolt, substantially as described.

No. 36,091. Brake Beam for Vehicles.

(*Sommier de frein de voiture.*)

Edward William Mackenzie Hughes, Chicago, Illinois, U.S.A., 9th March, 1891; 15 years.

Claim.—1st. The pressed-steel brake-beam *5*, having transverse rivets *7*, substantially as described. 2nd. The pressed-steel brake-beam *5*, having transverse rivets *7*, and sleeves *8*, substantially as described. 3rd. A hollow box brake-beam pressed from a flat plate of steel directly into the form of a box, having sides, ends and back, substantially as described. 4th. A hollow box brake-beam pressed from a flat plate of steel directly into the form of a box having sides ends and back, and having the closed sides of the box curved from *G*, to *F*, as shown, substantially as described. 5th. A hollow box brake-beam pressed from a flat plate of steel directly into the form of a box, having sides, ends and back, and a strap surrounding the same and in contact with the back of the box, substantially as described.

No. 36,092. Toy, or Game. (*Jouet ou jeu.*)

Elijah Jefferson Bond, Baltimore, Maryland, U.S.A., 10th March, 1891; 5 years.

Claim.—1st. The game apparatus herein described, consisting of a board having the alphabet, and numerals, and certain signs and figures arranged as shown, in combination with a table provided with legs, and a pointer, and operated by the hand in the manner shown, and for the purpose set forth. 2nd. In a game apparatus, the combination of the board *A*, having the alphabet *B*, the numerals *C*, the words "Yes", and "No", and signs or figures with the table *D*, having legs *a, b, c, d*, and elongation *E*, forming the pointer, all constructed and arranged, as shown and described. 3rd. In a game apparatus, a table, consisting of a disk supported on legs, one of which is arranged on an elongated projection serving as an index, substantially as shown and set forth. 4th. A board for a game apparatus of rectangular shape having the letters of the alphabet in two semi-circular rows, the numerals underneath in a straight line near the bottom, two human figures, the upper corners provided with a full and crescent moon with the words "Yes", and "No", below them, all as specified.

No. 36,093. Machine for Making Metal Tubes. (*Machine à faire les tubes en métal.*)

Lewis Fulton Betts, Brooklyn, New York, U.S.A., 10th March, 1891; 5 years.

Claim.—1st. In a machine for forming metal tubes, the corresponding die sections *A*, and *B*, the former provided with the marginal projection on one side end, the angular recess on the opposite side, substantially as shown and described. 2nd. In a machine for forming metal tubes, the recessed bed plate, the bending

plates mounted thereon, and the closing die arranged to move the bending plates, the parts being combined, substantially as shown and described. 3rd. In a machine for forming metal tubes, the recessed bed plate, the bending plates mounted thereon, and having openings with inclined faces, and the closing die provided with projections arranged to enter the openings in the bending plates, and to move said plates, the parts being combined, substantially as shown and described. 4th. In a machine for forming metal tubes, the combination of a recessed bed plate, bending plates mounted thereon and having openings with inclined faces, a mandrel, a closing die, provided with projections arranged to enter the openings in the bending plates, and returning springs operating in connection with the bending plates, substantially as shown and described.

No. 36,094. Ball Valve for Hydrants and Fire Plugs. (*Soupe à boulet pour bornes-fontaine.*)

James Main Swinbourn, Middle Brighton, Colony of Victoria, Australia, 10th March, 1891; 5 years.

Claim.—1st. A ball valve for hydrants and fire plugs fitted with a spring (such as *C*), arranged to always keep it pressed tightly against its seating, substantially as and for the purposes herein described and explained and as illustrated in my drawings. 2nd. In a ball valve for hydrants or fire plugs, the combination with such ball valve (such as *A*), of a cup (such as *D*), a bridge piece (such as *F*), extending across the interior of the casing of said hydrant, in combination with a spiral or other spring (such as *C*), fitting between said cup and said bridge piece itself, substantially as and for the purposes specified and as illustrated in my drawings.

No. 36,095. Suspenders. (*Bretelles.*)

William Lowry Doran, Niagara Falls, Ontario, Canada, 10th March, 1891; 5 years.

Claim.—1st. The combination of two webs *A*, connected by a clasp *C*, having a barrel *c*, limbs *c*¹, and a piece *C*¹, provided with teeth *c*, engaging the webs *A*, clasps *C*¹, having a barrel *c*¹¹, and teeth *c*, engaging the ends *A*¹, the ends *A*¹, having the clasps *C*¹, and the link *B*, connecting the barrels of the clasps *C*, and *C*¹, substantially as set forth. 2nd. In a clasp for connecting webs, the combination of a flap *c*¹, turned into barrel shape limbs *c*¹¹, conforming to the angle of the ends of the web to be joined and doubled up longitudinally, and the teeth *c*, along the edges, substantially as set forth. 3rd. In a clasp for connecting webs, the combination of the flap *c*¹, turned into barrel shape to engage a link, the limbs *c*¹¹, conforming to the angle of the edges of the webs to be joined, and doubled up, the corner piece *C*¹, and teeth *c*, on the edges of the limbs and on one edge of the corner piece, set at a right angle to enter the fabric, substantially as set forth. 4th. The combination of the ends *A*¹, and the clasps *C*¹, the latter having a barrel *c*¹¹, adapted to engage a link, and having teeth *c*, adapted to penetrate into the fabric of the ends, substantially as set forth.

No. 36,096. Puzzle. (*Jeu de patience.*)

Paris H. Wheeler, Washington, District of Columbia, U.S.A., 10th March, 1891; 5 years.

Claim.—1st. In a puzzle of the character described, a board or table having its surface divided into a series of sections or divisions, each section or division having a separate color or other distinguishing mark, and each provided with a series of pockets, the number of pockets in each section being equal, and an extra pocket being provided in the center of the board or table, of a series of movable objects bearing colors or other distinguishing marks corresponding with the colors or marks of the sections of the board or table, substantially as described, and for the purpose specified. 2nd. In a puzzle of the character described, a board or table, the surface of which is divided into a series of divisions or spaces arranged one within the other, each of the divisions or sections being of a different color, and each provided with a series of pockets, substantially as and for the purpose specified. 3rd. The herein described puzzle, the same consisting of a board or table, the surface of which is divided into a series of divisions or sections arranged one within the other, and each having a different color or other distinguishing mark and each provided with a series of pockets, the central section having an extra pocket at the central point upon the board, and a series of marbles or other movable objects having colors or other distinguishing marks corresponding with the colors or marks of the sections of the board or table, substantially as and for the purpose specified.

No. 36,097. Hoop for Coopers Ware.

(*Cercle de tonnelier.*)

Leonard Leeds Frost, Shubert, Nebraska, U.S.A., 10th March, 1891; 5 years.

Claim.—1st. As a new article of manufacture, a hoop for coopers' ware having a plain edge and a projection or flute extending inwardly at its opposite edge, substantially as set forth. 2nd. As a new article of manufacture, a hoop for coopers' ware, having one plain edge, and an obliquely-fluted opposite edge, the inner ends of the flutes vanishing between said edges, substantially as set forth. 3rd. As a new article of manufacture, a hoop for coopers' ware having one plain edge, and an elastic opposite edge, as and for the purpose set forth.

No. 36,098. Storage Battery.*(Accumulateur électrique.)*

William A. Macleod, Boston, Massachusetts, U.S.A., assignee of George E. Hatch, Cambridge, Massachusetts, 10th March, 1891; 15 years.

Claim.—1st. A storage battery, having intermediate plates of stiff porous material, alternating with its conducting plates, substantially as shown and described. 2nd. A storage battery, consisting of alternate conducting plates of metal, and intermediate plates of earthenware or similar material, to which intermediate plates the active material or agent of the battery is directly applied. 3rd. A storage battery, consisting of alternate conducting plates of metal, and intermediate plates of earthenware or similar porous material, provided with recesses on either side thereof to receive the active material of the battery, substantially as shown and described. 4th. A separating and supporting plate for storage batteries, composed of earthenware or similar material, and provided on one or both sides with grooves, pits, or depressions for the reception of the active material, substantially as shown and described.

No. 36,099. Safety Stand and Trainer for Bicycles.*(Appareil pour maintenir les bicyclettes à l'arrêt.)*

Henry Judson Curtis and Frederick C. Rockwell, both of Hartford, Connecticut, U.S.A., 10th March, 1891; 5 years.

Claim.—1st. A stand, having a base with lateral arms, with braces attached to the arms and terminating at the upper end in a clamp adapted to be secured to the frame, an upright support for the front wheel secured to the base, a roller journaled to the base beneath the rear wheel, and braces having pointed ends and forked heads adapted to engage the frame of the bicycle adjacent to the axis of the driving-wheel, substantially as specified. 2nd. A stand, having a base provided with braces and clamps for securing the front wheel of a bicycle, a friction wheel mounted on the base, and adjustable braces adapted to be attached to opposite sides of the frame, near the axle of the driving wheel, substantially as specified.

No. 36,100. Frame for Quilting.*(Metier à piquer.)*

Marian Whites and James H. Ruess, both of Woodville, Missouri, U.S.A., 10th March, 1891; 5 years.

Claim.—The combination, with the quilting frame, composed of crossed end pieces, pivotally connected, and parallel side bars uniting said end pieces, of a roller journaled in the end pieces below one of said side bars, and a fabric cover to secure said roller and extending, when unwound, over both side bars, as and for the purpose set forth.

No. 36,101. Box for Letters.*(Boîte à lettre.)*

Arthur S. Johnston, Cohoes, New York, U.S.A., 11th March, 1891; 5 years.

Claim.—1st. The combination, with a letter-box case, of a vestibule case, having a letter port leading interiorly of the box, and a weight controlled oscillatory port lid pivoted to oscillate in such vestibule case, substantially as described. 2nd. The combination, with a letter box case, having an inwardly converging conduit forming a letter port leading into such box, of an oscillatory port lid, which lid forms, when open, one of the converging walls of such conduit, substantially as described. 3rd. The combination, with a letter-box case, of a vestibule case, having a passage way through A', and A'', and a passage way through A' and A', and a lid oscillatory from one passage way to the other, substantially as described.

No. 36,102. Storm Door.*(Contre porte.)*

Theophilus Vankannel, Philadelphia, Pennsylvania, U.S.A., 11th March, 1891; 15 years.

Claim.—1st. The combination in a storm door structure, of the outer casing, having opposite segmental sides, with the pivoted door composed of wings, each fitting snugly to the segmental sides of the casing, the latter being of a width equal to or greater in extent than the distance between the outer ends of adjacent wings of the door, all substantially as specified. 2nd. The combination in a storm door structure, of the outer casing having top, base and opposite segmental sides, with the pivoted door composed of wings, each fitting snugly to the top, base and segmental sides of the casing, said segmental sides being of a width equal to or greater in extent than the distance between the outer ends of adjacent wings of the door, all substantially as specified. 3rd. The combination of the outer or enclosing casing, having opposite segmental sides, with a pivoted door structure, having radiating wings, one or more of which are hinged in whole or in part, so as to be thrown back out of the way, all substantially as specified. 4th. The combination of the pivoted door having radiating wings, one or more of which is hinged with braces, one or more of said braces being detachable, all substantially as specified. 5th. The combination of the fixed structure, having opposite segmental sides with the door, the wings of which have projecting flexible strips, provided with means of adjustment, whereby they are held taut, all substantially as specified. 6th. The combination of the wing of the door and the grooved strip secured thereto, with the outer flexible strip and the flexible carrier therefor, consisting of a strip or sheet secured to the outer strip and folded around a cord confined in the groove of the door strip, all substantially as specified. 7th. The combination of the door having radiating wings, with the casing structure having opposite segmental sides with flex-

ible jams, all substantially as specified. 8th. The within described combined brace and hand rail for the wings of the door, the same consisting of a bar connected at one end to a stud on the central standard of the door, and at the opposite end to a stud near the outer edge of the wing of the door, substantially as specified. 9th. The combination of the rotating door, having radiating wings, the outer casing having opposite segmental sides, said casing being divided, and the opposite segmental sides hinged to the wall of the room or apartment, so that said sides can be swung apart, substantially as specified. 10th. The combination of the rotating portion of the door, having radiating wings, with the outer casing having segmental sides pivoted to the wall of the room or apartment, said casing being divided, and one portion of the casing carrying the pivot post of the rotating door, substantially as specified. 11th. The combination of the rotating portion of the door, having projecting wings, the outer casing having opposite segmental sides for closing the spaces between the wings and mechanism connected to the pivot shaft or standard of the door for imparting motion thereto, without direct pressure upon the wings of said door, substantially as specified.

No. 36,103. System of Lacing.*(Système de crochets ou oillets de laçage pour chaussures.)*

Franklin S. McKenney, Detroit, Michigan, U.S.A., 11th March, 1891; 5 years.

Claim.—The combination, with a shoe, of a series of shanks engaged upon the under surface of the overlapping edge thereof, a series of loops engaged upon the surface of the opposite edge, and a lacing cord in engagement with said shanks and loops, substantially as described.

No. 36,104. Fastening for Laces.*(Système de crochets ou oillets de laçage pour gants ou chaussures.)*

Franklin S. McKenney, Detroit, Michigan, U.S.A., 11th March, 1891; 5 years.

Claim.—The fastening herein described, consisting of a loop rounded at its ends, as described, provided with a shank whereby the fastening may be engaged in place, substantially as set forth.

No. 36,105. Tent.*(Tente.)*

Alphonso Sprague Comstock, Evanston, Illinois, U.S.A., 11th March, 1891; 5 years.

Claim.—1st. A tent, having its apex at the front end, from which it is supported by means of a single pole, guy-ropes extending from the pole in line with the rear corners, and a front section arranged in a plane oblique to the axis of the pole, whereby said front may be rendered taut to oppose the tensional strain of said guy ropes, substantially as shown and described. 2nd. A tent, having its front sides and rearwardly slanting top arranged to converge to a single point forming the apex of the tent, at which point it is supported by means of a single pole located at the front of said tent, and means for bracing the same, substantially as described and shown. 3rd. A tent, having its apex at the front end, from whence it is supported by means of a single pole, guy ropes extending from the pole in line with the rear corners, and supplemental guy ropes extending forward obliquely to the plane of the front of the tent, substantially as shown and described. 4th. A tent, having its apex at the front end from which it is supported by means of a single pole, guy-ropes extending from the pole in line with the rear corners, supplemental guy ropes extending forwardly in lines oblique to the plane of the front of the tent, and a reversible flap *m*, adapted to fit over said front guy ropes and form a continuation of one of the sides of the tent, thereby serving as a storm screen to protect the door-way, substantially as shown and described. 5th. The combination, with a tent, having a pole at the front and forwardly projecting guy ropes, of the trapezium-shaped flap *m*, substantially as shown and described.

No. 36,106. Sign.*(Enseigne.)*

Frederick John Brown, Montreal, Quebec, Canada, 11th March, 1891; 5 years.

Claim.—In the construction of a sign or plate, the combination of the block *a*, covering *b*, and attached letters *c*, the whole, substantially as described.

No. 36,107. Method of Producing Metallic Salts.*(Moyen et mode de production des sels métalliques, etc.)*

Gustaf Otto Rennerfelt, Stockholm, Sweden, 11th March, 1891; 5 years.

Claim.—1st. In producing, by means of electrolysis decomposed products, of melted haloid salts and other combinations of metals, the method of removing the metal set free at the cathode out of the electrolytic vessel, by reducing the air pressure in the outlet pipes. 2nd. An apparatus for producing, by means of electrolysis, decomposed products of haloid salts and other combinations of metals, the arrangement of providing the electrolytic vessel with a pipe for removing the set free metals, which pipe communicates with any apparatus effecting rarefaction of the air.

No. 36,108. Device for Preventing Horses from Kicking. (*Appareil pour empêcher les chevaux de ruer.*)

Harry Wilmot Sisson, Monmouth, Illinois, U.S.A., 12th March, 1891; 5 years.

Claim.—The combination, with the rings C on the shafts and the rings D on the saddle, of the usual harness, of the strap B adapted to be passed through the mouth of the horse and over his head, and thence through said rings and over his rump, whereby the horse is prevented from kicking, substantially as described.

No. 36,109. Wind Mill. (*Moulin à vent.*)

Marcus Johnson Stroem Soli, Brookings, Dakota, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. A turbine wind-wheel, consisting of top and bottom plates, and a series of spaced and independent blades arranged between the said plates, each blade extending inwardly from the periphery toward the center, and then curved outwardly to the periphery again, substantially as described. 2nd. A turbine wind-wheel, consisting of top and bottom plates F, and the spaced and independent blades G, each formed with the curved part G¹, the semi-circular part G², and the curved part G³, substantially as herein shown and described. 3rd. In a windmill, the combination, with the main shaft, a wind-wheel mounted thereon, and a sliding casing for partially or wholly covering the wheel, of a weighted lever engaging a collar carried by the casing, a governor on the main shaft, and a second weighted lever engaging a collar of the governor and connected to the first named weighted lever, substantially as herein shown and described. 4th. In a windmill, the combination, with the main shaft B, and the wind wheels E, E¹, E², and the governor O, on the shaft, of the sliding casing H, provided with a downwardly extending arm J, the pivoted weighted lever K, engaging a collar on the said arm, a second pivoted and weighted lever N, engaging a collar of the governor, and the link L, pivoted to the said levers K, N, substantially as herein shown and described.

No. 36,110. Pump. (*Pompe.*)

Carton W. Canfield, Winthrop, Minnesota, U.S.A., 12th March, 1891; 5 years.

Claim.—In a pump, the combination, with the coupling section E, having a collar k, of the tube I, having at its upper end an angular head, and at its lower end a packing-gland, and a piston-rod passing through the tube.

No. 36,111. Vehicle. (*Voiture.*)

Felia G. McClellan, Carrothers, Ohio, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. A waggon-body, consisting of the longitudinal and transverse sills, the bottom, the sides, the vertical threaded eyebolts passing through the sills and bottom, and a pivot-bar arranged above the bottom, fitted in said eyebolts and carrying a rack or ladder, substantially as and for the purpose described. 2nd. The combination of the longitudinal sills, an extensible frame arranged in the same horizontal plane as said sills, and adjustable longitudinally thereon, in line with the same, to vary the length of the foundation frame for the body of the vehicle, the transverse sills, one of which is fixed to the extensible frame, the cross-piece, the inclined stakes fitted in the cross-pieces on the longitudinal sills and extensible frame, and the bottom and side boards, substantially as and for the purpose described. 3rd. A waggon-body, consisting of the longitudinal sills, an extensible frame having its sides between and supported on the rear ends of said longitudinal sills, said extensible frame being adjustable bodily on the sills in the direction of its length to extend or shorten the length of the foundation-frame for the vehicle-body, the transverse sills secured to the longitudinal sills, and the extensible frame, the cross-piece secured in the sills, the fixed inclined stakes, the vertical sectional side-boards, the continuous inclined side-boards and end-gate, substantially as described. 4th. A waggon-body, having the inclined side-boards, the strap-loops, each secured by a single pivot-bolt to one of the sides and projecting longitudinally therefrom beyond the rear edge of the same, and a hinged end-gate having the fixed straps which extend from edge to edge thereof, and provided with the transverse slots through which the strap-loops are adapted to pass when said end-gate is closed, substantially as described.

No. 36,112. Window Tray. (*Allège de fenêtre.*)

Mary L. W. Martinot, New York, State of New York, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. As an improved article of manufacture, a window tray, consisting of a dish-shaped body provided with front and rear marginal inclined flanges, and pans, open at their inner side, held to slide upon the flanges, substantially as shown and described. 2nd. In a window tray, the combination, with a body section comprising an essentially horizontal bottom and upwardly and outwardly inclined sides and ends, the bottom being provided with an outlet opening, of flanges formed upon the margin of the body section at front and rear and inclined downward in the direction of the center, pans held to slide upon the flanges, brackets attached to the body section and engaging with the bottom of the pans, stop lugs attached to the forward portion of the body section, and legs secured to the rear portion of said section, as and for the purpose specified. 3rd. In an article of the character described, the combination, with a body section consisting of an essentially horizontal bottom and upwardly and outwardly inclined sides and ends, the bottom being

provided with an outlet opening surrounded by a downwardly-extending tube, of flanges formed upon the margin of the body section at front and rear, the said flanges being downwardly-inclined in the direction of the center of the body and provided with inwardly extending horizontal slide-ways, pans resting upon the flanges, having grooves formed at their ends to receive the slide-ways of said flanges, brackets attached to the body and engaging with the under faces of the pans, legs connected with the bottom of the body section, near the outer edge thereof, and stop lugs attached to the body section between the center thereof and the tube surrounding its outlet opening, as and for the purpose specified.

No. 36,113. Brace for Waggon Springs.

(*Tirant de ressort de wagon.*)

Samuel Trumbore, Easton, Pennsylvania, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. The combination, with the body, axles, and springs of a waggon, of a bracket secured to the body and arranged between the axles, vertically-disposed equalizing levers having their lower ends fulcrumed in the bracket and engaging each other, and rods connected with the upper ends of said levers and extending to the springs, substantially as and for the purpose set forth. 2nd. The combination, with the body, axles, and springs of a waggon, of a bracket secured to the waggon-body between the axles, a pair of levers having their lower ends pivoted to said bracket and controlled by each other, and rods connected with the free upper ends of the levers and with the springs, substantially as and for the purpose set forth. 3rd. The combination, with the body, axles, and springs of a waggon, of a bracket connected with the waggon between the axles, a pair of vertically-disposed levers pivoted to said bracket and provided with intermeshing segments, and spring-rods connected with the free ends of the levers and with the springs, substantially as and for the purpose set forth. 4th. The combination, with the body, axles, and springs of a waggon, of a bracket connected with the waggon-body between the axles, a pair of pins, a pair of levers pivoted on said pins and provided at their lower ends with intermeshing segments, a brace connecting said pins, and rods connected with the free ends of the levers and with the springs, substantially as and for the purpose set forth.

No. 36,114. Fire Kindler. (*Allume-feu.*)

Rudolph Guenther, Kansas City, Missouri, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. The combination of a steam-pipe H, with a receptacle B, having the steam-chamber F, formed by perforated cap or partition E, the perforated partition D, upon which the peat is placed, and the lid or cover L, resting upon the cushion K, of flange J, and forming an air-tight joint, substantially as described. 2nd. The combination of a receptacle B, having a perforated floor therein, a steam-pipe connected therewith below the said perforated floor, and a perforated cover located over the said steam-pipe within the said receptacle, the space between the said cover and the floor being filled with moss saturated with oil, as described.

No. 36,115. Brace for Hollow Walls.

(*Lien pour murs creux.*)

Darwood Alexander Weese, Belleville, Ontario, Canada, 12th March, 1891; 5 years.

Claim.—A hollow wall brace, consisting of a metal bar E, having the ends bent in the opposite direction to the cleats a, and the cleats a, cut and bent or punched to a right-angle with the bar E, as and for the purpose hereinbefore set forth.

No. 36,116. Hydrocarbon Burner.

(*Foyer à hydro-carbures.*)

Joseph Burns, Fort Plain, New York, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. In a hydrocarbon burner, a burner proper mounted to slide and to turn in the air supply pipe, substantially as shown and described. 2nd. In a hydrocarbon burner, the combination, with an air supply pipe, of an oil supply pipe, carrying the burner proper and fitted to slide and to turn in the said air supply pipe, substantially as shown and described. 3rd. In a hydrocarbon burner, the combination, with an oil supply pipe having a contracted end, of a burner held on the said contracted end and comprising a plate and prongs, substantially as shown and described. 4th. In a hydrocarbon burner, the combination, with an oil supply pipe having a contracted neck, of a plate extending from the said contracted neck, and alternately upwardly and downwardly extending prongs formed on the front end of the said plate, substantially as shown and described. 5th. In a hydrocarbon burner, the combination, with a casing, a contracted air feed pipe held in the said casing, a main air pipe connected with the said casing and into which extends the contracted air feed pipe, an oil supply pipe extending into the said air pipes, and a burner held on the inner end of the said oil supply pipe, substantially as shown and described. 6th. In a hydrocarbon burner, the combination, with a casing, a contracted air feed pipe held in the said casing, a main air pipe connected with the said casing and into which extends the contracted air feed pipe, an oil supply pipe extending into the said air pipes, a burner held on the inner end of the said oil supply pipe, the said oil supply pipe and its burner being mounted to turn and to slide, substantially as described. 7th. In a hydrocarbon burner, the combination, with a casing, of a main air supply pipe connected with the said casing, and a contracted air feed pipe adapted to be secured to the said casing and extending concentrically in the said main air pipe, substantially as shown and described.

No. 36,117. Device for Stretching and Drying Curtains. (*Appareil pour étirer et sécher les rideaux.*)

Helen Victoria Holmes, Chicago, Illinois, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. A device for holding curtains during the process of drying, consisting of a number of separate flexible strips adapted to be arranged in the form of a rectangular frame, and provided with holding-pins, substantially as described. 2nd. In a device for holding curtains, the combination, with the respective flexible side and end strips, of the holding-pins, inserted through said strips, one end of said pins projecting at an angle with reference to the face of said strip, and the opposite ends clinched in the material, substantially as described.

No. 36,118. Holder for Cow Tails.

(*Attache-queue pour vaches.*)

Edwin G. Farnham, Dover, Maine, U.S.A., 12th March, 1891; 5 years.

Claim.—In a cow-tail holder, the combination of the casing-plates, a bar secured between the same, and having a jaw and a curved arm extending laterally in opposite directions, a jaw mounted pivotally at the corner opposite to the fixed jaw, and having a laterally extending handle, a curved arm mounted pivotally at the corner opposite to the fixed arm and having a laterally extending handle, the lugs extending from said handles past each other, and a spring arranged within the casing and bearing against the inner lug, substantially as and for the purpose set forth.

No. 36,119. Clothes Drier. (*Sechoir à linge.*)

Mary L. W. Martinot, New York, State of New York, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. In a drier, the combination, with a hollow body, provided with a series of slide-ways and an opening in its bottom, of spaced radiating plates arranged above the lower opening, and trays supported by the said slide-ways, substantially as described. 2nd. In a device of the character described, the combination, with a box-like body, provided with a door at one side, an opening in its bottom surrounded by a downwardly-extending flue, and slide-ways secured to the opposite sides of the body, of two spaced radiating plates, one of iron and the other of tin, supported over the opening in the bottom of the body, and open-work trays supported by the slide-ways of the body, substantially as and for the purpose specified. 3rd. As an improved article of manufacture, a portable clothes drier, the same consisting of a box-like body, provided with a door at one side, an opening in its bottom surrounded by a downwardly-extending conducting flue, having a flange at its lower end, and angled slide-ways secured to the opposite inner face of the body, spaced horizontal radiating plates, located within the body over the flue opening, the said plates being of less surface area than the cross sectional area of the body, and lattice-work trays supported by the slide-ways, the bodies of which trays are of less surface area than the cross-sectional area of the box-like body, substantially as shown and described and for the purpose specified.

No. 36,120. Fastener for Buttons.

(*Queue de bouton.*)

Franklin A. Smith, Providence, Rhode Island, U.S.A., 12th March, 1891; 5 years.

Claim.—1st. As an improved article of manufacture, a button fastener, consisting essentially of a main or body portion, having a top and two inclined sides, and of two parallel-depending prongs adapted to be forced into and clinched to the material to which the fastener is to be secured for the purpose specified. 2nd. The button fastener, herein described, the same consisting of an angular crown or arch for the reception of the eye, of a button and two parallel attaching prongs, having sharpened or attenuated points, said prongs being formed, one at each end of said crown or arch, and projecting downward therefrom, and being of substantially uniform size above the attenuated points, as said crown or arch, substantially as herein set forth.

No. 36,121. Automatic Gate.

(*Barrière automatique.*)

Joseph Camille Laporte, Pointe Bleue, Province of Quebec, Canada, 13th March, 1891; 5 years.

Résumé.—1o. Dans une barrière automatique, les roues B¹, B¹¹, munies des leviers c¹, c¹¹, et de manivelles D¹¹, tel que décrits pour obtenir les fins indiquées. 2o. Dans une barrière automatique, les roues B¹, B¹¹, munies des courroies U, T, V, R, S, telles que décrits pour obtenir les fins indiquées. 3o. Dans une barrière automatique les roues B¹, B¹¹, munies des boudons c¹, c¹¹, et des courroies x, y, et des leviers c¹, c¹¹, tels que décrits pour obtenir les fins indiquées. 4o. Dans une barrière automatique, les roues B¹, B¹¹, les courroies R, S, T, U, v, x, et le cylindre D, tels que décrits pour obtenir les fins indiquées. 5o. Dans une barrière automatique, les roues à courroie Q¹, Q¹¹, la courroie L, le cylindre D, les axes E, K, tels que décrits pour obtenir les fins indiquées. 6o. Dans une barrière automatique, les volets M, M, portant les cylindres N¹, N¹¹, comme partie de construction pour être remplis de plomb et servir de contrepois, tels que décrits pour obtenir les fins indiquées. 7o. Dans une barrière automatique, le levier g, l'axe j la bielle I, le ressort P, et la claioche H, tels que décrits pour obtenir les fins indiquées.

No. 36,122. Sleigh Pole. (*Timon de traineau.*)

Patrick Lynch, Fournier, Ontario, Canada, 13th March, 1891; 5 years.

Claim.—The brace A, A, in combination with the bridge bracing D, and the runners R, R, substantially as hereinbefore shown and described and as and for the purposes set forth.

No. 36,123. Automatic Gate.

(*Barrière automatique.*)

James C. Anderson, Township of Turnberry, Huron County, Ontario, Canada, 13th March, 1891; 5 years.

Claim.—The gate G, formed with the recesses R¹, R², R³, covers C¹, C², C³, and pivotally secured to any suitable support, in combination with the arm A, secured to the hinge-pin P, near the lower end, and extending under the gate frame, the strands B¹, B², passing over suitable anti-friction rollers or pulleys, the spring bolt E, weight H, tube T and double cranks C¹, C², and any suitable connection between said double cranks and the pin P, substantially as shown and described and for the purpose specified.

No. 36,124. Cleaner for Railway Tracks.

(*Appareil pour nettoyer les voies de chemins de fer.*)

Augustus Day, Detroit, Michigan, U.S.A., 13th March, 1891; 5 years.

Claim.—1st. The combination, in a track cleaner, of the draw-bar D, the plate attached to the draw-bar, and carving the broom-head, the removable broom-head for holding the spring-blades and the spring blades, all substantially as described. 2nd. In a track cleaner, the combination of the bars G, G, to engage with the holding-plate, the bars I, I, recessed to hold the spring-blades, the spring-blades and the bolts H, H, all substantially as described. 3rd. In a track cleaner, the combination of the holding plate provided with the ribs grooved to secure the broom-head, the bars G, G¹, bevelled to engage with the grooved ribs, the bars I, I, recessed to receive the spring blades, the spring blades, and the rods to bind the head together, all substantially as described. 4th. In a track cleaner, the combination of the rod to turn the rock-shaft carrying the draw-bar, the draw-bar keyed on the rock-shaft and supporting the holding-plate, the holding-plate provided with the grooved ribs, the removable broom-head and the spring-blades, all substantially as described.

No. 36,125. Cleaner for Railway Tracks.

(*Appareil pour nettoyer les voies de chemins de fer.*)

Augustus Day, Detroit, Michigan, U.S.A., 13th March, 1891; 5 years.

Claim.—1st. In a track cleaner, the combination of the main blade of the scraper with the overlapping spring blades forming the lower edge of the scraper, substantially as described. 2nd. In a track cleaner, the combination of the main blade of the scraper, with the overlapping spring-blades forming the lower edge of the scraper, and the means for connecting them together, substantially as described. 3rd. In a track cleaner, the combination of the main blade of the scraper, with the twisted spring-blades forming the lower edge of the scraper, and the means for connecting them, substantially as described. 4th. In a track cleaner, the combinations of the main blade with the spring blades, the means for connecting the spring blades to the main blade, and the covering blade, all substantially as and for the purposes set forth. 5th. In a track cleaner, the combination of the rigid upper portion of the blade of the scraper with the overlapping sectional spring-blades of the lower edge, substantially as set forth. 6th. In a track cleaner, the combination of the main blade of the scraper with the sectional spring blades on the lower ends, and the covering blade bolted to the front of the main blade, substantially as described.

No. 36,126. Bowling Crease.

(*Auget pour jeux de quille.*)

Thomas Hector Roberts, Owen Sound, Ontario, Canada, 13th March, 1891; 5 years.

Claim.—1st. A horizontal bowling-crease A, with its surface above the surface of a slanting floor D, formed at the pin end of the crease A, which end is curved or angled towards its edge or edges, in combination with a channel or channels F, formed on one or both sides of the crease, and slanting downwardly towards the bowling end of the said crease, substantially as and for the purpose specified. 2nd. A horizontal bowling crease A, with its surface above the surface of a slanting floor D, formed between a rebounding cushion E, and the pin end of the crease A, which end is curved or angled towards its edge or edges, in combination with a channel or channels F formed on one or both sides of the crease, and slanting downwardly towards the bowling end of the said crease, substantially as and for the purpose specified. 3rd. A horizontal bowling crease A, having on one or both sides of it a channel or channels F, slanting towards the end B, of the crease A, and a channel or channels G¹, slanting towards the pin end of the crease, in combination with a slanting floor D, set below the surface of the pin end of the crease A, which is curved or angled towards the channels F and H, substantially as and for the purpose specified. 4th. One or more pins G, arranged on a bowling crease A, each pin having a light spindle I extending from its end and projecting through a plate J, supported above the pin end of the crease, in combination with a sphere or hemisphere K fixed to each

spindle I, and fitting into cupped recesses made in the plate J, and a counter-balance weight L fixed to the upper end of the spindle I, substantially as and for the purpose specified. 5th. One or more pins G, arranged on a bowling crease A, each pin having a light spindle I extending from its end and projecting through a plate J, supported above the pin end of the crease, a sphere or hemisphere K fixed to each spindle I and fitting into cupped recesses made in the plate J, a counter-balance weight L fixed to the upper end of the spindle I, in combination with a cord M fixed to each spindle I, and connected at its other end with a cross-head N, which is operated as described by the cord O, substantially as and for the purpose specified. 6th. One or more pins G, arranged on a bowling crease A, each pin having a light spindle I projecting from its end and through a plate J supported above the pin end of the crease, a plate P, with guiding tubes Q, supported above the plate J, a sphere or hemisphere K fixed to each spindle I, and fitting into cupped recesses made in the plate J, a counter-balance weight L fixed to the upper end of the spindle I, in combination with a cord M, fixed to each spindle I, and connected at its other end with a cross-head N, which is operated, as described, by the cord O, substantially as and for the purpose specified.

No. 36,127. Attachment for Shoes.

(*Attache pour chaussures.*)

Thomas F. Byrnes, Emporia, Kansas, U.S.A., 13th March, 1891; 5 years.

Claim.—A shoe, provided with a strip of suitable material applied vertically to the inner side of the counter, well down on the heel line, and having its ends firmly secured between the lining and the adjacent portion of the counter, and there by forming a loop for use in combination with a fastening band or string.

No. 36,128. Box for Fruit.

(*Boîte à fruits.*)

Adelbert C. Rice and William H. Spillman, both of Walkerville, Ontario, Canada, 13th March, 1891; 5 years.

Claim.—The blanks A and B, constructed as shown, and adapted to form the sides and bottom of a fruit box, substantially as described.

No. 36,129. Stove Pipe Fastener.

(*Attache de tuyau de poêle.*)

William John Washburn, Chesley, Ontario, Canada, 13th March, 1891; 5 years.

Claim.—The combination of the pipe section A, having a flat spring C secured thereto near one end, the free end of said spring provided with a perforation E near the opposite end, and the connecting pipe section B, having an exterior projecting stud F, said perforation and stud engaging to prevent separation at the joint, as set forth.

No. 36,130. Coupling for Pitmans.

(*Joint de bielle.*)

Chanoy C. Shults, Winterset, Iowa, U. S. A., 13th March, 1891; 5 years.

Claim.—1st. A coupling device, comprising a metal strap or base-piece having a vertical projection, and a transverse perforation in said projection adapted to admit a bolt or pivot, a curved projection at some space from said vertical projection and in the same plane therewith, and concentric with the transverse opening, and a metal bar or plate having a bifurcated end and a fixed bolt or integral pivot, and a vertical mortise or opening adapted to admit the curved projection on the base piece, to operate in the manner set forth. 2nd. A coupling for a cutter bar, and a pitman composed of a flat bottomed metal strap having a flat sided vertical projection at one end rising from the center of its top surface, a perforation and also a concentric curved slot in said projection, and a pitman having a bifurcated end, and perforations in its parallel overlapping part that coincide with the perforation and slot in the vertical projection on the metal strap, and hinge section, and bolts extended through said coinciding perforations and slot, substantially as shown and described. 3rd. The metal strap and hinge section A, having a vertical projection B, and a perforation and curved slot in said projection, a pitman having a bifurcated end, and perforations therein coinciding with the said perforation and slot, combined with a cutter bar and a pitman-driver, substantially as shown and described for the purposes stated.

No. 36,131. Rack for Canals and Flumes.

(*Gril pour canaux d'écluse.*)

Frank L. Robinson, Caribou, Maine, U. S. A., 13th March, 1891; 5 years.

Claim.—1st. The combination, with a flume, a grating extending across the same and inclining up stream, a waste outlet leading out of the lower end of the flume and closed by a gate, and a lateral conduit connected to this waste outlet and discharging to one side of the flume, substantially as described. 2nd. The combination, with a canal, of a vertical partition or partitions arranged therein to form flumes, gates at the heads of these flumes, racks arranged in these flumes and inclining up stream, concentrating boards arranged at the lower ends of the flumes, waste outlets controlled by gates, and a lateral conduit communicating with the waste outlets and discharging to one side of the canal, substantially as described. 3rd. The combination of a canal, flumes therein, slotted racks in these flumes these racks inclining up stream, concentrating boards at the lower ends of the flumes, these boards leading to waste conduits, gates for

these waste conduits, and a lateral conduit located on the bottom of the canal and communicating with the said waste conduits, substantially as described. 4th. The combination, with a flume, of the upwardly inclined grating leading to a waste opening, and a gate or valve controlling this waste opening, substantially as described. 5th. The combination, with a flume, of the upwardly inclined rack or grating, a concentrating board in the bottom of the flume at the lower end of said rack, this board leading to a waste opening, and a valve or gate for closing said opening, substantially as described.

No. 36,132. Trap for Moths. (*Piège à insectes.*)

William C. Barnard, Worcester, Massachusetts, U.S.A., 13th March, 1891; 5 years.

Claim.—1st. A moth-trap, consisting of a glass jar of any desired capacity having a luminous paint covering a portion of its circumference, and figures, as flowers or the like, in bright colors on the other portion thereof to serve as an attractor for insects, a wire-supporting frame for said jar, and a cap-piece having openings therein for the entrance of moths, substantially as described. 2nd. A moth-trap, consisting of a glass jar having luminous paint and bright colors on the cylindrical portion thereof, a wire frame surrounding said jar, a bail secured to said frame, an annular flange depending from the mouth of said jar into the interior thereof, a cap with openings therein for the admission of moths, and an aromatic bait therein, substantially as described.

No. 36,133. Manufacture of Paints, Kalsomine, etc. (*Fabrication de peinture, etc.*)

Nicholas A. Bibikov, Albuquerque, Territory of New Mexico, U. S. A., 13th March, 1891; 5 years.

Claim.—The herein described paint compound, the same comprising a vehicle consisting of a solution of silicate of soda, potash, pulverized mica, and lime suspended therein, substantially as specified.

No. 36,134. Neck Yoke. (*Volée d'avant.*)

Wildor B. Chapman, Omro, Wisconsin, U. S. A., 13th March, 1891; 5 years.

Claim.—1st. A holdback for neck-yokes, consisting of a strap which is doubled or folded upon itself to form a loop to receive the cross-bar of a yoke, and an adjustable loop secured to the folded end of the strap and fitted loosely around the latter at a point adjoining the loop, whereby the adjustable loop is adapted to tighten the hold-back strap upon the cross-bar, substantially as described. 2nd. A holdback for neck-yokes, consisting of a strap doubled or folded upon itself to form a loop for receiving the cross-bar of a yoke, and having a pole-receiving opening in its lower free end, and an adjustable loop permanently secured in the doubled end of the strap and fitted around said strap at a point adjacent to the loop so as to ride freely thereon, substantially as described. 3rd. A holdback for neck-yokes, having a pole-receiving opening and an adjustable loop, the loop embracing the holdback when the latter is bent to form a clasp-loop which fits around the neck-yoke, substantially as described. 4th. A holdback for neck-yokes, having a pole-receiving opening at one end, and bent or doubled upon itself at the opposite end to form a clasp-loop, and an adjustable loop C, permanently connected to the doubled end of the holdback and fitting around the latter at a point above the pole-receiving opening, substantially as described. 5th. A holdback for neck-yokes having a pole-receiving opening at one end and an adjustable loop C, permanently connected to the other end of said holdback, and fitting around the latter at a point above the opening therein, said adjustable loop having a removable bolt, substantially as described. 6th. A holdback for neck-yokes doubled or bent upon itself at one end to form a loop for the reception of the neck-yoke, and having a pole-receiving opening at its opposite end, an adjustable loop permanently connected to the doubled end of the hold-back and fitting around the latter at a point above the opening therein, and a safety-strap connected to the adjustable loop, substantially as described.

No. 36,135. Electric Circuit Controlling Apparatus. (*Appareil à régler les circuits électriques.*)

Edwin Ruthven Gill, Kansas City, Missouri, U. S. A., 13th March, 1891; 5 years.

Claim.—1st. An escapement device, consisting of a wheel having a predetermined combination of electric contacts, all of which are for reversing it except one, in combination with pawl mounted upon an armature lever, and an electro-magnet, whereby the direct action of said electro-magnet causes said escapement device to be restored to normal position when a wrong combination of pulsations is caused to be made by the electro-magnet, substantially as described. 2nd. An escapement device, consisting of a wheel having predetermined electrical contacts at irregular intervals, and provided with detents at intervals, in combination with an armature lever having a long limit, and a short limit pawl alternately engaging the escapement device, an electro-magnet operating the lever, an electro-magnet, an S-shaped armature upon the shaft of the escapement device, restoring the escapement device to normal position, a circuit for the actuating electro-magnet and a circuit for the restoring electro-magnet in which is included the contacts on the escapement device, substantially as described. 3rd. An escapement device, having electrical contacts at irregular intervals, and provided with detents at intervals, long limit and short limit pawls having alternate engagement with the escapement device, a lever carrying said pawls, an electro-magnet operating the lever, a cord wound under tension upon the shaft of the escapement device, an electro-magnet restoring the

latter to normal position, a circuit for the operating electro-magnet, including all save one of the contacts on the escapement, and a local circuit made operative by the engagement of the last contact on the escapement device with one of the pawls, substantially as described. 4th. An escapement device having contacts at predetermined intervals and detents at intervals, a lever having long and short limit pawls alternately engaging the detents, an electro-magnet operating said lever, a cord wound under tension upon the shaft of the escapement device for giving progressive movement to the escapement device, an electro-magnet restoring it to normal position, a local circuit for the operating electro-magnet in which is included an armature of a relay and a main circuit for said relay, substantially as described. 5th. An escapement device having contacts arranged with reference to a predetermined combination of electrical pulsations, a lever carrying a long and short limit pawl, engaging alternately with the escapement device, a final contact but one 28a, upon said escapement device, lying in a separate circuit and the latter circuit operating the drop contact 41, said circuit being made operative by the engagement of the contact 28a, with one of the pawls of the lever, substantially as described. 6th. An escapement device having intermittent progressive movement varied in degree by the character of the electrical impulses sent over the line, said device having contacts arranged with accordance with a predetermined combination of such impulses and electrically connected together, a final but one contact 28a, in a separate circuit, said circuit made operative by the final impulse of said combination and a restoring contact 48, also carried by the escapement device by which the restoring circuit passing through the restoring electro-magnet 25, is made operative to restore the parts to normal position, substantially as described. 7th. A main line circuit, a relay operating the local circuit, an escapement is allowed to advance, (by a cord wound under tension upon the shaft of the escapement device) by successive steps, varied in length by the length of the impulses, and operating circuit made operative only by the last but one advance movement of the escapement device, and a restoring circuit acting directly and operated by the final advance movement of the escapement, substantially as described. 8th. An escapement device having a series of contacts arranged with reference to a certain combination of electrical impulses, a circuit operating said escapement device a local operating circuit made operative by one of the contacts of a series, a restoring or reversing circuit made operative by a separate contact on the escapement connected electrically with all but the last contact of the series, and a contact plate adjacent to the escapement by which the circuit of the restoring electro-magnet is rendered inoperative upon the escapement device reaching normal position, substantially as described. 9th. An escapement device provided with electrical contacts some of which are arranged to close a circuit through the restoring electro-magnet 25, in combination with an auxiliary circuit contact connection 29, and 31, whereby said circuit is retained by the electro-magnet 25, until the mechanism is restored to normal position by said electro-magnet 25, substantially as described. 10th. An electric circuit embracing a restoring electro-magnet, an auxiliary armature, its metallic point 31, the armature lever 4, its pawl 8, the shaft 17, and its escapement device having metallic points 28, and 48, contact plate 33, and its contact 34, said circuit being rendered active by any one of said metallic points upon the escapement device when brought in contact with pawl 8, whereby the circuit is established by the escapement device and is retained until the mechanism is restored to normal position and then broken, as herein described.

No. 36,136. Freight Car. (*Char à marchandises.*)

Charles Henry Kimball, Chelsea, Massachusetts, U. S. A., 13th March, 1891; 5 years.

Claim.—1st. A freight car, composed of a compartment for a source of heat, one or more compartments for storage, three courses of sheathing around the storage compartments, and a non-heat-conducting material between the outside and middle courses, and between the middle and inside courses, there being an air space completely closed from the outside continuing around the compartments and opening only into the heating compartment, as set forth. 2nd. The box car having the top, bottom, and ends, and also the sides of it from the door-ways therein to the said ends formed of two courses of sheathing *a*, and *b*, properly supported and arranged apart, and having the spaces between said courses packed with saw-dust or other suitable material, for the purpose set forth, and also having arranged within the inner course *b*, another course *c*, of the sheathing, a connected air space being left between said courses *b*, and *c*, within and throughout the bottom and ends, and also in the top, and sides, of the car, between the door-ways of the car and the said ends, substantially as shown and described. 3rd. The box car having the top, bottom, and ends, and also the sides of it from the door-ways in said sides to the said ends, formed of two courses of sheathing *a*, and *b*, properly supported and arranged apart, the spaces between the said courses being packed with saw-dust or other suitable material, for the purpose set forth, and also having arranged within the inner course *b*, another course *c*, of sheathing, a connected air space between the said courses *b*, and *c*, within and throughout the bottom, and ends, and also in the top, and sides, from the door-ways to the said ends of the car, and also having guides secured to each side of the chambers *F*, or *G*, in grooves between which are arranged to slide slot doors *D*, and *E*, constructed as described, a series of bulk-head boards *g*¹, also being arranged to slide in the grooves in which the door *E*, slides, all substantially as shown and described. 4th. A freight car, composed of two storage compartments, and a heating compartment, there being doors between them, and completely around the storage compartments an air space closed from the outside air and opening into the heating compartment, and around the entire car outside of the air space, a non-heat-conducting material, as set forth. 5th. The box car having the sliding doors *I*, *I*, formed in sections provided with air spaces, and hinged together as shown, an apron being fixed to the inner side of the upper section to cover the joint between them, said sections also having means of locking one to the other as shown, the slot doors *K*, and *L*, each arranged in

guides in which they are supported, either overhead or when drawn down into a vertical position against the inner face of the casing, or so as to close the door-ways and form a space *S*, between them and the sliding doors, to receive a packing of saw-dust or other proper material, substantially as shown and for the purpose described.

No. 36,137. Automatic Guide for Circular Saws. (*Guide automatique pour scies rondes.*)

Dexter Hazard and Frederick O. Clark, both of Marquette, Michigan, U. S. A., 14th March, 1891; 5 years.

Claim.—1st. The combination, with a circular saw, of guides or supports adapted to sustain the said saw at several points about its periphery, substantially as and for the purposes described. 2nd. The combination, with a circular saw, of guides or supports adapted to be brought against the surface of the saw, and support the same at three or more points about its periphery, substantially as and for the purposes described. 3rd. The combination, with a circular saw, of guides or supports adapted to be brought against the saw, each said guide or support embracing a considerable segment of the said saw, substantially as and for the purposes described. 4th. The combination, with a circular saw, of guides or supports at several points upon the surface of the saw adjacent to its periphery, said guides made in the form of segments, and means for adjusting said segments toward and from the saw mandrel, substantially as and for the purposes described. 5th. The combination, with a circular saw, of guides or supports at several points upon its surface adjacent to its periphery, each said guide or support provided with ribs *e*¹, and intermediate air channels *e*², substantially as and for the purposes described. 6th. The combination, with a circular saw, of guides or supports at several points upon its surface adjacent to its periphery, and provided with lubricators for lubricating the bearing surfaces of said guides, substantially as and for the purposes described. 7th. The combination, with a circular saw, of several guides or supports adapted to bear upon the surface of the saw adjacent to its periphery, and means for supporting the outer guides and inner guides independently toward and from the saw, substantially as described. 8th. The combination, with a circular saw, of guides adapted to be brought against both sides of the saw, and means for simultaneously adjusting in opposite directions those portions of the guides or supports which are in substantially the horizontal plane of the saw shaft, substantially as and for the purposes described. 9th. The combination, with the guides upon either side of the saw, of mechanism whereby all parts of said guides are simultaneously adjusted toward or from the saw, substantially as and for the purposes described. 10th. As a means for simultaneously adjusting against the saw, all those portions of the guide upon one side of the same, the combination, with the guides and the worm gears *f*², of the shafts *H*, *H*¹, and worms *h*, and an actuating hand wheel, substantially as and for the purposes described.

No. 36,138. Tack Driver.

(*Chasse-broquette.*)

Horace Malcolm Barnes, John Stephen Barnes, and Arthur Wellington Barnes, all of Detroit, Michigan, U. S. A., 14th March, 1891; 5 years.

Claim.—1st. In a tack driver, the combination of the magazine *F*, to hold the tacks, with the finger *M*, to separate the tacks, the rocking-bar *L*, on the rock-shaft *K*, actuating the fingers *M*, and *N*, the finger *N*, the rock-shaft *K*, the spring to rotate the rock-shaft, the arm *k*, projecting from the rock-shaft *K*, and the reciprocating bar *B*, as and for the purposes set forth. 2nd. In a tack driver, the combination of the magazine *F*, to hold the tacks, with the finger *M*, sliding into the magazine and actuated by the rocking-bar *L*, on the rock-shaft *K*, the finger *N*, actuated by the rocking-bar *L*, and sliding into the magazine, the rock-shaft *K*, the arm *k*¹, projecting from the rock-shaft *K*, the spring actuating the rock-shaft, the reciprocating hammer *B*, the cylinder *A*, containing the hammer *B*, and the feeding tube *G*, connecting the magazine with the cylinder *A*, all substantially as described. 3rd. In a tack driver, the combination of the magazine to hold the tacks, with the fingers *M*, and *N*, actuated by the rocking-bar *L*, and inserted in the magazine to hold and separate the tacks, the rocking-bar *L*, on the rock-shaft *K*, the rock-shaft *K*, the arm *k*¹, on the rock-shaft, the spring rotating the rock-shaft, the cylinder *A*, containing the reciprocating hammer *B*, the reciprocating hammer *B*, the feeding tube *G*, through which the tacks pass from the magazine to the cylinder *A*, and the lips *D*, *D*, held together by a spring, to hold the tacks for the hammer, all substantially as described.

No. 36,139. Sheet Metal Bar for Glazed Structures. (*Barreau de fenêtre en feuille de métal.*)

William A. Bass, Streator, Illinois, U. S. A., (assignee of Willard F. Mills, Kalamazoo, Michigan, U. S. A., 14th March, 1891; 5 years.

Claim.—1st. In a metallic window frame, the combination, with a series of multiform frame bars oppositely channeled, and each bent from a single blank of sheet metal, of a series of re-enforcing rods or bars that are enveloped with sheet metal, and then attached to the assembled frame bars, substantially as set forth. 2nd. In a structure of the character described, the box or rod *B*, having a sheet or strip of metal surrounding it, the longitudinal edges of the sheet or strip being formed into the attaching flanges *g*, substantially as set forth. 3rd. The combination, with the channeled bar *A*, formed of sheet metal bent to form parallel flanges *a*, *a*, *e*, *e*, and spaced webs *c*, of the bar *B*, having a sheet metal covering strip, the longitudinal edges of which are bent to form flanges *g*, to enter the space between the two webs *c*, substantially as set forth.

No. 36,140. Wrench. (*Clé à écrou.*)

Henry Marshal and Samuel K. Huntsinger, both of Lincoln, Nebraska, U.S.A., 14th March, 1891; 5 years.

Claim.—1st. In a wrench, the combination, with a rectangular stock terminating at its upper end in a transverse head or jaw and at its lower end in opposite handle-sections, combining to form a socket in rear of the stock, of a sliding jaw mounted on the stock between the head and handle, having its rear face provided with transverse teeth, and a lever pivoted in the head in rear of the jaw and having its inner face provided with teeth for engaging those of the jaw, and its lower end adapted to fit between the handle sections and constitute the remainder of the handle, substantially as specified. 2nd. In a wrench, the combination, with the stock terminating at its upper end in a transverse head, and at its lower end in opposite handle-sections extended in rear of the stock and combined to form a recess, and a sliding jaw mounted on the stock between the head and handle, and having its rear face provided with transverse teeth, of a locking lever pivoted at its upper end in an opening in the head in rear of the stock, and having its inner face provided with teeth for engaging those of the jaw, said lever being adapted to fit within the socket formed by the handle sections, and to thus complete the handle, and carrying a ring at its lower end adapted to swing over the lower reduced end of the handle, substantially as specified. 3rd. The shank *l*, having the handle at one end, and the jaw at the other and above the handle, provided with the curved tooth recess *15*, in combination with the lever *11*, pivoted to the head and toothed opposite the recess, substantially as specified.

No. 36,141. Grinding Attachment for Mowing Machines. (*Appareil à aiguiser pour moissonneuses.*)

The Kellogg Section Grinder Company, (assignees of Clement Augustine Kellogg), all of Elkton, Ohio, U.S.A., 14th March, 1891; 15 years.

Claim.—1st. A grinding attachment for mowing machines, provided with grindstones having a section of wood or analogous, non-grinding material secured thereto to prevent grinding the ridge at the front end of the knives, substantially as described. 2nd. A grinding attachment for mowing machines, consisting of one or more yokes carrying grindstones, and secured to a rod adapted to be secured to the finger-bar, and passing through the yokes, in combination with springs secured to said rod and to the yokes, substantially as described. 3rd. A grinding attachment for mowing machines, consisting of one or more yokes and grindstones, a rod adapted to be attached to the finger-bar, supporting said yoke or yokes, and a tension device bearing on said yokes and operated positively by a lever, substantially as described. 4th. A grinding attachment for mowing machines, consisting of one or more yokes supporting grindstones, a rod adapted to be attached to the finger-bar passing through said yoke or yokes, a spring coiled around said rod, secured at its ends to the yoke and provided with a loop, in combination with a spur projecting from the rod and extending through the loop, substantially as described. 5th. A grinding attachment for mowing machines, consisting of a rod adapted to be attached to a finger-bar, swinging yokes secured upon said rod, and extending rearwardly beyond the rod, and grindstones supported by said yokes, in combination with a spur secured to the rod and projecting rearwardly to the end of the yokes, and springs for applying the grindstones to the knives, substantially as described.

No. 36,142. Gauge for Lumber.

(*Jauge pour bois.*)

The Burrell Johnson Iron Co., (assignees of Benjamin Raymond Pat-ten), all of Yarmouth, Nova Scotia, U.S.A., 14th March, 1891; 5 years.

Claim.—1st. The combination, with the vertical gauge roller *K*, journaled in the hinged frame *J*, of the tubular standard *B*, the sliding table *A*, grooves *a*, the dial *C*, having notches *c*, and numerals *D*, the rod *G*, journaled in the said standard *B*, having a pinion *F*, engaging the rack *E*, the crank *H*, handles *h*, and pawl *I*, substantially as set forth. 2nd. In a vertical lumber gauge for saw mills, the combination, with the standard *B*, rod *G*, pinion *E*, engaging a stationary rack crank *H*, handles *h*, pawl *I*, having a weighted end *i*, of the dial *C*, having notches *c*, and numerals *D*, substantially as set forth.

No. 36,143. Balance for Window Sashes.

(*Contre-poids de croisée.*)

Emery Nixon, Robert George Waite, and Frank Armstrong, all of Toronto, Ontario, Canada, 14th March, 1891; 5 years.

Claim.—1st. As an improved window sash balance, a cylindrical casing loosely journaled on its central spindle, a helical spring connected at one end to the central spindle, and at the other to a post in the casing, and a metal ribbon, one end of which is connected to the periphery of the cylindrical casing, and the other end to the bottom of the sash, substantially as and for the purpose specified. 2nd. As an improved window sash balance, a cylindrical casing loosely journaled on its central spindle, a helical spring connected at one end to the central spindle, and at the other to a post in the casing, and a metal ribbon, one end of which is connected to the periphery of the cylindrical casing, and the other end to the bottom of the sash, in combination with the toothed wheel and double-acting dog, arranged substantially as and for the purpose specified. 3rd. As an improved window sash balance, a cylindrical casing loosely journaled on its central spindle, a helical spring connected at one end to the central spindle, and at the other to a post in the casing, and a metal ribbon, one end of which is connected to the periphery

of the cylindrical casing, and the other end to the bottom of the sash, in combination with the toothed wheel and double-acting dog *h*, which is held in position by being between the inner end of the casing *A*, and the bracket *C*, substantially as specified. 4th. As an improved window sash balance, a cylindrical casing loosely journaled on its central spindle, a helical spring connected at one end to the central spindle, and at the other to a post in the casing, and a metal ribbon, one end of which is connected to the periphery of the cylindrical casing, and the other end to the bottom of the sash, in combination with the toothed wheel and double-acting dog *h*, which is held in operative connection with the toothed wheel by the spring *I*, substantially as and for the purpose specified. 5th. A toothed wheel *H*, secured to or forming part of the cylindrical casing *A*, in combination with the dog *h*, having a slot *i*, into which the pin *h'*, extends, and a spring *I*, having a broadened U-shaped end against the sides of which the upper end of the dog *h*, is held in the different positions it assumes, substantially as and for the purpose specified.

No. 36,144. Carding Machine.

(*Machine à carder.*)

Samuel Shoefelt and Joseph Mayor, both of Cornwall, Ontario, Canada, 16th March, 1891; 5 years.

Claim.—1st. The combination in a carding-machine, with the lick-in, of a screen consisting of a concave perforated plate secured under the lick-in, and a frame provided with transverse wires or bars, the said frame being hinged to the concave perforated plate, and a device for adjustably securing the hinged-frame, as described. 2nd. The combination, with the concave perforated plate *9*, provided with the end ribs *11*, and the flange *12*, of the concave-screen *14*, hinged to the plate *9*, provided with the end and center ribs *17*, the closely-spaced wires or bars *18*, near the hinged edge and the wide-spaced wires or bars *19*, adapted for use with the lick-in of a carding-machine, as described.

No. 36,145. Horse Shoe. (*Fer à cheval.*)

Walter Thompson, Newark, New Jersey, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. In a horse shoe, provided with slots, rubber, or elastic cushions or calks, adapted to fit into said slots, as described and for the purposes set forth. 2nd. The combination, with a horse shoe, provided with slots having angular sides, as shown, of rubber or elastic cushions or calks adapted to fit into said slots and having their surfaces extending slightly beyond the surface of the shoe, as set forth. 3rd. The combination, with a horse shoe, provided with slots having angular and grooved sides, as shown, of rubber or elastic cushions or calks, and projections or lugs on the sides of said calks, said calks being adapted to fit into said slots and grooves, as described and for the purposes set forth.

No. 36,146. Corn Product for Brewing.

(*Blé à l'usage des brasseries.*)

Harvey Bates, Indianapolis, Indiana, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. As a new article of manufacture, the herein described corn product, consisting of dry, very tender, uncooked or gelatinized and very absorbent flakes. 2nd. The process of preparing corn, which consists in soaking the corn in warm water, in contradistinction to the use of steam, until perfectly soft throughout, then drawing the water from the grains, then rupturing the maximum of starch corpuscles by laminating the grain between cold rolls, and subsequently drying the resulting flakes, substantially as hereinbefore described.

No. 36,147. Switch for Railways.

(*Aiguille de chemin de fer.*)

Aaron A. Ackerly, Chicago, Illinois, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. The combination, with the laterally-movable main rail *A*, of the laterally-movable siding-rail *B'*, rigidly connected to said rail *A*, at its front end, the fixed siding rail *B*, the fish plates *D* and the bolts *d* connecting said fish-plates and provided with sleeves or thimbles *d'*, said plates passing through suitable slots *b*, in the movable rail *B'*, substantially as and for the purposes specified. 2nd. The combination, with the laterally-movable crossing rails *A* and *B'*, rigidly connected at their meeting ends, of the filling *A²*, of wood or other suitable material, secured in the angle between said rails, substantially as and for the purposes specified. 3rd. The combination, with the laterally-movable switch and crossing rails and their operating mechanism, of locking mechanism for securing the same in position, and guard-slides connected to the fixed main and sliding rails between the switch and crossing-rails and controlled by the locking mechanism, substantially as and for the purposes specified. 4th. The combination, with the lock *G*, link *g²* and bell crank *g¹*, of the hand-lever *G¹*, connecting rod *g*, three-armed lever *G²*, transverse rod *G³*, bell-crank lever *G⁴*, and the slides *H* and *H¹* connected respectively to the three-armed lever *G²* and bell-crank lever *G⁴*, substantially as and for the purposes specified. 5th. The combination, with the laterally movable switch and crossing rails, of the switch stand and its operating lever, and suitable connecting rods and intermediate levers, the pivots whereby the connecting rods are connected to said levers, being adjustable toward and from the fulcrum of the lever, substantially as and for the purposes specified. 6th. The combination, with the laterally-movable switch rails *C* and their operating lever, of the connecting rods, the intermediate lever *F*, provided with slots *j*, the blocks *J* mounted in said slots and adjustable therein, securing devices for said blocks and the pivots *i* and *i²* mounted in said blocks, substantially as and for the purposes specified.

No. 36,148. Odour Diffusing Apparatus.*(Appareil pour la diffusion des parfums.)*

John Augustus Gibbons, Toronto, Ontario, Canada, 16th March, 1891; 5 years.

Claim.—1st. An odour diffusing apparatus, consisting of a vessel to contain the fluid, a cage and tray to gradually receive the fluid from the vessel, and a ball stopper to close the mouth of the vessel when required, substantially as and for the purpose specified. 2nd. An odour diffusing apparatus, consisting of the cylindrical vessel A, having holes, a neck E, having holes *a* at its bottom edge, in combination with the plate F, with hole *f* and ball stopper I, attached in position by spring H, substantially as and for the purpose specified. 3rd. The cylindrical vessel A, having holes *a*, neck E, having holes *e* at its bottom edge, in combination with the plate F, with holes *f*, ball stopper I attached in position by spring H and tube G, with holes *g* arranged as and for the purpose specified. 4th. The cylindrical vessel A, having holes *a*, neck E, having holes *e* at its bottom edge, cage B, tray C and perforated casing J, in combination with the plate F, with hole *f*, ball stopper I attached in position by spring H and tube G, with holes *g* arranged as and for the purpose specified. 5th. The cylindrical vessel A, having holes *a*, neck E, having holes *e* at its bottom edge, cage B, tray C and perforated casing J, in combination with the plate F, with hole *f*, ball stopper I attached in position by spring H and tube G, with holes *g* and cylindrical casing L, arranged as and for the purpose specified.

No. 36,149. Electric Belt.*(Ceinture électrique et suspensoir abdominal.)*

Harvey Cortland, Toronto, Ontario, Canada, 16th March, 1891; 5 years.

Claim.—A belt, consisting of a rear waist section, and a front abdominal section connected at the hips by an elastic and lacing, both sections having a row of alternately copper and zinc magnets connected by a circuit wire J, and wires L, M, at the hips to connect with one another or with a portable battery N, worn by the wearer of the belt, and perforated strips P, of eel skin covering said magnets and stitched to the belt on the inside, as set forth.

No 36,150. Governor for Water Wheels.*(Gouverneur pour roues hydrauliques.)*

Thomas H. Coulter and Floyd Ambrose Taft, both of Dayton, Ohio, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. In a speed regulator, the combination of the pulley B, spur wheels D and E, bevel wheels I, I, ratchet wheels O and P, driving arms A¹, provided with the compound dogs composed of parts 6 and 7, the pawls 22, disengaging dogs 19 and 20, bevel pinion J on the shaft K, having a worm gear connection with the shaft N, which regulates the water wheel gate with the shifting arm 18 on the sliding bar 16, moved to trip the dogs on the driving arm, substantially as set forth and described. 2nd. The combination of a ball governor arranged to operate the bent lever U, and shifting arm 18, with the driving arm A¹, provided with the compound dogs 6 and 7, and disengaging dogs 19 and 20, the ratchet wheels O and P, bevel wheels I, I, shaft K and N and worm gear L and M, substantially as set forth and described.

No. 36,151. Folding Rack for Clothes.*(Porte-habit pliant.)*

Emily S. Shoenerberger, assignee of William Hamilton Shoenerberger, both of Cobourg, Ontario, Canada, 16th March, 1891; 5 years.

Claim.—1st. The combination, with the back of a bedstead, of an arm provided with hooks, and hinged or otherwise movably fixed to the back of the bedstead, substantially as and for the purpose specified. 2nd. An arm A, hinged or otherwise movably fixed to the back of the bedstead C, in combination with a shelf F hinged to the arm, and clothes hooks D hinged within a recess E, made in the side of the arm, substantially as and for the purpose specified. 3rd. An arm A, hinged or otherwise movably fixed to the back of the bedstead C, and supported by the hinged brace H, in combination with a shelf F hinged to the arm A and supported by the hinged bracket G, the clothes hooks D hinged within the recess E, made in the side of the arm A, substantially as and for the purpose specified.

No. 36,152. Cooler for Tuyeres.*(Refrigerateur de tuyère.)*

Jean Baptiste Vincent, Montreal, Quebec, Canada, 16th March, 1891; 5 years.

Claim.—1st. The combination of a jacketed tuyère cold water-feed overflow and reservoir, substantially as and for the purpose hereinbefore set forth. 2nd. The indicating float in the reservoir of a tuyère cooler.

No. 36,153. Machine for Forming Sheet Metal Can Bodies.*(Appareil pour la fabrication des boîtes à conserves.)*

Mathias Jensen, and the Jensen Can Filling Machine Company, all of Astoria, Oregon, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. In a machine of the character described, the combination with a clamp for holding the blank, of a longitudinally-reciprocating edge-turning block or folder, to travel along the edge of the blank and fold or turn it, substantially as set forth. 2nd. The combination, with a clamp for holding the blank, of the two oppo-

site, longitudinally-reciprocating edge-turning blocks or folders to travel along opposite edges of the blank, and fold or bend said edges respectively over upon opposite sides of the blank to simultaneously form the interlocking hooks at a single stroke, substantially as set forth. 3rd. The combination, with a frame having fixed longitudinal guide-ways and a horizontal, longitudinally-slotted table above said guide-ways, of a reciprocating carrier under the table on said guide-ways, and having dogs projecting up through the slots in the table, and opposite yielding arms on the carrier, substantially as set forth. 4th. In a can body forming machine, the combination with a fixed table, of a reciprocating carrier provided with dogs for feeding the sheet metal blanks forward on the said table, and yielding arms pivoted on the said carrier and adapted to engage the ends of the blank to guide the latter forward, substantially as shown and described. 5th. In a can body forming machine, the combination, with fixed rounded dies, of movable dies reciprocating over the said fixed dies to partly bend and to clamp the blank, and folding blocks mounted to reciprocate longitudinally and having grooved ends adapted to engage and move along the ends of the blank and press the same over the edges of the fixed dies, substantially as shown and described. 6th. In a can body forming machine, the combination with a reciprocating carrier provided with dogs adapted to feed the sheet metal blank forward, of spring-pressed pivoted arms provided with grooves in their free ends to receive the lips of the sheet metal blank, substantially as shown and described. 7th. In a can body forming machine, the combination, with pivoted arms supported on springs and supporting the sheet metal blank, of a pair of bending tongs adapted to engage the sheet metal blank to bend the same and to disengage its lips from the said pivoted arms, substantially as shown and described. 8th. In a can body forming machine, the combination, with pivoted arms supported on springs and supporting the sheet metal blank, of a pair of bending tongs adapted to engage the sheet metal blank to bend the same and to disengage its lips from the said pivoted arms, and a fixed horn in line with the said arms and pair of tongs, and over which the sheet metal blank is bent, substantially as shown and described. 9th. In a machine of the character described, the combination, with a horn having a longitudinally-extending shoulder along one side, of a bending tong adapted to close around the horn and having the free ends of its members constructed to overlap at said shoulder, the end of the overlapped member being adapted to press a previously folded edge of the can body against said shoulder, and the end of the outer or overlapping member projecting across the shoulder to force the opposite folded edge past the first-named edge, and an interlocking mechanism at the shouldered end of the horn to engage the folded edges of the body, hold them when released by the tongs and interlock them, substantially as set forth. 10th. In a machine of the character described, the combination, with the horn in the form of a volute, the groove and shoulder formed thereby, extending along the lower side of the horn, of a bending tong above the horn and adapted to embrace the same to bend a previously folded or lipped blank there around, and bring the folded ends into position for interlocking, and a transversely-movable lever below the shoulder to force the lower or outer folded end of the blank inwardly into the fold of the opposite end, the inner fold being supported by said shoulder, substantially as set forth. 11th. The combination, with the horn and the bending tongs to bend the blank around the horn to bring its previously-folded ends into position, the free ends of the tongs being provided with overlapping toothed prongs, of a lever reciprocating transversely under the said horn, and having its upper end provided with teeth to pass between the teeth of said prongs and interlock the said folded ends of the blank, substantially as set forth. 12th. The combination, with the horn, of a bending tong to bend the blank around the horn to bring its folded ends into position, the free ends of the tongs having prongs or stops to limit the movement of the blank along the horn previous to bending, substantially as set forth. 13th. The combination, with the horn and the bending tongs to bend the blank around the horn and bring its previously folded ends into position, the free ends of the tongs being provided with overlapping prongs having teeth, of a transversely-swinging, interlocking lever having its upper end rounded, toothed and shouldered to pass between the prong teeth and engage the lower or outer folded edge of the can, and interlock it with the other folded edge, substantially as set forth. 14th. In a can body forming machine, the combination, with a horn supporting the sheet metal can body, of a roller mounted to turn in the said horn and projecting below the same, a second roller in line with the said first named roller, and a reciprocating carrier for turning the said second roller and sliding the can body over the said horn, its seam passing between the said rollers, substantially as shown and described. 15th. In a can body forming machine, the combination, with a horn supporting the sheet metal can body, of a roller mounted to turn in the said horn and projecting below the same, a second roller in line with the said first named roller and a reciprocating carrier for turning the said second roller and sliding the can body over the said horn, its seam passing between the said rollers, and yielding bearings for the said second roller, substantially as shown and described. 16th. In a can body forming machine, the combination, with a horn, of a carrier frame hinged on the end of the said horn, and adapted to receive the can bodies directly from the said horn, substantially as shown and described. 17th. In a can body forming machine, the combination, with a horn, of a carrier frame hinged on the end of the said horn and adapted to receive the can bodies directly from the said horn, and a reciprocating frame provided with yielding hooks for moving the can bodies from the said horn onto the said hooks for moving the can bodies from the said carrying frame and around it, of a reciprocating frame held over the said carrying frame and provided with dogs to move the can body forward on the said carrying frame, substantially as shown and described. 18th. In a can body forming machine, the combination, with a can body carrying frame constructed to receive the can bodies upon and around it, of a reciprocating frame held over the said carrying frame and provided with dogs to move the can body forward on the said carrying frame, and dogs held on the said carrying frame, to engage the interior of the can bodies to prevent a backward movement thereof, substantially as shown and described. 20th.

In a can body forming machine, a fluxing device comprising a reservoir, an elevated tank and an oscillating ladle for transferring the acid from the said reservoir to the said tank, substantially as shown and described. 21st. In a can body forming machine, the combination, with a horn, a can body carrying frame secured to one end of the horn and upon and around which the can bodies pass from the horn, and a mechanism for moving the can body along the said frame, of a fluxing device held below the said frame, and provided with an acid tank through which passes the seam of the can body, substantially as shown and described. 22nd. In a can body forming machine, the combination, with a can body carrying frame, and a mechanism for moving the can body along the said frame, of a fluxing device held below the said frame and provided with an acid tank through which passes the seam of the can body, and a moistener held in the said frame and adapted to pass over the inside of the seam, and hung into the said tank, substantially as shown and described. 23rd. In a can body forming machine, the combination, with a can body carrying frame, and a mechanism for moving the can body along the said frame, of a fluxing device held below the said frame and provided with an acid tank through which passes the seam of the can body, a moistener held in the said frame and adapted to pass over the inside of the seam and hung into the said tank, and an inside wiper hung on the said frame to remove the surplus acid from the inside of the seam, substantially as shown and described. 24th. In a can body forming machine, the combination, with a can body carrying frame to receive the cans upon and around it directly from the horn and having an inside moistener and wiper, and a mechanism for moving the can body along the said frame, of a fluxing device held below the said frame and provided with an acid tank through which passes the seam of the can body, and a fixed wiper held on the said tank under the inside wiper, to wipe the acid from the outside of the seam after the can leaves the tank, substantially as shown and described. 25th. In a can body forming machine, the combination, with a can body carrying frame, and a mechanism for moving the can bodies on the said frame, of a soldering reservoir held below the said frame and provided with a tank containing molten solder through which passes the seam of the can body, the upper end of the tank having a supplying mechanism connected therewith, and the lower end of the tank discharging into the reservoir, whereby the solder will flow through the interior of the can along its seam as the can is fed along the frame, substantially as shown and described. 26th. In a can body forming machine, the combination, with a straight, longitudinally-extending can body carrying frame, a horn from which the can bodies are discharged upon the said frame, and a mechanism for moving the can bodies on the said frame, of a reservoir held below the said frame and provided with a tank containing molten solder through which passes the seam of the can body, and means, substantially as described, for automatically filling the said tank with molten solder at its upper or outer end, the lower end of the tank discharging the surplus solder back into the reservoir and delivering the flow of solder into the can body along its seam, substantially as shown and described. 27th. In a can body forming machine, the combination, with a straight, longitudinally-extending can body carrying frame provided with an upwardly-inclined end, a horn from which the can bodies are discharged upon and around said frame, and a mechanism for moving the can bodies over the said end, of a soldering device held under the main or straight part of the frame and near the said inclined end, to permit the surplus solder on the can bodies held on the inclined end to flow back into the said reservoir, substantially as shown and described. 28th. In a can body forming machine, the combination, with a horn, a can body carrying frame connected to the horn and receiving the can bodies upon and around it directly from the horn, and a mechanism for moving the can bodies on the said frame, of a wiper comprising an arm pivoted in the said frame and a cloth secured on the free end of the said arm and adapted to engage the inside of the seam of the can body, substantially as shown and described. 29th. In a can body forming machine, the combination, with a horn, a can body carrying frame pivoted to the end of the horn to receive the can bodies upon and around it, and a mechanism for moving the can bodies over the said frame, of a transversely-extending wiping brush mounted to revolve below and across the delivery end of the said frame and adapted to engage the exterior of the can body seam, substantially as shown and described. 30th. In a can body forming machine, the combination, with a can body carrying frame, and a mechanism for moving the can bodies over the said frame, of a wiping brush mounted to revolve below the said frame and adapted to engage the exterior of the can body seam, and a weighted arm carrying said brush to press the latter into contact with the seam, substantially as shown and described. 31st. In a can body forming machine, the combination, with a can body carrying frame, and a mechanism for moving the can bodies over the said frame, of a wiping brush mounted to revolve below the said frame and adapted to engage the exterior of the can body seam, a weighted arm carrying said brush to press the latter into contact with the seam, and means, substantially as described, for imparting a rotary motion to the said brush, as set forth. 32nd. In a can body forming machine, the combination, with a horn and a can body carrying frame hinged thereto to receive the can bodies upon and around it, and provided with a grooved roller in its outer end to engage the interior of the can bodies, of a second roller in frictional contact with the said first named roller, substantially as shown and described. 33rd. In a can body forming machine, the combination, with a horn and a can body carrying frame hinged thereto to receive the can bodies upon and around it, and provided with a grooved roller in its outer end to engage the interior of the can bodies, of a second roller in frictional contact with the said first named roller, and means for imparting motion to the said second roller, substantially as shown and described. 34th. In a can body forming machine, a feed table comprising a slotted plate, an inclined transverse bar for supporting the sheet metal blanks, and wedges held in the said plate in front of the said bar, substantially as shown and described. 35th. In a can body forming machine, a feed table comprising a slotted plate, an inclined transverse bar for supporting the sheet metal blanks, wedges held in the said plate in front of the said bar and springs for holding the sheet metal blanks in place, substantially as shown and described. 36th. In a can body forming machine, the combination, with

fixed, rounded female dies and concave male dies adapted to operate over the female dies, and a reciprocating head carrying the said male dies, of a carrier to present the blanks to said dies in its forward movement, and provided at opposite sides with folders or lip-forming blocks to engage the ends of the blank in the rearward movement of the carrier, substantially as shown and described. 37th. In a can body forming machine, the combination, with a fixed plate having guide-ways, of a reciprocating carrier, and upwardly-projecting arms pivoted on the said carrier at opposite sides of the center to move toward each other and engage the end edges of the blank and engaging the said guide-ways, substantially as shown and described. 38th. In a can body forming machine, the combination, with a fixed plate having guide-ways in its lower face, of a reciprocating carrier under said plate, and arms pivoted on the said carrier at opposite sides of its center to swing towards each other and engage the end edges of the can blank and engaging the said guide-ways with their upper ends, and springs pressing on the said pivoted arms to open them, substantially as shown and described. 39th. In a can body forming machine, the combination, with a fixed plate of a fixed, longitudinally-slotted table held below the said plate, a blank-receiving space being formed between the two, and a reciprocating carrier sliding under the said fixed table and provided with pivoted dogs projecting up through the slots in the table into said space to move the blank sheet along the said table under the said plate, substantially as shown and described. 40th. In a can body forming machine, the combination, with a fixed plate, of a fixed, longitudinally-slotted table held below the said plate, a blank-receiving space being formed between the two, a reciprocating carrier sliding under the said fixed table and provided with pivoted dogs projecting up through the slots in the table into said space to move the blank sheet along the said table under the said plate, and bars mounted yieldingly in the lower face of said plate to press the blank sheet upon the fixed table, substantially as shown and described. 41st. The combination, with a horn in the form of a volute, and having a vertical, central, longitudinal recess intersecting the longitudinal shoulder and groove formed by the two diameters, and a seaming roller mounted in said recess and projecting therethrough into the longitudinal groove, of a yielding seaming roller mounted in the vertical plane of and adjacent to said horn roller, substantially as set forth. 42nd. The combination, with the horn and the bending tongs to bend the blanks around the horn to bring their previously folded or hooked edges into position, of an inter-locking mechanism under the horn to interlock the said hooked or folded edges, and seaming rollers in advance of the said tongs and inter-locking mechanism to press the interlocking seams into permanent union, substantially as set forth. 43rd. The combination, with a feed table, stationary dies at the forward end thereof, a horn in advance of the said dies, and a vertically-reciprocating head having dies corresponding to the first named dies, of a bending tongs over the horn to bend the blanks therearound, and a carrier provided with dogs, one in advance of the other, to successively feed the blank in its forward stroke between the dies, then to the horn, and then along the horn, and opposite folders or edge-turning blocks in the carrier to act in connection with the lower outer edges of said stationary dies and fold the end edges of the blank on the rearward stroke of the carrier, substantially as set forth. 44th. The combination, with the feed table, the stationary dies at the forward end thereof, the horn in front of the dies, blank holders above the horn, a reciprocating die over the stationary dies, and a bending tongs over the horn and above the blank holders, to force the blank therefrom and around the horn, of a carrier having dogs to successively feed the blank between the dies, then to the holders over the horn, and then along the horn, and folders or edge-bending blocks on the carrier to act on the back stroke of the carrier upon the end edges of the blank and bend them prior to the delivery of the blank to the holders over the horn, and an interlocking mechanism under the horn to interlock said folded or hooked edges, substantially as set forth. 45th. The combination, with the feed table, the clamping and bending dies at the front end thereof, a horn in front of said dies, a carrier frame secured to the front end of the horn in longitudinal alignment therewith, blank-bending tongs over the horn, a seam interlocker under the horn, and seam pressing rollers at the forward end of the horn, of a carrier having dogs to successively present the blank between the said dies, then to the horn, and then force them along the horn to the seaming dies, folders or bending blocks on the carrier and acting on its rear stroke to fold the end edges of the blank while held by the said dies, and mechanism for feeding the now seamed bodies from the horn to the carrier frame, substantially as set forth. 46th. The combination, with the feed table, the dies at the front end thereof, the longitudinally-grooved horn and the bending and seam interlocking mechanisms operating in connection therewith, of a carrier having edge folders or bending blocks acting on the back stroke thereof with respect to the carrier to feed the blank to the dies, and then to the horn, and laterally-swinging arms or dogs pivoted to the front end of the carrier and projecting in front thereof to enter the grooves in the horn and adapted to push the can body along the horn, substantially as set forth. 47th. The combination, with the longitudinally-grooved horn having a longitudinally-aligned can carrier secured to its forward end to receive the can bodies upon and around it from the horn, and the seam-forming mechanism, of a carrier having dogs to feed the blank to the horn, and laterally-swinging dogs or arms projecting in front of the carrier to enter the grooves in the horn and adapted to feed the can body along the horn, a reciprocating frame above the said carrier and provided with swinging hooked arms at its rear end to enter the horn grooves behind the can body and remove said body from the horn, to the can carrier, and dogs on said reciprocating frame, one in advance of the other, to feed the can body successively and fluxing and soldering mechanism below the carrier to which the can bodies are presented by said dogs, substantially as set forth.

No 36,154. Cattle Guard. (*Garde-bétail.*)

The National Surface Guard Company, (assignees of James Thomas Hall), all of Chicago, Illinois, U.S.A., 16th March, 1891; 5 year.

Claim.—1st. A surface cattle guard secured in position by engaging with the rails, substantially as described. 2nd. A surface cattle

guard secured in position by a bar, engaging with the rails, and secured to the guard sections, substantially as described. 3rd. In a surface cattle guard, the combination, with the inner and outer sections of the bar K, centrally engaging with the rails, and having its ends secured respectively to the inner and outer sections, substantially as described. 4th. In a surface cattle guard, the combination, with the inner and outer sections of the bar K, having the depression L, engaging with the rail and the bolts M, engaging with the inner and outer sections respectively, substantially as described. 5th. In a surface cattle guard constructed in the form of gratings, the central section between the rails constructed of two parts, substantially as described. 6th. A surface cattle guard composed of four like interchangeable parts, substantially as described. 7th. In a surface cattle guard, a grating consisting of strips of metal connected together and having a series of upwardly projecting edges and inclined sides, substantially as described. 8th. In a railway surface cattle guard, sections formed of inverted V-shaped bars, substantially as described.

No. 36,155. Reaper and Harvester.

(*Faucheuse et moissonneuse.*)

Richard Hornsby and Sons, Limited, (assignees of James Hornsby, John Innocent, and John Henry Smith), all of the Spittlegate Iron Works, Grantham, Lincoln, England, 16th March, 1891; 5 years.

Claim.—1st. The mechanism, substantially as described, for straining the endless carrying bands and keeping the rollers they pass around parallel the one to the other, such mechanism consisting of a pair of bars carrying the bearings in which one of the rollers is held, and pressed forward by springs and caused to move in unison by a rod or axis, with pinions gearing with teeth formed on the bars. 2nd. In an apparatus for straining the endless bands used in reaping machines, the combination, consisting of the roller *g*, the bearings *r*¹, *r*², receiving the axes of the roller *g*, bars carrying the said bearings and having in them slots *r*³, provided on one side with teeth *r*⁴, springs *t*, pressing forward the said bars and pinions *u*, *u*, on an axis *w*, gearing with the teeth *r*⁴.

No. 36,156. Means for Attaching Truss Rods to and Under Waggon Axles. (*Manière d'attacher les tirants aux et sous les essieux de wagon.*)

Bernard Wood and George Wood, Kincardine, Ontario, Canada, 16th March, 1891; 5 years.

Claim.—The truss rod hook D, D, fig 3, and the manner in which it is attached to the axle, and to the truss rod or link C, substantially as and for the purposes hereinbefore set forth.

No. 36,157. Switch for Railways.

(*Aiguille de chemin de fer.*)

Aaron A. Ackerly, Chicago, Illinois, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. The combination, with the crossing-rails A, and B¹, one pair of which is laterally movable, of the saddle or chair E, provided with projections E¹, located one on each side of the crossing, and each having a height substantially equal to that of the rails, whereby a bearing for the tread of the wheels is formed in both positions of the movable rails, substantially as and for the purposes specified. 2nd. The combination, with the crossing-rails A, and B¹, one pair of which is laterally movable, of the saddle E, having a bearing-surface for the said rails, a central projection *e*, to fit between the fixed rails, and lateral projections E¹, these latter being both of a height substantially equal to that of the rails, substantially as and for the purposes specified. 3rd. The combination, with the crossing-rails, arranged in pairs, one of which pairs is movable, of an arm attached to said movable pair, a locking device arranged immediately adjacent thereto to positively engage said arm and lock the movable rails, the switch-stand provided with a lever and connecting devices to move the said crossing-rails laterally, and a separate lever and separate connecting devices, whereby said locking device may be operated from the switch-stand, substantially as and for the purposes specified. 4th. The combination, with the movable crossing-rail, of an apertured bar secured thereto, a keeper through which said bar slides, a spring-controlled locking-bolt for actuating said apertured bar, and operating mechanism for actuating said bolt, substantially as and for the purposes specified. 5th. The combination, with the movable rail A, having apertured bar G¹, of the fixed rail A¹, having apertured bar G², the box or keeper G, to receive said bars, and the locking-bolt H, substantially as and for the purposes specified. 6th. The combination, with the laterally-movable crossing rails and the rock-shaft F¹, for operating the same said rock-shaft being provided with a cam, of the sleeve J, mounted on said rock-shaft and free to move vertically on and around the same, the handle-lever and its bar provided with seats for locking the same, and the spring locking-bolt connected to said sleeve and operated thereby, whereby the rotation of the rock-shaft will free the locking-bolt, substantially as and for the purposes specified.

No. 36,158. Stand for Switches.

(*Bati d'aiguille de chemin de fer.*)

Fred William Snow, Hillburn, New York, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. A switch stand, composed of a pillar with base adapted to be secured upon one or more ties, and provided in its lower

portion with a bearing for a vertical spindle, and at the upper end with an angular throated neck, a block having a vertical eye serving as journal bearing for a vertical spindle, and corresponding in cross section to and fitting slidably in the angular neck of the pillar, and provided at its upper end with beveled clutch teeth, a cap resting upon the upper end of the pillar and having downward projecting clutch teeth which are the counterpart of the clutch teeth of the angular block, and having its lower part provided with a vertical eye in which the vertical spindle may rotate, and a square recess in its upper part adapted to receive and engage a square projection, a vertical spindle carrying a crank at its lower end, and of circular cross section as far as it extends through said lower bearing angular block and the lower part of the cap, and of square or angular cross section above that, a spring coiled upon the circular part of said spindle and holding up the angular block, a long sleeve corresponding in cross section to and fitting upon the upper square or angular portion of the spindle, and pinned or bolted thereto, a block or outer sleeve fitting slidably upon said inner sleeve and having at its lower end a square projection adapted to engage the square recess in the cap, and provided with a lug adapted to pass through the fork of a lever, a lever forked to straddle the long angular sleeve, and having its forked ends pivoted to the upper end thereof, and adapted to engage the lug of the outer sleeve, and straps connecting said lever and outer sleeve or block and pivoted at their upper ends to said lever near the pivotal end, and adapted to lift said sleeve or block out of engagement with the cap when the lever is raised, substantially as set forth. 2nd. In a switch stand, the combination of a pillar A, having arched or gapped base *a*, stops *a*¹, and angular throated neck at the upper end, a sliding block of angular cross section corresponding to and fitting in the angular throat of the pillar, and having eye *b*¹, and beveled clutch teeth *b*¹, the cap C, having clutch teeth *c*¹, eye *c*¹, and square recess *c*¹, spindle D, having crank D¹, spring E, coiled upon the spindle D, extending between the bearing *a*¹, and block B, sleeve F, of angular external cross section fitting upon and being rigidly secured to the upper portion of the spindle, an outer sleeve or block G, having an angular eye *g*, to fit and slide upon the sleeve F, and a square downward projection *g*¹, adapted to engage the recess *c*¹, and provided with lug *g*¹, forked lever H, pivoted to the sleeve F, and adapted to engage the lug *g*¹, and links H¹, connecting said lever and block G, substantially as set forth. 3rd. In the switch stand pillar, the combination of an arched or gapped base plate *a*, adapted to be secured upon the ties, and the gap or arch affording room for the play of the crank stops *a*¹, to restrict the motion of the crank on the under side of said base, a vertical bearing *a*¹, in said base, a hollow conical body formed integrally with said base and terminating at the top in a neck having a square or angular throat, substantially as set forth. 4th. In a safety block for a switch stand, the combination of a block B, of square or angular cross section corresponding to and fitting the throat of a stand, the beveled clutch teeth *b*¹, upon its upper surface and the eye *b*¹, serving as bearing for a vertical spindle, substantially as set forth. 5th. In a cap for a switch stand, the combination of a circular plate C, downward projecting beveled clutch teeth *c*¹, an eye *c*¹, in the lower portion of said plate to form a bearing for a vertical spindle, and a square recess *c*¹, in the upper face of said plate, substantially as set forth. 6th. In a switch stand spindle, the combination of a circular and an angular or square portion, a crank D¹, at the end of the circular portion, an angular or square sleeve F, fitting upon and being pinned or bolted to the angular or square portion, substantially as set forth. 7th. In a switch stand, the combination of a spindle D, having its upper portion *d*, of angular or square cross section, and having a crank D¹, upon its lower end, a sleeve of angular or square cross section fitting upon and being pinned or bolted to the upper portion of said spindle, and a forked lever H, having its forked ends pivoted to the upper end of said sleeve, substantially as set forth. 8th. In a switch stand, the combination of a spindle D, a sleeve having a square or angular cross section rigidly secured to the upper part of said spindle, a block H, adapted to slide upon said sleeve, and having a square projection *g*¹, and a lug *g*¹, a forked lever H, having its forked ends pivoted to the upper end of said sleeve and adapted to engage the lug *g*¹, and straps H¹, pivoted to said lever, and the block G, substantially as set forth. 9th. In a switch stand, the combination of a pillar A, having a bearing in its base for a vertical spindle, and a throat of square or angular cross section, a block B, fitting said throat slidably without rotating and forming a bearing for a vertical spindle, and provided with upward projecting beveled clutch teeth cap C, having clutch teeth gearing into the clutch teeth of the block B, and having an eye forming a bearing for a vertical spindle, and a square recess in its upper face, a spindle D, having a crank D¹, at its lower end, and passing through and rotating in the base of the pillar, the block B, and the cap C, and having upon its upper end a sleeve of angular cross section extending into the square recess of the cap, and a spring E, coiled upon said spindle and extending from its lower bearing to the block B, and supporting the latter, substantially as set forth.

No. 36,159. Combined Shoulder Strap Bag and Knapsack. (*Huvresac et sac à bretelles combinés.*)

John Thomas Dwyer, Montreal, Quebec, Canada, 16th March, 1891; 5 years.

Claim.—1st. In a shoulder strap bag, the combination, with the bag proper and the cover, of transverse strengthening ribs C, and D, and straps G, G¹, secured to flap, first passing down through rib C, and then taken upwards through rib D, and joined, as herein set forth. 2nd. In a shoulder strap bag, the combination, with the bag proper and the cover, of transverse strengthening ribs C, and D, and straps G, G¹, secured to flap, taken down and through openings in rib C, then upwards and through rib D, and then down the back through the staying loop H, and finally joined centrally, as herein set forth. 3rd. The combination, with a bag, of the staying loop H, attached to and outside the bag, substantially as herein set forth.

No. 36,160. Manufacture of Shoes.*(Chaussures.)*

Guillaume Boivin, Montreal, Quebec, Canada, 16th March, 1891; 5 years.

Résumé.—1o. Dans une bottine lacée la combinaison du coin B¹ du contrefort D, et du morceau E, tous attachés à l'empeigne et en formant partie tel que décrit. 2o. La combinaison dans une empeigne de chaussure dans laquelle l'ouverture de devant est coupée de manière à former un angle avancé, sur l'un des cotés du morceau de coin B¹, et de la bandelette F, pour les boutonnières tel que décrit. 3o. Le combinaison dans une bottine bouton née du morceau de coin B², cousue à l'un des bords droits de l'ouverture de devant avec la pièce à boutonnière J, cousue au dit morceau de coin et au bord de la coupure qui forme l'ouverture le bout tel que décrit et représenté.

No. 36,161. Roaster for Meat. *(Poêle à frire.)*

Henry R. Williams, Oshkosh, Wisconsin, U. S. A., 16th March, 1891; 5 years.

Claim.—A meat roaster, consisting of a grate to support the meat, and a pan to receive the grate, said pan having its bottom convex on its inner surface, said grate being removable from the pan.

No. 36,162. Automatic Brake for Railway Cars. *(Frein automatique de chars.)*

George E. Gillam, Macomb, Illinois, U.S.A., 16th March, 1891; 5 years.

Claim.—The combination to form an automatic brake for railway cars, and the like, of springs for normally putting on the brakes, rods controlling said springs, arms to which said rods are pivoted, a shaft journaled beneath the car carrying said arms, a lever rigidly affixed to said shaft, cross-bars arranged upon an extension of the draw-bars, the opposite end of each of which is connected to said lever, and the other opposite end of each provided with push-bars for the purpose described.

No. 36,163. Ink Stand. *(Encrier.)*

John Larkin, Bradford, Pennsylvania, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. The combination of the body of the inkstand, provided with a cover with a vertically moving cone, provided with a stem which extends through the cover, and an elastic ball or body having an opening for the inflow of ink, and which is applied to the lower end of the stem, substantially as shown. 2nd. The combination of the body provided with an air tight cover, the vertically moving cone provided with a shouldered stem which regulates the amount of movement that the cone shall have, and an elastic body which is applied to the lower end of the cone, and having an opening in its lower end for the admission of ink, whereby the said opening is closed by the body of the ink reservoir, substantially as described. 3rd. The combination, with an inkstand, of an automatically acting valve which is applied thereto for the escape of rarefied air, substantially as set forth. 4th. The combination of an automatically acting inkstand, with an air passage or outlet, a perforated plug or cover applied to the outer end of this outlet, and a valve which is made conical at both of its sides, substantially as specified. 5th. The combination, with an air tight ink chamber or reservoir, of an elastic hollow body, a vertically moving feeding stem which is secured thereto for collapsing the said body, and an automatically acting valve for allowing an excess of air to escape, substantially as shown and described.

No. 36,164. Ice Plow. *(Charrue à glace.)*

Hamilton Pray, Clove, New York, U.S.A., 16th March, 1891; 5 years.

Claim.—1st. In an ice plow, the combination, with a frame comprising two parallel longitudinal beams, and suitable transverse beams for connecting the said longitudinal beams with each other, of two U-shaped runners of different length held adjustably on the front and rear ends of each longitudinal beam, and cutting blades of different length held adjustably on the said longitudinal beams between the said runners, and extending below the lower ends of the front runners, substantially as shown and described. 2nd. In an ice plow, the combination, with a frame comprising two parallel longitudinal beams, and suitable transverse beams for connecting the said longitudinal beams with each other, of two U-shaped runners of different length held adjustably on the front and rear ends of each longitudinal beam, and cutting blades of different lengths having each a rearward brace H², with a curved slot in it, and a flange at its upper end, a horizontal bolt extending through said curved slot into the beam, and a vertical bolt extending through the flange and beam substantially as shown and described. 3rd. In an ice plow, the combination, with a frame provided with side beams, of the front and rear runners G, and G¹, held adjustably on the said side beams, substantially as described, and cutting blades H, and H¹, each bolted at two different points to the beam, one point forming an axial connection and the other a curved sliding connection, in the manner described, and for the purpose set forth.

No. 36,165. Lock for Vehicle Seats.*(Fermeture pour sièges de voiture.)*

Jonathan Sherlock, Milton, Massachusetts, U. S. A., 16th March, 1891; 5 years.

Claim.—1st. The combination of the seat A, provided with the perforated tongues d, arranged therewith, essentially as shown, the

carriage-body B, supplied with the socketed and perforated plates D, provided with spring-bolts adapted to connect the tongues to the plates, and the levers E, for operating said bolts to disengage the said tongues from the sockets, as and for the purpose explained. 2nd. The seat A, provided with the perforated tongues beveled at their lower ends, in combination with the body of a carriage having its sides provided with the socketed and perforated plates D, the spring-bolts J, beveled at their inner ends and adapted to engage the said tongues to the said plates D, the levers E, for disengaging the bolt from said plate, and the elastic washers F, for preventing rattling of the levers, all arranged and to operate, essentially as and for the purpose explained.

No. 36,166. Track for Hay Elevators.*(Voie pour monte-foin.)*

Joseph Ewing Porter, Ottawa, Illinois, U.S.A., 16th March, 1891; 5 years.

Claim.—The combination, with an inverted T-iron track having a longitudinal bead on the upper edge, of the vertical web thereof, which bead is cut away near one end of each section of track, and the horizontal flanges on the lower edge of said web, which flanges form threads for the opposite wheels, and a suitable hay-carrier, of a hook having its shank provided with downwardly and inwardly projecting arms that embrace said bead between them, and thus suspend said track.

No. 36,167. Shoe for Hoofed Animals.*(Fer pour chevaux, mulets, etc.)*

Joseph Benfield, Walsall, Stafford, England, 17th March, 1891; 5 years.

Claim.—1st. The herein described improved channel section shoe for horses, mules, and other hoofed animals, formed from a rolled metal channel section bar, or from sheet metal, and provided with the fixing clips a, formed integral therewith, of parts punched and raised from the upper side of the shoe, substantially as hereinbefore set forth and illustrated by figs. 1 to 8, both inclusive. 2nd. The herein described improved channel section shoe for horses, mules, and other hoofed animals, formed from a rolled metal channel section bar, or from sheet metal, and provided with the fixing clips a, formed integral therewith, of parts punched and raised from the upper side of the shoe and having spikes c, c', formed from lateral projecting parts of the said clips, substantially as hereinbefore described and illustrated by fig. 8. 3rd. The herein described improved channel section shoe for horses, mules, and other hoofed animals, formed from the rolled metal channel section bar j, and provided with the jagged or roughened fixing clips a, formed therefrom with the flange i, of the said bar, substantially as hereinbefore described and illustrated by figs. 9, 10, and 11.

No. 36,168. Holder for Window Shades.*(Cadre pour store de fenêtre.)*

Ambrose Coates Spicer, Battle Creek, Michigan, U.S.A., 17th March, 1891; 5 years.

Claim.—1st. The combination of the vertical guide-rails, the castings at the lower ends of these guide-rails having projections that enter the grooves of said guides, and serving to fasten the said guide-rails in position, and the castings at the upper ends of said guide-rails, likewise having projections that enter the grooves of the guides, and provided also with grooves and perforations through which pass the draw-cords, said upper castings thus serving to secure the guide-rails in place, and supports for the draw-cords, all in combination with the curtain or shade roller having slides at each end thereof which operate in the grooved guide-rails, substantially as described. 2nd. The combination of the roller and its slides, the grooved guides within which said slides operate, and the upper castings C, and C¹, said casting C, being at the upper end of one guide-rail and having the downward projection c, and the passage c', and the casting C¹, at the upper end, of the other guide-rail having the projections d, d', and the passage d', together with the draw-cords m, and n, one of which is attached to one slide, and the other to the other slide, substantially as described. 3rd. In combination with the grooved guides, the lower castings L, L, having projections l, l, that enter the grooves of the guides, and the upper castings C, and C¹, having projections that enter the grooves of the guides, said casting C, having a passage c', and said casting C¹, having the projections d, d', all in combination with a shade or curtain roller having slides which operate within the guides.

No. 36,169. Ironing Machine.*(Machine à repasser le linge.)*

Frank Delmont Adams, Northville, Michigan, U. S. A., 17th March, 1891; 5 years.

Claim.—1st. An ironing machine combining the following elements: a non-revoluble polishing roll, an ironing board adapted to be reciprocated back and forth beneath the said roll, means for bringing the ironing board and the polishing roll into contact with each other by foot or by manual pressure, friction rollers adapted to reciprocate the said ironing board, and a hand-crank whereby said friction rollers may be manipulated, substantially as and for the purposes described. 2nd. An ironing machine combining the following elements: a non-revoluble polishing roll, an ironing board adapted to reciprocate back and forth beneath the roll, friction rollers with an operating crank adapted to actuate the ironing board, and means for bringing the roll and ironing board into regulatable contact, the one against the other, said means consisting of pivoted frame-work supporting one of the said devices, and a foot-treadle

whereby the said frame is tilted to bring the said two parts into contact, substantially as described. 3rd. An ironing machine combining the following elements: a non-revoluble polishing roll, an ironing board adapted to reciprocate back and forth beneath the roll, friction rollers adapted to be brought into contact with said ironing roll or its support for actuating the same, said friction rollers supported in a pivoted frame governed by a foot-lever, whereby the said frame may be tilted to bring said rollers into engagement with the ironing board or its support, and a crank for actuating said friction rollers, substantially as described. 4th. The combination, with a non-revoluble polishing roll, of an ironing board mounted in a supporting frame provided with suitable guards or fenders, and friction rollers for actuating the same and pressing the ironing board into contact with the polishing roll, and depressions *c*, along the middle portions of the guides for said support, substantially as and for the purposes described. 5th. The combination, with the reciprocating ironing board, of a non-revoluble polishing roll, and adjusting screws or equivalent *b*, whereby said roll may be adjusted to any desired position with respect to the ironing board, substantially as described.

No. 36,170. Organ. (*Orgue.*)

Annie Dixon, (assignee of Alexander Hutton Dixon), both of Toronto, Ontario, Canada, 17th March, 1891; 5 years.

Claim.—1st. An organ action made movable in its case wherein the key-board is fixed, in combination with mechanism arranged to adjust the organ action so as to bring a higher or lower toned reed in connection with a given key, substantially as and for the purpose specified. 2nd. An organ action made movable in its case wherein the key-board is fixed, and provided with mechanism arranged to adjust the organ action, so as to bring a higher or lower toned reed in connection with a given key, in combination with mechanism arranged to raise the keys clear of the mute pins during the movement of the organ action, substantially as and for the purpose specified. 3rd. The wind-chest to which the organ action is connected, and friction rollers arranged in rails to support the wind-chest, in combination with a spindle connected to the wind-chest, and arranged to adjust the same in relation to the key-board, so as to bring a higher or a lower toned reed in connection with a given key, substantially as and for the purpose specified. 4th. The wind-chest A, with its connections supported by friction rollers *a*, arranged in the rails B, in combination, with a spindle E, journaled in the casing G, and screwed through the nut F, connected to the wind-chest, substantially as and for the purpose specified. 5th. The wind-chest A, with its connections supported by friction rollers *a*, arranged in rails B, the screwed spindle E, journaled in the casing G, and screwed through the nut F, in combination with the eccentric roller K, arranged below the case D, crank L, link M, lever N, cam O, and spring P, substantially as and for the purpose specified.

No. 36,171. Chimney. (*Cheminée.*)

Albert Heinrich Ristedt, Niles, Ohio, U.S.A., 18th March, 1891; 5 years.

Claim.—A chimney-top, consisting of a collar adapted to rest on the top of the chimney, and provided with a flat flange 4, extending laterally on all sides beyond the sides of the chimney to form a close joint with the roof of the building, a long neck 2, extending within the chimney and fastened thereto, a short neck 5, extending above the chimney, and a chimney-stack above said collar and resting thereon outside the said neck 5, and secured thereto, substantially as described.

No. 36,172. Coop for Poultry.

(*Cage à volailles.*)

Robert G. Thomasson, Bumpass, Virginia, U.S.A., 18th March, 1891; 5 years.

Claim.—1st. The chicken coop or crate, comprising the bottom having the side and end projecting portions, forming the normally upturned portions or sides and ends of the coop, connected together by the short tacked in corner pieces or strips, and the inner and outer opposite strips or pieces lapping and secured to the top edge strips of the sides, and suitably re-enforced thereat, substantially as and for the purpose set forth. 2nd. The chicken coop, consisting of the bottom wicker work portion having side and end portions held together, as described, having upper and lower bottom re-enforcing pieces or strips also re-enforcing, metallic pieces or strips near their corner edges, the wire netting covered bows with their braces or stays, said bows being secured to the said bottom portion, upright stays or braces secured to said bottom portion, and the end bows and the re-enforcing metal pieces secured to said upright stays, and to said bottom portion, and to the central top brace of said bows, and the central underneath strip or brace of said bottom portion, substantially as set forth.

No. 36,173. Car Coupling. (*Attelage de chars.*)

Hugh Stephens, Port Bruce, Ontario, Canada, 18th March, 1891; 5 years.

Claim.—The combination, with the drawhead A, having an internal cavity, and provided with a stop block E, of the pivoted side jaws B, B, the spring *f*, intervening said jaws rearwardly, the sliding cam block H, engaging the rear ends of said jaws, and the levers K, K, to move said block, whereby the rear end of the jaws will be moved against the resistance of the spring to uncouple the draw bolt and the reacting of the spring effect coupling by the jaws engaging the effects of the draw bolt, as set forth.

No. 36,174. Plow. (*Charrue.*)

Ernst John Swiedom, Giddings, Texas, U.S.A., 18th March, 1891; 5 years.

Claim.—1st. The combination, with the plow-beam having a downwardly-projecting extension or arm at its rear end, and a plow-standard pivoted to the beam in front of said extension, of a plate connecting said standard and extension and adapted to slide vertically thereon, and an adjusting-screw for operating said plate, substantially as set forth. 2nd. The combination, with the plow-beam having a rearwardly-inclined extension E, and hinged plow-beam C, of a plate G, having slots G^1 , G^2 , through which pass said extension and standard respectively, and a threaded crank shaft or rod H, swiveled on the beam parallel with the said extension, and engaging a threaded aperture in the said plate, substantially as set forth.

No. 36,175. Block for Braids, etc.

(*Blocs pour braids, etc.*)

Joseph W. Heric, Winnipeg, Manitoba, Canada, 18th March, 1891; 5 years.

Claim.—The combination of two pieces of wood K, and two tin clamps X, X, end piece of wood O, substantially as and for the purposes hereinbefore set forth.

No. 36,176. Car Coupling. (*Attelage de chars.*)

Charles Oscar Barnes and Lucian Barnes, both of Syracuse, New York, U.S.A., 18th March, 1891; 5 years.

Claim.—1st. The single-armed knuckle C, terminated at its rear end with vertical faces intersecting each other V-shaped, and provided at said end with a vertical slot elongated in a direction diagonally of the knuckle, in combination with the draw-head formed on one side with a V-shaped recess for the reception of the rear end of the knuckle, a pin passing vertically through the recessed portion of the draw-head and through the slot of the knuckle, and a key connected to the draw-head and adapted to lock the knuckle in its closed position, as set forth and shown. 2nd. The combination of the single-armed knuckle C, terminated at its rear end with vertical faces intersecting each other V-shaped, and provided with the slot *d*, and with the shoulder *d'*, on its outer side, the draw-head formed with the V-shaped recess *a*, and abutment *f'*, the pin *c*, passing through the draw-head and slot *d*, and the key *o*, engaging the rear end of the knuckle, substantially as described and shown. 3rd. The combination of the single-armed knuckle C, formed V-shaped at its rear end and provided with the notch *n*, and slot *d*, in said end, and with the forwardly facing shoulder *i*, rearwardly-facing shoulder *i'*, and straight rear bearing *h'*, with the draw-head provided with the V-shaped recess *a*, rearwardly facing abutment *f'*, forwardly facing abutment *f*, and straight front bearing *h'*, the pin *c*, passing through the recess *a*, and slot *d*, and the key *o*, adapted to enter the notch *n*, all constructed and combined, substantially as described and shown.

No. 36,177. Chair for Lawns.

(*Chaise pour pelouse.*)

James John Dicks, Toronto, Ontario, Canada, 18th March, 1891; 5 years.

Claim.—1st. The net-work B, having strips C, secured on each side of it, in combination with cords D, laced through the eyelets in the strips C, and through staples *a*, in the wooden frame A, substantially as and for the purpose specified. 2nd. The net-work B, having strips C, secured on each side of it, in combination with the adjustable roller E, substantially as and for the purpose specified. 3rd. The net-work B, having strips C, secured to each side of it and connected at one end to an adjustable roller E, in combination with the cord D, laced through the eyelets in the strips C, and through staples *a*, in the wooden frame A, substantially as and for the purpose specified. 4th. The combination with a chair of an adjustable hood or shade G, substantially as and for the purpose specified. 5th. The folding frame H, pivoted at *f*, on the frame A, and covered with a hood or shade G, substantially as and for the purpose specified.

No. 36,178. Manufacture of Sodium and Potassium. (*Fabrication de sodium et potassium.*)

Hamilton Young Castener, London, England, 18th March, 1891; 5 years.

Claim.—1st. The hereinbefore described process of manufacturing the alkaline metals, which consists in treating the caustic alkali while constantly maintained at a temperature of not more than 200° C, above its melting point to the action of the electric current, substantially as described. 2nd. The hereinbefore described process of manufacturing the alkaline metals, which consists in submitting the caustic alkali to the action of the electric current, said alkali being kept at such a low temperature that the metal may be separated but not distilled, substantially as described. 3rd. In an apparatus for carrying out the process described in the foregoing claims, the combination, with the two electrodes, of an interposed screen or gauze, and a vessel adapted to receive the reduced metal, the surface area of the electrodes and their distance apart being proportioned to the quantity of current employed so that the bath may be kept at a constant temperature.

No. 36,179. Car Coupling. (*Attelage de chars.*)

Robert H. Dowling, Charles Follett, and Charles H. Follett, all of Newark, Ohio, U.S.A., 18th March, 1891; 5 years.

Claim.—1st. The car-coupling having its draw-head provided with the circular sockets or seats, having at opposite sides of the passage for the knuckle or hook axial pin recesses or depressions, one having outwardly flared or diverging walls and an entrance way, and the other having connection with the aforesaid depression by a passage-way, substantially as set forth. 2nd. The car-coupling having its draw-head provided with the circular sockets or seats, having recesses or depressions on opposite sides of the passage for the axial pin of the knuckle or hook, one having outwardly flared or diverging walls, and an entrance-way, and the other depression having connection with the aforesaid depression by a passage-way, and being semi-circular in shape, in combination with the knuckle or hook having the circular bosses or shoulders provided with lugs engaging said recesses or depressions, substantially as specified. 3rd. In a car coupling, the knuckle or hook having the circular bosses or shoulders provided with lugs on opposite sides of the passage for the axial pin of said hook or knuckle, in combination with the draw-head provided with circular sockets or seats having recesses or depressions, one having flared walls and an entrance-way, and the other depression having connection with the aforesaid depression by a passage-way, and being semi-circular in shape, substantially as set forth. 4th. In a car-coupling, the hand lever or rod having a loosely-connected arm or bar connected to the lower end of the knuckle or hook pivot or axial pin, provided with a guard or lug, said rod passing through the lower end of the locking-pin, and which, when raised and thrown to right, causes said locking pin to engage a recess or seat in the bottom edge of the draw-head, substantially as set forth. 5th. The combination, with the knuckle axial or pivoting pin provided with a guard or lug, the locking pin having the shoulder about at its mid-length and upon its forward edge or side, and a notch engaging a recess or seat in the bottom edge of the draw-head, and the knuckle or hook having at its inner forward edge the seat or recess, of the lever passing through the lower end of the locking-pin and connected to an arm of the axial or pivoting pin, substantially as set forth.

No. 36,180. Opener for Sashes.

(*Appareil pour ouvrir les croisées.*)

Thomas Royden Musker and Alexander Wilson, both of Winnipeg, Manitoba, Canada, 18th March, 1891; 5 years.

Claim.—A rectangular tube A, with flanges and perforations, in combination with the pulleys B, B', axle pins C, C', eccentric grooved fastener D, axle pin E, and cord F, substantially as and for the purpose above set forth.

No. 36,181. Automatic Adjuster for Bearings. (*Ajusteur automatique de coussinet.*)

Harvey L. Hopkins Co., assignee of Harvey Lyrov Hopkins, all of Chicago, Illinois, U.S.A., 14th March, 1891; 5 years.

Claim.—1st. Two bearing surfaces, adapted to receive and clasp between them a journal, or other like device, in combination with a supporting frame in which said bearings are enclosed, a turning cam mounted in said frame and arranged to clamp the bearings together, and a spring arranged to actuate the said cam automatically, substantially as and for the purposes specified. 2d. A connecting rod, provided with a fork or slotted head, in combination with a part box bearing arranged within said fork or slot, a wrist mounted in said bearing, a circular cam or eccentric seated within the fork or slot of the head in the rear of the box, and free to turn in its seat, and a spring applied to said cam and arranged to constantly turn the latter outward toward the box, substantially as and for the purposes specified. 3rd. The forked head A, in combination with the bearing box B, B', the wrist C the bearing block F, the circular cam or eccentric G and the coiled spring H, substantially as and for the purposes specified. 4th. The forked head A, provided at the bottom of the fork with a concave seat a^b , having a central groove a^c , in combination with the box B, B', the eccentric G mounted in said seat with its cam projection g in said groove, and a coiled actuating spring H applied to the eccentric, substantially as and for the purposes specified. 5th. The forked head A, in combination with the bearing box B, B', the bearing block F, a little less in width than the space between the fork-arms, the eccentric G and the coiled spring H, substantially as and for the purposes set forth. 6th. The forked head A, in combination with the bearing box B, B', the bearing block F, constructed as described, the eccentric G, the coiled spring H, arranged at one end of the eccentric and the cap I, substantially as and for the purposes specified. 7th. The knife-head J, provided with a ball t , in combination with the forked arms k , of the pitman provided with sockets adapted to receive the said ball, the clamping frame L adapted to receive the arms of the pitman, the cam M pivoted on said frame, and the actuating spring O arranged to turn the cam inward against one arm of the pitman, substantially as and for the purposes set forth. 8th. The fork arms k , of the pitman adapted to receive and clamp a ball between them, in combination with the clamping frame L, adapted to be slipped upon said arms, the cam M, pivoted between the open ends of the frame and the actuating spring O coiled around the pivot pin of the cam, and connected at one end to the latter and at the other to the frame, substantially as and for the purposes specified. 9th. The fork-arms k , of the pitman, in combination with the clamping frame L, provided with the lug or projection l , the cam M pivoted on said frame and provided with the lug q and the actuating spring O, substantially as and for the purposes specified. 10th. The fork arms k , of the pitman, in combination with the clamping frame L, the cam M, pivoted in said frame and provided with socket p , the actuating spring O and the detachable lever or handle P, substantially as and for the purposes specified.

No. 36,182. Tyre for Wheels.

(*Bandage de roues*)

Frank Stanley Willoughby, and Thomas Horsfield, both of Manchester, England, 19th March, 1891; 5 years.

Claim.—The combination, with a wheel tyred with india rubber or other materials or composition possessing similar vibration destroying qualities, of an additional flexible coiled metal tyre or tyres either built on, firmly secured to, or partially embedded in the outer periphery of the india rubber or other similar substance, substantially in the manner and for the purposes hereinbefore set forth and described and illustrated by the drawings annexed.

No. 36,183. Spring for Vehicles.

(*Ressort de voiture.*)

Peter Senecal, Raxton Pond, Quebec, Canada, 19th March, 1891; 5 years.

Claim.—1st. A vehicle spring, consisting of two or more leaves, the lower leaf being made in two parts, one of the said parts being secured to the upper leaf or leaves, and the other part being free to slide in clips or guides, the end of the said sliding portion lapping the end of the bolted portion, substantially as set forth. 2d. The combination, in a vehicle spring, with the block A, leaves E, F, G, and bolt H, of the clips B, bars C, bars D, having the distance pieces d , substantially as set forth. 3rd. The combination, with a vehicle spring having the lower leaf made in two parts, one part being free to slide in suitable guides, of the plates K, having shoulders L, connected to the said lower leaf by the bolts k , substantially as set forth.

No. 36,184. Check Hook. (*Crochet de selle.*)

Dennis McDonnough, Racine, Wisconsin, U.S.A., 19th March, 1891; 5 years.

Claim.—A check hook, consisting of a base and oppositely curved arms spaced apart to form a strap-entering passage, one of said arms being provided with a rearwardly-projecting horizontal arm, and both of the arms having their ends correspondingly curved in a diagonal direction across the top of the check hook, the two arms forming thereby a practically continuous ring, substantially as and for the purpose set forth.

No. 36,185. Plow. (*Charrue.*)

James D. Marley, Dodd, Texas, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. The combination, with a plow standard, provided at opposite sides with adjustable brackets of a triangular-shaped convex sweep bolted to the brackets and having the angles of its base in the same plane with the apex or point, and its rear edge disposed at a right angle to the beam, and opposite triangular wings partaking of the facial contour of the sweep, and secured to the rear edge of the sweep and at opposite sides of the beam or standard, substantially as specified. 2nd. The combination, with the plow standard, terminating at its lower end in a foot provided with front and rear openings, of opposite right angular brackets provided at their front ends with a single opening, and at their rear ends with a pair of openings, a pivot bolt passed through the front openings of the brackets and the foot, an adjusting bolt passed through a pair of the rear openings of the bracket, and of the foot, a triangular convex sweep bolted to the upper portions of the brackets and having the base of the triangle in the same plane with the apex or point thereof, opposite wings of triangular shape located in rear and partaking of the facial contour of the sweep, and opposite straps bolted to the under side of the wings and sweep, substantially as specified.

No. 36,186. Nut Lock. (*Arrête écrou.*)

Cyrus Clay, Elmhurst, Pennsylvania, U. S. A., 19th March, 1891; 5 years.

Claim.—In a device for locking nuts on bolts, the combination with a plate having a slot, of a device composed of spring wire and having a loop and arms extending from the sides of said loop, and a key for holding the loop in engagement with the plate after the same has been inserted through the slot, substantially as and for the purpose set forth.

No. 36,187. Cultivator. (*Scarificateur.*)

John Henry Fountain, Ceresco, Michigan, U.S.A., 19th March, 1891; 5 years.

Claim.—The combination, with the beam and the support B, pivoted thereto and carrying the tooth D, of the U-shaped bar E, pivoted to the support B, near its lower end, the rod F passed through the end of the bar E, and pivotally secured at its upper end to the beam, the cross-head J on the rod F, within the bar E, and guided by the parallel portions of said bar, the nut k on the rod below the cross-head, and the spiral spring around the rod F, between the cross-head and the end e , of the U-shaped bar, substantially as shown and described.

No. 36,188. Dash Board for Vehicles.

(*Garde crotte pour voitures.*)

Henry H. Lockwood, Olean, New York, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. The combination of a dash frame, with a foot consisting of two parts hinged together, as set forth. 2nd. The dash frame A, in combination with the foot C, consisting of two parts D and E, held together by the axial bolt G, as set forth. 3rd. The dash frame

A, having the webs B, with the slots b^1 , and hole b^2 , all in one opening, in combination with the foot D, as set forth. 4th. The foot D, consisting of the part E, having the socket, and one part D, having the end d^3 fitting said socket, and the bolt G holding the two parts together, as set forth. 5th. The combination of a dash frame with a foot, and the two bolts holding the foot to the frame, as set forth.

No. 36,189. Weather Strip.

(*Bourrilet de porte.*)

James H. Hull, Lennoxville, Quebec, Canada, 19th March, 1891; 5 years.

Claim.—The combination of the stop C, C, constructed as described, with adjustable stop G and spiral springs E and adjusting D, all arranged for a weather strip for doors and windows, substantially as and for the purpose hereinbefore set forth.

No. 36,190. Tonic for Human Hair.

(*Tonique pour les cheveux.*)

Frederick Joseph Bourdon, Lethbridge, Alberta, North West Territories, Canada, 19th March, 1891; 5 years.

Claim.—1st. Solution of bichloride of mercury, hydrate of chloral, distilled water, pure glycerine and alcohol, as described. 2nd. Solution, containing beta naphthol, tincture of spongia and absolute alcohol, as described. 3rd. Ointment, composed of salicylic acid, tincture of benzoin, tincture of cantharides and neat-foot oil, as described, the whole as and for the purpose described and in the proportion set forth.

No. 36,191. Holder for Window Shades.

(*Garniture pour rideaux de fenêtres.*)

Ambrose Contes Spicer, Battle Creek, Michigan, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. In a device for holding curtain-rollers at different heights, the combination of the curtain-roller having at one end the round journal, and at the other end a flat journal, the rigid vertical guide-rods which are removable and adjustable, the supporting-brackets C, at each end of the guide rods being sockets provided with set-screws, provided also with cones d , through which the draw-cords pass, and with perforated lugs e , whereby the brackets are secured in place by means of screws, the ends of the said guide-rods entering and being firmly held within the sockets of the brackets e , the slide on one guide having a round socket to receive the round journal of the roller, and the slide on the other guide having a right-angled socket to receive the flat journal on the other end of the roller, said slides being perforated to permit the passage through them of the guide-rods, and having lateral perforated lugs which are above the above-mentioned sockets, wherein the journals of the curtain-roller are located, and the draw-cords connected to said perforated lugs and passing through the loops of the upper brackets so as to operate to lift the two slides simultaneously. 2nd. In a device for holding window-curtains at different heights, the combination of the rigid vertical guide rods or bars which are removable and adjustable, the supporting-brackets C, therefore, having integral sockets, cord-loops d , and perforated lugs e , e , the said guide-rods entering the said bracket-sockets, and being held therein by means of set-screws the curtain-roller having a rounded projection at one end, and a flat projection at the other, with a notch, a slide on one of the guide-rods having a round socket to receive the round projection on the roller, and the slide on the other guide-rod having a rectangular socket to receive the flat projection on the other end of the roller, and provided with a lip formed in the interior of the socket to be engaged by the notch on the flat projection of the roller, said slides being perforated to permit the passage through them of the guide-rods and having perforated lips or lugs above the sockets which hold the roller-journals together with the draw-cords connected to said perforated lugs, and passing through the loops d , d , of the upper brackets, substantially as described.

No. 36,192. Combined Bureau and Commode.

(*Bureau et commode combinées.*)

William H. Merritt and John F. Taylor, both of Brandon, Manitoba, Canada, 19th March, 1891; 5 years.

Claim.—1st. A bureau A, having an open front sliding commode drawer D, provided with a door D^1 , hinged thereto to enclose the open front, said drawer having a commode top consisting of a seat E, and floor F, sliding extensively from said drawer, and provided with a supporting leg J, said door provided with a cleat K, to support said commode top when extended, as set forth. 2nd. A bureau having a sliding commode drawer D, provided with a door C, and having a commode top E, F, sliding extensively, said top provided with a leg J, and a triangular commode seat M, hinged at one corner to a bracket, secured to said drawer, a leg N, at the inner corner, and the other corner when the seat is swung outward bearing on a bracket attached to the door, whereby the door supports the seat conjointly with the leg, as set forth. 3rd. The commode top, consisting of the seat E, and the floor F, said floor provided with slotted cleats L, adjustable endwise to keep the utensil in place, as set forth. 4th. A bureau A, having an attached spring L, carrying at its free end, a cover M, in combination with a commode top consisting of the seat and floor, whereby said top engages the spring to depress the cover, as and for the purpose set forth. 5th. The frictional spring cushion or catch T, as set forth.

No. 36,193. Skate. (*Patin.*)

Charles Grant Lamont, Denver, Colorado, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. The combination, with the adjustable toothed clamps 5, and 6, seated upon a suitable bed plate, of the spindle 15, having the

enlarged base 9, pivoted within a suitable slot formed in the skate blade, the toothed cylinder 20, seated upon base 9, which is provided with teeth engaging those of the cylinder which also engage the toothed portion of the clamps, a plate made fast to the upper extremity of the spindle and retaining the clamps in place, a spring located in the upper portion of the cylinder and engaging the plate above the clamps, and suitable space between the top of the cylinder and the retaining plate to permit the raising of the cylinder sufficiently to disengage it from the toothed base 9, substantially as described. 2nd. In a skate, the combination, with the toothed clamps seated upon a bed plate, means for retaining the clamps in place, a spindle having an enlarged toothed base pivoted within the skate blade, the top of the spindle being made fast to a plate or lever above the clamps, a toothed cylinder surrounding the spindle and engaging the base of the spindle at one extremity, and the toothed portions of the clamps at the opposite extremity, and the arrangement of the parts being such that there shall be sufficient space between the top of the cylinder and the plate above to permit the raising of the cylinder to disengage it from the toothed base, substantially as described. 3rd. In a skate, the toothed clamps 5, and 6, resting upon a bed plate and retained in place by a plate above, a spindle secured within the skate blade or frame, and a toothed cylinder adapted to rotate thereon and engage the teeth of the clamps for the purpose of adjustment, substantially as described. 4th. In a skate the adjustable toothed clamps 5, and 6, resting upon suitable bed plates, spindles 15, each provided with an enlarged base 9, pivoted within the skate blade, a toothed cylinder 20, located upon each spindle and engaging the base 9, and clamps 5, and 6, and the adjustable levers 2, and 3, having their outer extremities made fast to the top of spindles 15, and having their inner extremities suitably united for the purpose of adjustment, substantially as described. 5th. In a skate, the adjustable toothed clamps 5, and 6, resting upon a suitable bed plate, spindles 15, each provided with an enlarged base 9, pivoted within the skate blade, a toothed cylinder 20, located upon each spindle and engaging the base 9, and clamps 5, and 6, the levers 2, and 3, for adjusting the clamps, said levers being united at their inner extremities by means of a slot 11, in one and a lug 7, in the other engaging the slot, said lug being provided with an elongated head normally occupying a position at an angle with the direction of the slot, but which when desired may be so adjusted that the slot may slip over the head of the lug and disengage the levers, substantially as described. 6th. In a skate, the adjustable toothed clamps 5, and 6, resting upon suitable bed plates, spindles 15, each provided with an enlarged base 9, pivoted within the skate blade, a toothed cylinder 20, located upon each spindle and engaging the base 9, and clamps 5, and 6, and the adjustable levers 2, and 3, suitably united and provided with a locking bar 2, having a clamp 40, said clamp being provided with a lug 13, engaging a socket 12, formed within the skate blade, substantially as described. 7th. In a skate, the adjustable toothed clamps 5, and 6, resting upon suitable bed plates, spindles 15, each provided with an enlarged base 9, pivoted within the skate blade, a toothed cylinder 20, located upon each spindle and engaging the base 9, and the clamps 5, and 6, the nose lug or stop 36, secured to or formed integral with the blade and projecting upward in the rear of the heel plate, substantially as described.

No. 36,194. Sled. (*Traineau.*)

Castellio Enoch Cronk and Joel D'Aubigne Cronk, both of Belvidere, Illinois, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. In a sled of the class described, a base or frame provided with runners, curved seat-supporting standards extending from the base and projecting rearwardly from said base and located to the rear ends of the standards, substantially as specified. 2nd. In a sled of the class described, the triangular base having the runners at its three angles, the standards 6, projecting therefrom, curved bars 7, and bolts 8, themselves to form seat-bars 8, and rearwardly to form braces 9, the seat 10, having the back 11, the inclined upwardly disposed braces 13, connected to the seat, and the rearwardly disposed handle bars 15, connected by the handle 16, said handle bars being pivoted or otherwise secured to the braces 9, and the foot-tray 18, substantially as specified. 3rd. The frame 1, of triangular shape, and the blades 2, located at each of the angles of the frame, and having lateral perforated lugs 3, and screws or bolts 4, for securing them to position upon the frame, the standards 6, formed of spring metal bows 4, as at 7, and bent upon the selves to form seat-supporting bars 8, terminating in braces 9, the seat 10, having the back 11, and the braces 13, connected to the back and at their lower ends to the base, and to the seat bars at their point of crossing, the handle bars 15, rising from the base and connected to the braces 9, at their points of crossing, and the foot-tray 18, having the dash 19, mounted upon the frame, substantially as specified.

No. 36,195. Generator for Steam.

(*Générateur de vapeur.*)

Edward Fales, Boston, Massachusetts, U.S.A., 19th March 1891; 5 years.

Claim.—1st. In a device for generating steam and for the circulation of hot water, a combustion chamber enclosed with water chambers or walls on four sides thereof, in which are arranged a series of narrow chambers in the path of the flame or products of combustion as they emerge from the furnace, whereby the water is rapidly heated and circulated to the outer water chambers and to the place of usage. 2nd. In a device for generating steam or for the heating and circulating of water, a series of thin water holding chambers located in the path of flame from the furnace, said chambers communicating with other chambers which surround the products of combustion from the furnace, whereby the production of steam or a circulation of hot water is maintained. 3rd. In a device for generating steam and for the heating and circulation of water, a series of thin water holding chambers located in the path of flame from the furnace, said chamber being connected with and opening into a chamber in the lower part of the generator, whereby the water

is fed up into the narrow chambers from the chambers below, as set forth. 4th. That furnace provided at its rear end with an adjustable damper or draft regulator, and also with a series of vertically arranged teeth or grate bars, substantially as described, whereby the fuel is held in position when the damper is raised, as set forth. 5th. In a device for generating steam and also for the circulation of hot water, the water or steam chambers arranged on each side of the combustion flue or passage way connected by a water or steam chamber to divide the flues or passage way longitudinally, and a super-heating chamber communicating with the water or steam chambers in the flue or passage way, substantially as set forth. 6th. In a device for generating steam and for the circulation of hot water, the vertically arranged steam or water chambers, a water or steam chamber dividing the combustion flue or chamber horizontally, and flues at each side with the combustion chamber at points above and below the horizontally dividing chamber, and leading to the stack, substantially as set forth. 7th. In a device for generating steam and for the circulation of hot water, the water or steam chambers arranged on each side of the combustion flue or passage way, a series of narrow water or steam chambers, and a series of pipes forming communications between the narrow chambers and the main chambers, substantially as set forth. 8th. In a steam generator of the character described, the shoes for connecting the chambers with each other, substantially as set forth. 9th. In a steam generator of the character described, a bar or bent, and the shoes riveted thereto for securing the vertical and horizontal chambers to each other, substantially as set forth.

No. 36,196. Boiler. (Chaudière.)

Patrick Fitzgibbon, Oswego, New York, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. The combination of the upright boiler B, having the fire-box C, with the combustion chamber D, extending from the fire-box into one side of the upper part of the boiler, the fire-sheet *a*, attached to the exterior of the boiler, horizontal flues *b, b*, the recess *r*, in the top of the boiler, and the smoke-box E, extending over said recess and terminating with the exit pipe P, over the boiler, substantially as described and shown. 2nd. The combination of the fire-box E, provided with an opening in its bottom, and the damper *d*, across said opening as set forth.

No. 36,197. Gate. (Barrière.)

William Richard White, Bloomington, New York, U.S.A., 19th March 1891; 5 years.

Claim.—1st. In a sliding gate, the combination of a bar pivoted at one end, normally held vertical and free to swing to either side upon its pivot, with a block arranged to engage the free end of the bar when the gate is in its central position, substantially as described. 2nd. In a sliding gate, the combination, with the pendant bar pivotally connected at its upper end to the gate, with the block arranged in the path of the lower end of said bar, substantially as described. 3rd. In a sliding gate, the combination with the swinging strip, of the pendant bar and connections between said strip and bar, of the block arranged in the path of the lower end of said bar, substantially as described. 4th. In a sliding gate, the combination of the swinging strip, the connecting arm, the hitch bar, the pendant bar and the block arranged in the path of the lower end of said pendant bar, substantially as described. 5th. The combination of a gate and bearing R, near the centre thereof, of a pivoted bar hung to normally make contact with the bearing, and means for reciprocating the pivoted end of the bar when its opposite end is on the bearing to shift the gate, substantially as set forth. 6th. In a sliding gate, the combination, with the swinging strip, the pendant bar and connections between said strip and bar, of a slotted guide plate attached to the gate, and the block arranged in the path of the pendant bar, substantially as described. 7th. The combination, with the swinging strip, the pendant bar and connections between said strip and bar, of the guide plate, having the shoulders *1* and *2* on either side of the slot *s*, and the block R, substantially as described. 8th. In a gate of the class described, the guide plate, having the slot *s*, shoulders *1*, *2* and the terminal clips *3*, substantially as described.

No. 36,198. Axle for Vehicles.

(Essieu de voiture.)

William Nehring, Evansville, Indiana, U.S.A., 19th March, 1891; 5 years.

Claim.—1st. In an axle for vehicles, the axle proper A, composed of the two metal pieces *a*¹ and *a*², and the piece of wood *a*³ and bolts B, substantially as described for the purposes set forth. 2nd. In an axle for vehicles, the skein E, having the removable protector or bearing *f*, provided with the projection *f*², ring G and nut H, substantially as described and for the purposes set forth. 3rd. In an axle for vehicles, the skein E, having the grease box I, provided with the cover *i*, and grease passage *i*¹, substantially as described and for the purposes set forth. 4th. In an axle for vehicles, the combination of the skein E, with the axle A, substantially as described and for the purposes set forth. 5th. In an axle for vehicles, the combination of the protector or bearing *f*, with an ordinary wooden axle J.

No. 36,199. Lock for Railway Signals.

(Fermeture pour signaux de chemin de fer.)

Edward Spencer Piper, Toronto, Ontario, Canada, 20th March, 1891; 5 years.

Claim.—1st. A bolt or bar connected to the lever by which the semaphore is operated, in such a manner that the lowering of the semaphore to indicate that the road is open for traffic, will simultaneously

lock the mechanism which might accidentally be moved to indicate that the road is clear, substantially as and for the purpose specified. 2nd. A switch C, leading from the main track A, and connected to the operating mechanism of the semaphore D, in combination with a bolt or bar G connected to the operating lever H, substantially as and for the purpose specified. 3rd. The bolt or bar G, connected to the lever H, by which the semaphore D of a railroad crossing is operated, in combination with a similar bolt or bar G, connected to the lever by which the semaphore of the crossing road is operated, the said bolts or bars G being set relatively to each other, in such a manner that the lowering of one semaphore will lock the bolt or bar connected to the semaphore on the line crossing, substantially as and for the purpose specified. 4th. The bolt or bar G, connected to the lever H, by which the semaphore is operated, in combination with the pivoted dog I, arranged substantially as and for the purpose specified.

No. 36,200. Package for Transporting Fruit

(Envelope pour le transport des fruits.)

Joseph T. Mott, Brooklyn, U.S.A., 20th March, 1891; 5 years.

Claim.—1st. The herein described transporting package for fruit, consisting of a case C, having inclined sides and ends, and a cover, a series of boxes A, of equal dimensions, each having inclined sides and ends, and arranged in two tiers in said case, with a removable partition interposed between the tiers, the boxes in the upper tier lying transversely to those in the lower tier, and breaking joints therewith, and the walls of the boxes in each tier adjacent to the walls of the case being parallel thereto, as set forth. 2nd. The herein described transporting package for fruit, consisting of a case C, having inclined sides and ends, and a cover, its walls being provided with ventilating apertures, a series of boxes A, of equal dimensions, each having inclined sides and ends and arranged in two tiers in said case, with a removable partition interposed between the tiers, the boxes in the upper tier lying transversely to those in the lower tier, and breaking joints therewith, and the walls of the boxes in each tier adjacent to the walls of the case being parallel thereto, as set forth.

No. 36,201. Wrench. (Clé à écrou.)

Herman Louis Scheutzka, Bothell, Washington, U.S.A., 21st March, 1891; 5 years.

Claim.—1st. An improved wrench, substantially as described, consisting of the main bar or portion, provided at its opposite ends with jaws, the sliding bar or portion held to and movable longitudinally along the main portion, and provided at its opposite ends with jaws arranged to co-operate with those of the main portion, and the operating lever pivoted to the main portion and arranged to engage and operate the sliding portion, the said lever being pivoted at approximately the centre of the main portion, and having its handle end arranged to be turned toward and adjacent to either end of the said main bar, whereby the jaws of the wrench may be tightened on the object being turned in proportion to the resistance offered by such object, all substantially as and for the purposes set forth. 2nd. In a wrench, substantially as described, the combination of the main bar or portion, the slide bar or portion held to and movable along the main portion, and provided with a toothed rack, and the lever pivoted to the main portion, and provided with a head having teeth to engage the rack of the slide portion, and having adjacent to the said teeth a portion which, when turned next to the rack, will lie clear thereof, whereby the lever may be adjusted to set the operating lever to mesh the rack of the slide portion, or clear of such rack to permit the free longitudinal movement or adjustment of the slide portion, substantially as and for the purposes set forth. 3rd. The improved wrench, herein described, consisting of the main bar or portion, having jaws at its opposite ends, the slide bar or portion held to and movable along the main portion, provided at its ends with jaws arranged to co-operate with those of the main portion, and provided between its ends with a toothed rack, the operating lever provided with a head, having an elongated opening or slot for the pivot-pin, and provided at the ends of said head with a rack toe, to engage the rack of the slide-bar, and between said ends with a portion arranged when turned next to the rack to lie clear thereof, and the pivot pin passed through the slot of the head, all substantially as and for the purposes set forth.

No. 36,202. Reel for Fishing Rods.

(Roulet de manche de pêche.)

Candide Herminzile Croteau, of Longueuil, Quebec, and Ernest Joseph Westbrook, of Montreal, Quebec, Canada, 21st March, 1891; 5 years.

Claim.—1st. In a fishing reel, the combination, with the side frame discs, the reel proper and the main spindle, of a reciprocating transverse guide or carrier, through which the line passes and is guided from side to side along the spindle proper of the reel, and means for imparting motion to such carrier, from said main spindle. 2nd. In a fishing reel, the combination, with the side frame discs, the reel proper and the main spindle, of a sliding tension device mounted on transverse guide rods, a transverse right and left hand screwed spindle located beneath such rods, a swivel connection between said tension device and screwed spindle, and means for imparting motion to said screwed spindle from said main spindle, for the purpose set forth. 3rd. In a fishing reel, the combination, with the side frame discs, the reel proper and the main spindle, of a sliding tension device mounted on transverse guide rods, a transverse right and left hand screwed spindle located beneath such rods, a swivel connection between said tension device and screwed spindle, an eccentric and pinion mounted respectively on said main and screwed spindles, and a finger plate connected with said eccentric, suitably guided and adapted to engage intermittently with and rotate said pinion, for

the purpose set forth. 4th. In a fishing reel, the combination with the side frame discs having flanges *a, a*, and the discs of the reel proper overlapping such flanges, of a reciprocating transverse guide or carrier, and means for imparting motion to such carrier partially enclosed within a chamber formed by said discs and flanges, as set forth. 5th. In a fishing reel, the combination, with the guide rods *F, F*, the screwed spindle *H* and swivel connection *J*, of the tension device consisting of sliding block *E*, conical shell *G*, cone halves *g*, *a*, spring *p* and bearing plates *g*², as shown and described.

No. 36,203. Street Car Service.

(*Voie-trolée pour tramway.*)

Thomas Hunt Joseph Cruise, Toronto, Ontario, Canada, 21st March, 1891; 5 years.

Claim.—1st. A street car suitably suspended from a truck carried by an elevated track, substantially as and for the purpose specified. 2nd. A street car *E*, having upwardly-projecting rods *F* fixed to it, each set of rods being connected together by a plate *G*, which is pivoted on a plate *I*, in combination with the rods *L*, bearing boxes *K*, springs *M*, plate *L*, and wheels *C*, substantially as and for the purpose specified. 3rd. A street car *E*, having upwardly-projecting rods *F* fixed to it, each set of rods being connected together by a plate *G*, which is pivoted on a plate *I*, in combination with the rods *L*, bearing-boxes *K*, springs *M*, plate *L*, wheels *C*, cross-bar *N* and frame *O*, substantially as and for the purpose specified.

No. 36,204. Bung and Bushing.

(*Bonde et dé de fussette.*)

William Edward Delehanty, Albany, New York, U.S.A., 21st March, 1891; 5 years.

Claim.—1st. The combination, with a bushing, having inclined grooves upon its inner surface, said grooves being enlarged or tapered from their lowest portion upward, of a bung, having projections interlocking with said inclined grooves, and corresponding in size to those portions of the grooves occupied by them when in the locked position, whereby the bung may be partially unlocked, so as to vent the cask through said inclined grooves, substantially as described. 2nd. The combination, with a bushing, of a bung interlocking therewith, said bushing being provided with inclined grooves, and an internal annular shoulder, and said bung being provided with projections for engaging the grooves, and a disk, gasket or washer permanently secured to its under side, said bung being flush with the bushing when in its locked position, and having recesses in its face for the reception of corresponding projections of a wrench, substantially as described. 3rd. The combination, with a bushing, provided with an interior annular seat, and with inclined tapering grooves, of a bung having projections of a size fitting the lowest portions of said grooves, and having a gasket or washer secured to its under surface, said bung being flush with the bushing when in its locked position, substantially as described. 4th. The combination, with a bushing, provided with an interior annular seat and with inclined tapering grooves, of a bung having projections of a size fitting the lowest portions of said grooves, and having a gasket or washer secured to its under surface, said bung being flush with the bushing when in its locked position, and having in its upper surfaces wrench-engaging recesses, one of said recesses having a prolongation, whereby it may be made to engage with a similar projection on the wrench, substantially as described.

No. 36,205. Trap for Wash Basins.

(*Trappe pour cuvette de toilette.*)

The Delehanty Manufacturing Company, (assignees of William Edward Delehanty), all of Albany, New York, U.S.A., 21st March, 1891; 5 years.

Claim.—1st. A trap for the purposes described, consisting of a down-take leg and an uptake leg, a valve-chamber in the latter located wholly below its outlet, couplings at its opposite ends, whereby the chamber may be connected with or removed from the leg, a rubber ball valve within said chamber, and inlet and outlet openings in the latter, the inlet openings being smaller than the ball and forming a seat therefor, and the outlet opening being large enough to permit the insertion or removal of the ball, substantially as described. 2nd. A trap for the purposes described, consisting of a down-take leg and an uptake leg, a valve chamber in the latter located wholly below its outlet, exteriorly threaded nozzles at its opposite ends carrying internally threaded couplings, whereby the chamber may be connected with or removed from the pipe, a rubber ball valve within the chamber carrying a weight depending below its seat, and inlet and outlet openings in the bottom and top of the chamber respectively, the former being smaller than the ball and forming a seat therefor, and the latter being large enough to permit the insertion and removal of the ball, substantially as described.

No. 36,206. Device for Swaging, Setting and Jointing Saws.

(*Appareil à étamper, donner la voie et jointoyer les scies.*)

George Lemerise and Augustus Emile Randot, both of Amherstburg, Ontario, Canada, 21st March, 1891; 5 years.

Claim.—1st. The combination of the body *A*, having grooves *B, C*, the hammer *D*, and the set slot *E*, with the adjustable set gage *G*, the clamp block *Q*, set screw *R*, and adjustable raker gage *K*, substantially as described. 2nd. As an improved article of manufacture, the combined implement herein shown and described, consisting of the body *A*, having grooves *B, C*, the hammer *D*, and the set block *E*, and provided with pins *L*, gage screw *P*, adjustable gage *G*, clamp block *Q*, set screw *R*, raker gage *K*, and set screw *L*, all constructed and arranged, substantially as and for the purpose set forth.

No. 36,207. Loading Apparatus.

(*Appareil à charger.*)

Noah H. Harman, (assignee of Charles F. Harman), Valley Falls, Kansas, U.S.A., 21st March, 1891; 5 years.

Claim.—1st. The combination, with the frame, of the vertically disposed shaft in the upper end thereof, the damping platform or pan, the rope extending from said platform or pan over suitable guide pulleys to the vertical shaft, and means for rotating the said shaft, as set forth. 2nd. The combination, with the frame, of the vertically disposed shaft in the upper end thereof, the hoisting wheel secured on said shaft, the hoisting rope wound on the said wheel and extending from the side of the machine, the ropes secured to the shaft and wound thereon in a reverse direction to the hoisting rope, and the damping pan or platform secured to the lower ends of said ropes, as set forth. 3rd. The combination, with the hoisting mechanism, of the damping platform, consisting of an one-piece frame, the leaves pivoted therein, the braces secured to the corners of the frame to prevent downward movement of the leaves at their outer ends, and the spring latches mounted on the frame and adapted to engage the leaves to prevent upward movement thereof, as set forth. 4th. The combination, with the frame, of the vertically disposed shaft in the upper end thereof, the hoisting wheel secured on said shaft, the hoisting rope wound on the said wheel and extending from the side of the machine, the ropes secured to the shaft and wound thereon in a reverse direction to the hoisting rope, and the damping pan or platform secured to the lower ends of said ropes, the spring actuated latches pivoted to the frame and adapted to engage the platform to hold it in its raised position, and a lever *V*, connecting by a rope or chain with the latches.

No. 36,208. Baby Carriage.

(*Voiture d'enfant.*)

Rodolph McMakin and John Parsons, both of New Albany, Indiana, U.S.A., 21st March, 1891; 5 years.

Claim.—1st. The combination, with a baby carriage having its front axle centrally pivoted to turn horizontally, of a guiding and propelling bar extending from a point behind the carriage to a point near the front thereof, and there forked, the ends of which fork are secured to the front axle, the fork being rigidly and immovably connected with or formed upon the said bar to move as an integral part thereof, substantially as set forth. 2nd. In a baby carriage, the combination with the carriage body, of a rear axle rigidly connected with the said carriage body, and provided with a horizontal longitudinally extending slot, rear wheels mounted to turn on the said rear axle, a bolster held on the front end of the said carriage body, a front axle carrying the front wheels and pivotally connected with the said bolster, a propelling and guiding bar extending rearward from the said front axle, and provided with a handle for pushing and directing the carriage, said propelling and guiding bar passing through said slot in the rear axle and having a free horizontal oscillating movement therein, substantially as shown and described. 3rd. In a baby carriage, the combination, with the carriage body, of a rear axle rigidly connected with the said carriage body, rear wheels mounted to turn on the said rear axle, a bolster held on the front end of the said carriage body, a front axle carrying the front wheels and pivotally connected with the said bolster, a propelling and guiding bar extending rearward from the said front axle and provided with a handle for pushing and directing the carriage, said horizontally oscillating propelling and guiding bar passing through a slot extending transversely in the said rear axle, and a friction wheel held on the said propelling and guiding bar in the said slot, substantially as shown and described. 4th. In a baby carriage, the combination, with the carriage body, of side bars connected by springs with the said carriage body, a rear axle rigidly connected with the said side bars, and carrying the rear wheels, a bolster rigidly connected with the front ends of the said side bars, a front axle pivotally connected by a king-bolt with the said bolster, a fifth wheel located between the said bolster and said front axle on the king-bolt, front wheels held on the said front axle, and a rearwardly extending propelling and guiding bar guided in the rear axle and provided with an upwardly extending handle for pushing and directing the carriage, substantially as shown and described.

No. 36,209. Wheel for Vehicles.

(*Roue de voiture.*)

Jerome Boliek and Jonas Hunsucker, both of Conover, North Carolina, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. The combination of the spokes, the tire the felly-plates secured to the tire and provided with threaded openings, and the nuts *D*, having threaded stems to engage the openings in the felly-plates, and the sockets to receive the ends of the spokes, substantially as described. 2nd. The combination of the spoke, the tire, the felly-plates suitably secured to the tire and having a threaded opening, the nut *D*, provided with a threaded stem to engage the opening in the felly-plate, and having a socket to receive the end of the spoke and the rubber interposed between the tire and the felly-plate, and the felly-plate and the rubber, substantially as described. 3rd. In a wheel the combination of the tire provided with a groove semi-circular in cross section, and the auxiliary tire constructed of rubber or similar material, and fitting in said groove, and being semi-circular in cross section, and lying flush with the top of the tire on each side of the groove, substantially as described. 4th. The combination of the tire having its central portion *F*, curved and forming a groove *F*², the felly-plate provided with a groove and conforming to the configuration of the inner face of the tire, the spoke and the nut having a socket to receive the spoke, and provided with a stem to engage the felly-plate, substantially as described. 5th. The combination, with the tire, the felly provided with radial apertures, and the threaded tubes within said apertures, of the spokes tapered from the hub to the felly having their outer

ends *b*, screw-threaded and adapted to enter the threaded tubes, and the nuts 3, and washers 4, substantially as and for the purposes set forth. 5th. In a wheel, the combination, with the hub A, of the spokes B, tapered from the hub outward and screw-threaded at their ends *b*, of the tire and the felly suitably united to each other and provided with means whereby they may be suitably united with the spokes B, substantially as and for the purpose set forth.

No. 36,210. Switch for Incandescent Electric Lamps. (*Commutateur de lampe électrique à incandescence.*)

Arnold Boone Holmes, of Boston, and George Franklin Gale, of Winthrop, and Roderick McKenzie, of Halden, all in Massachusetts, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. The combination of a short metallic center post provided with an insulating disk at its upper end, and with an insulating segmental disk at its lower end, said post having a screw-threaded extension below the lower disk for receiving a lamp, a spring electrode attached at one end to the upper disk and provided with a downwardly-extending spring-arm, a metallic plate attached to the lower face of the segmental disk and provided with a spring-arm extending upward past the straight side of said disk, an insulating-sleeve extending transversely through said center post for a rotary key within said sleeve provided at one end with a rectangular cam disposed between said spring-arms, said cam having conductors on two opposite sides. 2nd. The combination of a short metallic center post provided with an insulating disk at its upper end with an insulating segmental disk at its lower end, said post having a screw-threaded extension below the lower disk for receiving a lamp, a binding-post dependent from the lower face of the upper disk, a binding-post attached to said center post, a spring-electrode attached at one end to the upper disk in contact with the dependent binding-post and provided with a downwardly extending spring-arm, a metallic plate attached to the lower face of the segmental disk and provided with a spring-arm extending upward past the straight side of said disk, an insulating-sleeve extending transversely through said center post, and a rotary key within said sleeve provided at one end with a rectangular cam disposed between said spring-arms, said cam having conductors on two opposite sides.

No. 36,211. Street Car. (*Tramway.*)

John George Schneider and Frank Rielle, both of Chicago, Illinois, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. In a convertible car, the combined panel and window sections extending from the letter board down to the bottom of the car between the ends of the seats, whereby said sections, divided vertically by the respective framing-posts, may be entirely removed from the structure or replaced as required, substantially as and for the purpose set forth. 2nd. In a car structure of the character described, the combination, with the vertical framing-posts having opposite sides beveled as described, of the removable panel and window sections having their framing edges correspondingly beveled and adapted to be removably inserted between the respective posts, substantially as and for the purpose set forth. 3rd. The combination, with the removable panel-section, of the pegs *a*, and the rubber block *a'*, substantially as described. 4th. In a convertible car structure, the combination, with the stationary transverse seats, of the removable seats, having ribs which engage with corresponding grooves in the stationary seats, and the pegs projecting from the lower edge of the removable seats and adapted to engage with corresponding apertures in the floor, substantially as described. 5th. In a convertible car structure, the combination, with the stationary seats having vertical grooves in the inner or adjacent ends, of the removable seats provided on their respective ends with a rib adapted to engage with said grooves in forming a continuous seat, substantially as and for the purpose set forth. 6th. The combination, with the framing-posts, of the plates *F*, provided with a transverse slot, the hand-rails adapted to be inserted in said slots, and the key for fastening the same in place, substantially as described. 7th. In a convertible car structure, the T-shaped wire-cloth panel adapted for temporary use in closing the exit-passage on one side of the car when the panel-sections proper are removed, substantially as described.

No. 36,212. Street Car. (*Tramway.*)

John George Schneider and Frank Rielle, both of Chicago, Illinois, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. A convertible car wherein the panels and windows forming the sides of the structure are adapted to be removed jointly in sections, the seats having adjustable backs and running lengthwise of the car, whereby said seats may be made to face outwardly when the joint panel and window sections are removed inwardly when the same are replaced, leaving an aisle or passage through the center of the car when in either position, and the folding steps arranged lengthwise of and on the respective sides of the car, substantially as described. 2nd. In a convertible car as described, the removable joint panel and window sections, the seats running lengthwise of the structure and provided with adjustable backs, which may be turned to face inwardly or outwardly with reference to the removable panel and window sections, one-half of the backs of said seats being removable on a line running through the longitudinal center thereof, as described, and the seats arranged lengthwise of and located at each side of the structure and adapted to fold up when not required for use, substantially as described.

No. 36,213. Filler for Sacks and Scoop.

(*Appareil pour remplir les sacs ou écopés*)

Walter H. Robinson, Hickson, and Frederick Edward Davies, Fargo, both in North Dakota, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. The combination, with a scoop having a hollow body portion, of a removable bottom adapted to fit within said body portion, substantially as described. 2nd. The combination, with a scoop having laterally extending ears or handles and a hollow tapering body portion, of a removable bottom fitting within the body portion and having a suitable handle attached thereto, substantially as described.

No. 36,214. Steam Boiler.

(*Chaudière à vapeur.*)

Hugh Patterson, John MacCormack and Harry Lee Van Zile, all of Albany, New York, U.S.A., 23rd March, 1891; 5 years.

Claim.—1st. A steam boiler, which is composed of a primary and a secondary boiler placed side by side, and separately connected together by upper and lower connecting pipes, one above and the other below the water-level line of said boiler, both of said connecting pipes being flanged together at or near the middle of their length, and each of said boilers being provided with a series of tubes through which the heated gas or products of combustion will pass, substantially as herein specified. 2nd. In a steam boiler, the combination of a fire chamber, a primary boiler provided with tubes and fixed directly over said fire chamber, a secondary boiler provided with tubes and connected by steam and water pipes to said primary boiler, and a dead-air chamber for containing heated air located between said primary boiler and secondary boiler, as and for the purpose herein specified.

No. 36,215. Brake for Sleds.

(*Frein de traineau.*)

William H. Lee, Mediapolis, Iowa, John H. Gear, Burlington, Iowa, William G. Crosby and Marion Drown, both of Washington, District of Columbia, all of U.S.A., 23rd March, 1891; 5 years.

Claim.—As an improved article of manufacture, a sled-brake, consisting of the lever *m*, the yoke *j* and the counterpart levers *k*, constructed and arranged, as shown, and co-operating in the correlation described.

No. 36,216. Boots. (*Chaussures.*)

Isaac C. Swartley and John C. Swartley, both of North Wales, Pennsylvania, U.S.A., 23rd March, 1891; 5 years.

Claim.—A boot, having seams at the sides and openings in said seams at points about opposite the wearer's ankle, the parts of the boot having a pair of tongues or flaps on each side, two of said flaps adapted to lie inside of the openings, and the other two outside of the openings, and straps or equivalent devices attached to the outside tongues or flaps, and adapted to be secured together at the rear of the boot, whereby the boot leg may be tightened at the ankle, substantially as set forth.

No. 36,217. Tone Softening Attachment for Pianos.

(*Appareil attaché aux pédales doux pour pianos.*)

W. Bell & Co., assignee of John J. Thomas, all of Guelph, Ontario, Canada, 23rd March, 1891; 5 years.

Claim.—The combination, of the softener rail A, softener felt curtain B, metal lever C, lift rod D, lever *s* and stop lever E, substantially as and for the purpose described in the accompanying specification.

No. 36,218. Arm Support for Books.

(*Appui bras pour livres.*)

Charles Hles and Andrew McLellan, both of Woolstock, Ontario, Canada, 23rd March, 1891; 5 years.

Claim.—In an arm support, the combination of two flaps A and B, the braces C, the niches D, and the holdall piece E, are all substantially as and for the purpose specified.

No. 36,219. Manufacture of Feather Mattresses. (*Fabrication des matelas en plume.*)

Andrew Jesse Cunningham, Dixon, Illinois, U.S.A., 24th March 1891; 5 years.

Claim.—The hereinbefore described process of making mattresses of feathers, in which the mattress, after being filled with renovated or cleaned feathers, and then coiled, is first placed upon a smooth solid surface of sufficient area to support every part thereof, the feathers then evenly distributed are held against an edge of the mattress by compressing them downward in a straight line running the extent of the edge, and a line of tufts formed near the margin of the tick, first, across one end of the mattress, second, across the opposite end thereof, third, along one side thereof, and, fourth, along the opposite side thereof, and then, in like manner, the interior of the mattress filled in with a sufficient number of lines to permanently hold the feathers against lateral displacement, and also against bunching, substantially as hereinbefore described.

No. 36,220. Fastener for Cruppers.

(*Attache de croupières.*)

George Herbert Davis, Livonia, New York, U.S.A., 24th March, 1891; 5 years.

Claim.—A crupper fastening device, consisting of the parts A and B, and having their edges turned up and corrugated at right angles to the length of the clamp and provided with an eye I, in one end thereof, substantially as described for the purposes set forth.

No. 36,221. Hanging Stage. (*Echafaud volant.*)

Robert W. Ferguson and William J. Otter, both of Detroit, Michigan, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. In a hanging stage, devices for connecting the suspending ropes with the platform, said devices consisting of the vertical legs F, F, joined at their upper ends by a resilient connection, substantially as shown and described. 2nd. In a hanging stage, devices for connecting the suspending ropes with the platform, said devices consisting of the vertical legs F, F, the two legs which are away from the surface to be operated upon, being provided near their upper ends with the hooks H, H, and a guard I connecting and supported by said hooks.

No. 36,222. Contract and Coupon Books.

(*Livre de coupon.*)

Moses Hamilton Kittredge, Bay City, Michigan, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. A coupon book, pamphlet, or paper, having a page formed with a blank for the name of the place where the lease is granted, a blank for the amount of the fare and the amount of the lease, a contract or lease, a blank for the signature of the lessee and a series of detachable coupons, numbered in serial order from the attached margin of the coupons, together with the designation and character of the coupons, each coupon bearing its number, all substantially as described. 2nd. A book, pamphlet or paper, having the blank and legends as described and shown, in combination with a series of detachable coupons, numbered in order from the attached margin, and bearing a legend indicating their character, substantially as described.

No. 36,223. Ventilator. (*Ventilateur.*)

Richard Montgomery Pancoast, Philadelphia, Pennsylvania, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination, in a car, of the intake cowl, at or near the side of the car and at the roof thereof, passages extending from said car and communicating with the interior of the car at a point between the floor and the roof, with an outlet cowl situated on the roof of the car and communicating with the interior of the car at the roof at a point above the inlet opening from the intake cowl, substantially as and for the purpose described. 2nd. The combination, in a car, of the vertical air passage ways at the sides of the car, with intake cowls communicating with said air passage ways, with an opening at or near the bottom of the inner shell forming the vertical air passage ways to allow the air to pass into the body of the car, with a perforated false floor on which the contents of the car are supported, and with an outlet cowl on the roof of the car and communicating with the interior of the car, so that air passing into the intake cowl will pass down the air passage-way and into the body of the car at the bottom up through the contents and out through the top of the car, substantially as specified. 3rd. The combination of the car, having air passage-ways down at the sides, an intake cowl at the top of the car communicating with said air passage-ways, openings in said air passage-ways, and with an outlet opening communicating with an outlet cowl, so that the circulation of air may be had which will pass through the intake cowl down the air passage way at the side of the car and into the car, either through or above the load and out through the outlet cowls, substantially as described. 4th. The combination, in an intake, of the tapered sides having inlet openings therein, with a pivoted deflecting plate adapted to close one of said openings, an inclined bottom plate and a gutter-way, and with an outlet opening to allow the rain water and dust to pass away from the cowl, substantially as specified. 5th. The combination, in an intake cowl, of the hood portion and the pivoted deflector in said portion, with an inclined bottom plate passing into and through the air-space, and with flanges ^b on the bottom plate, substantially as and for the purpose described. 6th. The combination, in a car, having side air passage-ways with doors, of air-passage ways in said doors with inlet cowls above said air passages for directing air into said passage ways, and with outlets in said door communicating with the interior of the car, substantially as specified. 7th. The combination, in an exhaust cowl, of the diamond-shaped cowl body, having exits in the front and rear sides, with the outer deflecting casing comprising front and rear plates shielding said exits and extending only to a point back of the line of the points of the diamond cowl body, and inclined, so as to form with the diamond-shaped cowl body opposite inclined discharge passages, whereby a current of air directed either against the front or rear plates of the cowl is deflected at an angle across both the discharge ends of the cowl by the deflecting plates, the ends of the cowl body thus assisting the outer deflecting plates in inducing a draught, substantially as specified. 8th. The combination of the neck M, plates *p*, *p*, plates S, forming a diamond shaped cowl body, having openings *a*, *a*, deflecting plates R and curved flanges *s* projecting from the plates S, at the openings *a*, *a*, substantially as and for the purpose set forth. 9th. The combination, in an exhaust cowl, of the diamond-shaped cowl body having its long axis in a vertical plane, and having exits at the sides of the body, with plates shielding said exits, said cowl body having at the bottom an opening for the discharge of water and air, substantially as set forth. 10th. The combination, in an exhaust cowl, of the diamond-shaped cowl body, having its long axis in a vertical plane, and having openings at the sides of the body with plates shielding said openings, said cowl body having openings at the upper and lower sharp ends, and a deflecting plate or plates situated directly below the upper opening, substantially as and for the purpose set forth. 11th. The combination, in an exhaust cowl, of the vertical plates S, forming a hood diamond-shaped in cross-section, and having exits in the front and rear sides, with the outer vertical plates R shielding said exits and extending only to a point back of the points of the diamond cowl body, and inclined so as to form with the plates comprising said cowl body opposite inclined discharge passages, substantially as and for the purpose described.

No. 36,224. Pin for Horse Collars.

(*Cheville pour collier de cheval.*)

L. Arthur Dion, Montmagny, Quebec, 24th March, 1891; 5 years.

Claim.—The combination of the cap B, with the pin A and the mortise C, substantially as and for the purpose hereinbefore set forth. 2d. The combination, with the pin A, of a cap B, as fastening, substantially as and for the purpose hereinbefore set forth.

No. 36,225. Process of Manufacturing Cement. (*Procédé de fabrication du ciment.*)

George Williams, Winnipeg, Manitoba, Canada, 24th March, 1891; 15 years.

Claim.—The process of making hydraulic cement, which consists in reducing carbonate of lime to a powder, by steam under pressure, produced from a solution of silicate of soda and water, in the proportions named, adding to the powder so produced alumina and silica, and a paste of chloride of calcium, unslacked lime, and warm water, molding into convenient forms which are burnt to a white heat, so as to produce a clinker which is then ground to a fine condition, all substantially as described.

No. 36,226. Shingle Sawing Machine.

(*Machine à scier le bardeau.*)

John Millin, Dunchurch, Ontario, Canada, 24th March, 1891; 5 years.

Claim.—1st. The combination, with the frame 1, carrying horizontal circular saws 6, 7, of the adjustable tables 2, 3, 4, to support the shingle block, and the horizontally rotating wheel or carriage 17, having openings or pockets 27, to receive the shingle block, and followers 28, engaging and disengaging said blocks to be cut, as set forth. 2nd. The combination, with the horizontally rotating wheel or carriage 17, having openings or pockets 27, provided with a follower 28, for holding the shingle bolt, of a shifting spindle 19, carrying a friction driving roller 18, a push bar 22, loosely connected to said spindle, a lever 23, connected to the push bar, and a spring 25, attached to the main frame of the machine for raising the push bar when moved forward by the lever, whereby the shingle roller is engaged with and disengaged from the wheel or carriage for the purpose set forth. 3rd. The combination, with the horizontally rotating wheel or carriage 17, having pockets or openings 27, of the spring followers 28, having an arm 29, provided with a downward projection 21, and the rim or segments 12, having a cam projection 13, for raising the followers to permit the shingle block or bolt to drop step by step at intervals, for the purpose set forth.

No. 36,227. Fastener for Windows.

(*Arrête-croisée.*)

Ernest M. Cattley, Toronto, Ontario, Canada, 24th March, 1891; 5 years.

Claim.—1st. A catch D, pivoted in the casing C, and actuated by the spring E, in combination with the pivoted pawl F, arranged, substantially as and for the purpose specified. 2nd. The casing C, having lugs H, formed on it and fixed to a window-sash A, in combination with the plate G, fixed to the sash B, and formed to engage with the lugs H, substantially as and for the purpose specified. 3rd. The catch D, pivoted in the casing C, and actuated by the spring E, the pawl F, pivoted in the catch D, in combination with the plate G, fixed to the sash B, and shaped to fit over the lugs H, substantially as and for the purpose specified.

No. 36,228. Chair for Railway Rails.

(*Coussinet de rail le chemin de fer.*)

Hornace Henry Charles Sintiz-nich, Toronto, Ontario, Canada, 24th March, 1891; 5 years.

Claim.—A rail-chair, consisting of a fixed jaw A, having oppositely extending lugs 1, 2, provided with a hole *a*, and having a downwardly and upwardly curved portion A', terminating in lugs 3, 4, extending in opposite directions and provided with a recess *b*, intermediately of said lugs 3, 4, a removable jaw D, having a correspondingly shaped portion C, fitting into said recess, and a fastening screw F, connecting the two sections of the chair together, said jaws fixed to clamp the rail, and the lower portion of the chair curving downward to clear the rail, as set forth.

No. 36,229. Mechanism for Operating Hatchway Doors. (*Appareil pour le fonctionnement des écuelles.*)

David B. Clem and Edward F. Smith, both of Philadelphia, Pennsylvania, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination, with an elevator hatchway, of a curved sectional arm connected at one end with the hatchway door, and at the other end projecting into the pathway of the elevator, a flat disk secured to or integral with the inner end of each arm-section, and provided with a central opening, a support in the latter, and a bolt or bolts passing through one of said disks outside said opening and into the other disk, substantially as and for the purpose described. 2nd. The combination, with an elevator hatchway, of a curved sectional arm connected at one end with the hatchway door, and at the other end projecting into the pathway of the elevator, a flat disk secured to or integral with the inner end of each arm-section and provided with a central opening, a support in the latter one of said disks, having a slot or slots outside its central opening a slot or slots and into the other disk, and a yielding gasket

or washer between the disks, substantially as and for the purpose described. 3rd. The combination, with an elevator hatchway, of the arm A, composed of the section a, with the disk a², thereon provided with the slots a³, a⁴, and the section a¹, with the disk a², thereon provided with the sockets a⁵, the bolts c, c¹, passing through said slots and into said sockets, said arm being pivotally supported so that one end will project into the pathway of the elevator, and the other end is connected with the hatchway door, substantially as and for the purpose described. 4th. The combination, with an elevator hatchway door, of the arm A, composed of the section a, with the disk a², thereon provided with the slots a³, a⁴, and the section a¹, with the disk a², thereon provided with the sockets a⁵, the bolts c, c¹, passing through said slots and into said sockets, the gasket C, said arm being pivotally supported so that one end will project into the pathway of the elevator, and the other end is connected with the hatchway door, substantially as and for the purpose described. 5th. The combination, with an elevator hatchway, of the arm A, composed of the section a, with the disk a², thereon provided with the slots a³, a⁴, and the section a¹, with the disk a², thereon provided with the sockets a⁵, the bolts c, c¹, passing through said slots and into said sockets, the gasket C, the plate B, provided with the boss b, said disks being provided with openings a⁶, for said boss, the washer d, the set-screw d¹, the pin e, and the forked rod E, pivoted on said pin and attached to the hatchway door, substantially as and for the purpose described.

No. 36,230. Musical Instrument.

(*Instruments de musique*)

Joseph Lea De Good, and Jacob H. Hahn, both of Detroit, Michigan, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination, with a stringed instrument, substantially as described, of a group of three pivoted, swinging, and lengthwise movable dampers corresponding with each of the letters of the scale, said dampers provided with muffers adapted to dampen or muffle all the strings not utilized in producing the corresponding chord, and said dampers corresponding respectively to the common chord or chord of one, the dominant seventh, and the relative minor chords, substantially as set forth. 2nd. The combination, with a stringed instrument, substantially as described, of dampers arranged transversely across its strings, there being a group of three dampers corresponding with each letter of the scale, said dampers in each group provided with a series of muffers, one for the common chord or chord of one, one for the dominant seventh, and one for the relative minor chords, each said group of three adapted to be shifted longitudinally in a direction across the strings, whereby they are caused to muffle the requisite strings and produce a series of chords a half step higher, substantially as set forth. 3rd. The combination, with the strings of the triple groups of dampers D, each said group engaged at their heels to prevent relative longitudinal displacement of its members, and engaged by a longitudinal slot and pivot connection whereby they may be shifted longitudinally through a limited distance, and springs or equivalent whereby each member of the group may be independently depressed into contact with the strings and restored again to its position free from the strings, substantially as set forth. 4th. The combination, with a stringed instrument, substantially as described, of dampers provided with muffers arranged transversely across the strings, and adapted to muffle the strings out of harmony with the chord to be produced, said damper provided with means whereby it may be shifted longitudinally to produce a chord a half step different from the chord produced when in its initial position, substantially as set forth. 5th. The combination, with a stringed instrument of the dampers D, and a common damper E, and means for bringing said last moved damper into action at the will of the operator, substantially as described.

No. 36,231. Spindle for Door Lock Knobs.

(*Tige pour bouton de serrure de porte.*)

John C. Wallace, Ridgetown, Ontario, Canada, 21th March, 1891; 5 years.

Claim.—1st. The combination of the two sectional spindles C, C, with the teeth grooves, and the set-screws E, E, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the solid heads D, D, at the outer ends of the said sectional spindles C, C, substantially as and for the purpose as hereinbefore set forth.

No. 36,232. Nozzle for Hose. (Lance de boyaux.)

David Roach, Falton, New York, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination, with the hose-nozzle, of two levers formed of a continuous bar pivoted at the center of its length to the side of the nozzle, and catches on said nozzle sustaining said levers parallel with the nozzle, as set forth. 2nd. The combination, with the hose-nozzle, of a metallic band embracing the said nozzle and rigidly secured thereto, and a bar pivoted central of its length to said band, as set forth. 3rd. The combination, with the nozzle, of a collar rigidly attached to said nozzle and provided with a circumferential groove, a metallic band embracing the grooved portion of said collar and terminating with perforated ears, a bolt passing through said ears and clamping the band on the collar, a trunnion projecting from the band and a bar pivoted centrally of its length on said trunnion, substantially as described and shown. 4th. The combination, with the nozzle, of a trunnion on the side of said nozzle at some distance from the ends thereof, collars on the end portions of the nozzle having notches in their exterior, and a bar bowed at its center from the nozzle and pivoted thereat on the aforesaid trunnion, substantially as described and shown.

No. 36,233. Lock. (Serrure.)

Charles Wood, Toronto, Ontario, Canada, 24th March, 1891; 5 years.

Claim.—1st. The pivoted lever D, having a projection b, on one

end, in combination with the disc H, having a notch f, made in it and connected to the spindle of the spur-wheel J, the pinion K, connected to the movable spindle L, substantially as and for the purpose specified. 2nd. The pivoted levers D, and E, having a projection b, on one of them, the springs F, and movable plate G, in combination with the disc H, having a notch f, made in it, and connected to the spindle of the spur-wheel J, the pinion K, connected to the movable spindle L, the pointer M, and the spring N, substantially as and for the purpose specified. 3rd. The block P, connected to the hasp B, and actuated by the spring Q, in combination with the pointer M, substantially as and for the purpose specified.

No. 36,234. Tug for Hames. (Mancelle.)

Henry Jeremi Demers, North Adams, Massachusetts, U.S.A., 24th March, 1891; 5 years.

Claim.—A hame, provided with lateral eye-bolts B, C, in combination with the coupling-head E, having central hole, the pin G, held in said eye-bolts, a lateral shank e, and at its lower end, a central bearing-flange H, of less diameter than the head, said shank adapted to receive the trace of two layers of material surrounding the shank, and secured thereto with the inner ends of said layers terminating at the head, substantially as shown and described.

No. 36,235. Fastener for Guy Ropes.

(*Devicé pour etais en corde.*)

Arthur Louis Seelbach, Cleveland, U.S.A., 24th March, 1891; 5 years.

Claim.—The fastener for guy-ropes, consisting of the device C, curved, as shown, and provided at one end with the eye a for attaching the end of a rope thereto, and having the upwardly extending fingers b, e, disposed diagonally opposite each other, and the horizontal finger c, disposed between the same and the bearings d, f, between the fingers, substantially as and for the purpose set forth.

No. 36,236. Lock Tenon. (Tenon pour écluses.)

Edward Arthur King, Oxford, Nova Scotia, Canada, 24th March, 1891; 5 years.

Claim.—The combination of circular tenon, with circular slot a, a, substantially as and for the purpose hereinbefore set forth.

No. 36,237. Apparatus for Cutting Pile Fabric. (Appareil pour tailler les tissus de poil.)

The Fastan Cutting Machine Company Limited, Ordall Lane Mills, Salford, assignees of James Hoyle Smith, Eccles, Andrew Goldard Stockport, Lloyd Higginbottom, and Thomas Mannock, both of Manchester, and in the County of Lancaster, England, 24th March, 1891; 5 years.

Claim.—1st. In knives for cutting pile fabrics, the combination, with the handle of the knife, of a "level" composed of a pivoted back member O, to which is connected a hook N, adapted to hook onto a rib p, on the table P, and a pivoted front member Q, which is made to nip the rib p, between it and the hook N, by the pull exercised by the latter on the back member O, substantially as shown and described. 2nd. So arranging the tables of machines for cutting pile fabrics upon rollers or equivalent supports, that any lateral movements imparted to the knife by the resistance which it is cutting is imparted directly thereby to the table, in proportion of the lateral motion of the cloth, substantially as and for the purposes herein described.

No. 36,238. Whiffletree. (Palonnier.)

Henry L. Moyer and John Harvey, both of Lee, Pennsylvania, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination of the slotted iron adapted to be secured to the end of the single or double tree, the hook hinged between the walls of the slot, and a locking lever also hinged between the same, its hinge or pivot being in line with the pivot of the hook and with the body of the whiffletree, and outside of said hook pivot, the lever being adapted to move on its hinge or pivot to lock the hook, and having a handle lying behind said iron and its body in the slot when the hook is locked, substantially as described. 2nd. In combination, the iron adapted to be secured to a single or double tree having a slot across one end and side, a hook hinged or pivoted in the side slot, and a locking lever hinged or pivoted in the end slot outside the hook pivot, and in line with the same as well with the body of the whiffletree, and conforming in a locked position to the end of the iron, the hook and lever being provided with shoulders or catches adapted to engage each other and lock the hook, substantially as described. 3rd. In combination, the iron adapted to be secured to a whiffletree, having a slot in one side and end, a hook pivoted in the side or front slot, and having an exterior notch on its limb, opposite the pivot, and a notched lever bent at right angles and pivoted in the slot in line with the hinge pivot, and with the body of the whiffletree, its body lying, when engaged with the hook, in the end slot, and its outer free end extending along close to the back of the iron and toward the whiffletree, substantially as described. 4th. In combination, with an iron adapted to be secured to a whiffletree, said iron being slotted in front, and at its end a hook pivoted in the front slot, and having an exterior notch on its free limb, and a locking lever pivoted in the slot and provided with a notch to engage the hook-notch, the notched ends of the hook and lever lying entirely in the slot, when their notches are engaged, substantially as described.

No. 36,239. Bicycle. (Bicycle.)

Joseph Knott and Stephen Coram, both of Utica, New York, U.S.A., 24th March, 1891; 5 years.

Claim.—1st. The combination, with the steering wheel, of a bicycle or velocipede, of a substantially round elastic tier, a removable

U-shaped tire in cross-section secured thereon, having a centrally downwardly-projecting knife edge on its under or bearing face, and a clamp for removably securing the tire to the wheel, substantially as set forth. 2nd. The combination, with the steering wheel, of a bicycle or velocipede, of a removable skate shoe or tire adapted to be secured to the wheel, having three downwardly-projecting longitudinal edges on its under or bearing surface, the central edge projecting downward further than others, substantially as set forth. 3rd. The combination, with the propelling wheel of a bicycle, of a felly, a substantially round rubber tire on the felly, a removable U-shaped tire in cross-section, adapted to engage the rubber tire, and having projecting spurs or serrated teeth on its bearing face, substantially as set forth. 4th. The combination, with the steering wheel of a bicycle, of a removable tire secured thereon, having round bearing face, and said bearing face having a central longitudinal downwardly-projecting sharp edge, and a clamping device for removably securing the tire to the wheel, substantially as set forth. 5th. The combination, with the steering wheel of a bicycle or velocipede, of a removable shoe or tire secured thereon, having continuously curved bearing face in the direction of its length, and a rounded face in the direction of its width, and a central longitudinal downwardly-projecting sharp edge, the said edge projecting to a greater distance from the regular outline of the shoe or tire than any other portion thereof, and the clamping device for removably securing the shoe or tire, substantially as set forth. 6th. The combination, with the steering wheel of a bicycle, of a removable shoe or tire secured thereon, having a continuously-curved bearing face in the line of its length, and conforming substantially to the circumference of the steering wheel, said bearing face having a central longitudinal downwardly-projecting sharp edge on its under or bearing face, and the clamping device for removably securing the shoe or tire on the wheel, substantially as set forth. 7th. The combination with the steering wheel of a bicycle or velocipede, of a substantially round rubber tire, a removable U-shaped tire in cross-section secured thereon, having a central curved bearing face in the direction of its length, and longitudinal downwardly-projecting sharp edge on its under or bearing face, and the clamping device for removably securing the tire and wheel, substantially as set forth.

No. 36,240. Felt for Roofing and Lining.

(Feutre pour toitures et doublures.)

The Powerville Felt Lining Company, assignees of Joseph A. Smith, New York, State of New York, U.S.A., 28th March, 1891; 5 years.

Claim.—1st. A sheet of felt for roofing, lining and other purposes, having one or more raised lines or ridges running parallel to the edge of the sheet, substantially as and for the purpose set forth. 2nd. A sheet of felt for roofing, lining and other purposes, having one or more raised lines or ridges running parallel to the edge of the sheet, and formed by incorporating in the sheet threads, or similar material, substantially as described, whereby a portion of the felt surface is caused to bulge and form guide lines, substantially as and for the purpose set forth.

No. 36,241. Punching Machine.

(Presse ou decoupoir.)

George H. Lanigan, Hamilton, Ontario, Canada, 28th March, 1891; 5 years.

Claim.—1st. The combination, with a press machine A, adapted to receive a shank S, and having a regulating screw c, of the embossing chase E, having handle E² and guide plate E¹, the embossing press n², with its guide n¹, and all the gauges affixed to the table B of the machine, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, in a press machine A, of the vertical slide c, having adjustable clamps c², lugs c¹, collars c₄, rounded cutter knife c³, with its shank S, and the spiral spring c⁴, with the book gauges c⁵, substantially as and for the purpose hereinbefore set forth. 3rd. The combination, with a press machine A, of the square cutting knife H and its counterpart H¹, provided with gauges H², substantially as and for the purpose hereinbefore set forth. 4th. The combination, with a press machine A, the dies I, J, L, M¹ and P², with their counterparts, I¹, J¹, L¹, M and P³, the bodkin N, the stripper K, as attached, the slide block o, the projecting arm P, having shank S and brace P¹, substantially as and for the purpose hereinbefore set forth. 5th. The combination, with a press machine A, of the die cutters T inserted in a plate having shank S, the screws T², the counterpart slide T¹ and the table slide block o, substantially as and for the purpose hereinbefore set forth. 6th. The combination with a press machine A, of the die block V, having shank S, the needles V¹, in plate 2, the guide pins 3, the plate y, having counterparts for needles, the slide block U, forming the ticket space 4, having ticket gauge pins 5 and the guide block o, substantially as and for the purpose hereinbefore set forth.

No. 36,242. Guide for Band Saws.

(Guide pour scies sans fin.)

Charles Erskine Wright, Waterbury, Connecticut, U.S.A., 28th March, 1891; 5 years.

Claim.—1st. A saw guide, consisting essentially of a body, a disk mounted therein at one side of the track of the saw, so that said saw will bear against the face of the disk, near the edge thereof, and guide plates between which the saw passes the disk, giving a firm support to the saw and the latter acting to rotate the disk. 2nd. In a saw guide, a disk capable of rotation and mounted at one side of the track of the saw, which bears against the face of the disk, near the edge thereof, so that the forward movement of the saw imparts rotation to the disk, as and for the purpose set forth. 3rd. In a saw guide, the combination, with a disk mounted at one side of the track of the saw, so that the saw will rest against the face of the disk, near its edge, of tilting guide plates on opposite sides of the saw and screws whereby said plates may be adjusted farthest apart at their outer edges. 4th. The combination, with a body and a disk mounted therein at one side of the track of the saw, so that the latter will bear against the face of the disk, near its edge, of guide-plates 21, on opposite sides of the saw-track, and screws 22 and 23, whereby said guide-plates may be adjusted to saws thinnest at the back. 5th. The combination in a saw-guide, of a back plate having a circular groove in its face, a series of balls in said groove, and a rotary disk, the inner face of which rests against the balls. 6th. The back plate, having a circular groove in its face, a series of balls in said groove, a disk resting against said balls and having a counter-sunk in its outer face and a spindle on which the disk is mounted and which is provided with a head beveled to correspond with the counter-sunk, and the inner end of which is threaded to engage the back plate so that lost motion may be taken up by rotation of the spindle. 7th. The combination, with the adjustable body, the back plate having a groove in its face, and a shank engaging the body where it is locked by a set screw, of a series of balls in said groove, a rotary disk bearing against the balls, and a spindle having a head engaging the outer face of the disk, the inner end of which is threaded to engage the back plate and shank. 8th. The combination, with the body having a shank 2, the back plate and disk of a sleeve through which the shank passes, and which is provided with an arm 6, having a slot at its upper end, a two-part clamp, and a bolt 9, which passes through said slot and engages one of the parts of the clamp.

No. 36,243. Door Knob. (Bouton de porte.)

William French Greene, Troy, New York, U.S.A., 28th March, 1891; 5 years.

Claim.—1st. In a knob, the combination, with the stem provided with a screw-threaded shank, and the forwardly-extending arms provided with projections, of a non-conducting hand-hold, having recesses adapted to engage said projections, and a projection on the hand hold designed to enter a recess formed in the stem, whereby said hand-hold is prevented from turning, substantially as described. 2nd. In a knob, the combination, with the stem having a screw-threaded shank, and a groove formed therein, adapted to receive a pin, the forwardly-extending arms, having projections of a non-conducting hand-hold, provided with a projection adapted to enter a recess formed in the stem, and the recesses in said hand-hold designed to engage the projections on the arms b, when the latter are forced together, substantially as described.

No. 36,244. Smoke Box, Front Door and Number Plate for Locomotives.

(Boîte à fumée, porte et plaque avec numéro pour locomotives.)

Edward William Mackenzie Hughes, Chicago, Illinois, U.S.A., 28th March, 1891; 15 years.

Claim.—1st. The combination of a flexible corrugated front plate for locomotives, made of pressed steel pressed between dies, of a flexible door, itself made of pressed steel pressed between dies, and having an elastic action in connection with said front plate, thereby enabling a tight joint to be made between the door and the front plate, substantially as described. 2nd. The combination of locomotive front plate and door, herein shown, which consists of a front plate and door hinged thereto, a transverse bar within the front plate, a bolt carried by the door and having a head locking in one position within the cross-bar, and in another position passing there-through, and a nut outside the door for locking the same when closed, substantially as described. 3rd. The combination of a boiler front plate, a door hinged thereto, and a cross-bar within the same, a bolt carried in said door and passing through said cross-bar for locking the door, the said bolt likewise carrying a number plate at its outside end, and a nut for locking the door in its closed position, substantially as described. 4th. The combination of the front plate 5, the door 13, hinged thereto, the bar 10, having longitudinal opening there-through, a bolt 8, passing through the bar 10, and on its outer end carrying the number plate 12, and nut 1, substantially as described.

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

2108. GEORGE J. B. RODWELL, and HEBERT C. SECORD, 2nd five years of No. 23,581, from the 9th day of March, 1891. Improved Machine for the Manufacture of Vulcanized Rubber Dies or Stamps, 3rd March, 1891.
2109. GEORGE HENRY WILLIAMSON, 2nd five years of No. 24,002, from the 7th day of May, 1891. Improvements on Metallic Boxes or Cases for Storing Articles of Food, Tobacco, Snuff, Paint, and for other like purposes, 5th March, 1891.
2110. THE INTERNATIONAL TERRA COTTA LUMBER CO., (assignee), 2nd five years of No. 23,596, from the 13th day of March, 1891. Process for Manufacturing Building Material, known as Terra Cotta Lumber and the Product therefor, 9th March, 1891.
2111. STEPHEN NORTH, 3rd five years of No. 12,490, from the 11th day of March, 1891. Improvements in Ear Trumpets, 9th March, 1891.
2112. BRINS OXYGEN COMPANY, (assignee), 2nd five years of No. 23,628, from the 24th day of March, 1891. Improvements in the Separation and Obtainment of Oxygen and Nitrogen from Atmospheric Air, 12th March, 1891.
2113. WILLIAM MORRISON, 2nd five years of No. 23,653, from the 26th day of March, 1891. Improved Heater for Household and other Heating, 13th March, 1891.
2114. T. McAIRTY & SONS, (assignee), 2nd five years of No. 23,744, from the 5th day of April, 1891. Improvements in Injectors, 14th March, 1891.
2115. PETER JOHN McDONALD, 2nd five years of No. 23,602, from the 15th day of March, 1891. Improvements in Refrigerating Apparatus, 14th March, 1891.
2116. OCTAVE CHARLAND, 2nd five years of No. 23,988, from the 6th day of May, 1891. Improvements in Hot Water Heating Apparatus, 14th March, 1891.
2117. PITT WILLIAM STRONG, 2nd five years of No. 23,604, from the 15th day of March, 1891. Improvements in Milk Weighing Cans and Conveyors, 14th March, 1891.
2118. WILLIAM JOSEPH COPP, 2nd five years of No. 23,692, from the 29th day of March, 1891. Improvements in Fire Place Grates, 16th March, 1891.
2119. LAFAYETTE LADD, 2nd five years of No. 23,945, from the 13th day of April, 1891. Improvement in Machines for Separating Seeds from Pulp, 18th March, 1891.
2120. WILLIAM MATHER, 2nd five years of No. 23,693, from the 30th day of March, 1891. Apparatus for Soaking, Boiling or Dyeing Textile Materials, or Subjecting them to the action of Liquids or Gases, 18th March, 1891.
2121. ALBANUS WEBSTER MORTON, 3rd five years of No. 12,502, from the 19th day of March, 1891. Improvements on Gas Heating and Cooking Apparatus, 18th March, 1891.
2122. HEATON-PENINSULAR BUTTON FASTENER CO., (assignee), 2nd five years of No. 23,707, from the 31st day of March, 1891. Improvements in Button Setting Machines, 20th March, 1891.
2123. ANDREW BELL JARDINE, 2nd five years of No. 23,797, from the 10th day of April, 1891. Improvements in Hub Boring Machines, 20th March, 1891.
2124. MINARD M. SMITH, 2nd five years of No. 24,365, from the 21st day of June, 1891. Improvements in Machines for Making Wire Nails, 20th March, 1891.
2125. SALLY GUSTAV COHNFELD, 2nd five years of No. 23,750, from the 5th day of April, 1891. Improved Method of Producing Moulded Articles from Substances Containing Ligneous Fibres, 21st March, 1891.
2126. ELIZABETH R. MILLIGAN, 2nd five years of No. 23,629, from the 24th day of March, 1891. Improvements on Plate Printing Presses and Wiping Appliance therefor, 23rd March, 1891.
2127. JAMES J. NEWELL, 2nd five years of No. 23,743, from the 5th day of April, 1891. Improvements in Apparatus for Generating Heating and Illuminating Gases, 24th March, 1891.
2128. PITT WILLIAM STRONG, 2nd five years of No. 23,630, from the 24th day of March, 1891. Improvements in Cheese Vats, 24th March, 1891.
2129. THE BELL TELEPHONE COMPANY, (assignee), 2nd five years of No. 23,677, from the 27th day of March, 1891. Improvements in Telephone Instruments, 26th March, 1891.
2130. THE NYE STEAM VACUUM PUMP COMPANY, (assignee), 2nd five years of No. 23,721, from the 31st day of March, 1891. Improvements on Steam Vacuum Pumps, 27th March, 1891.
2131. WILLIAM SARGENT, 3rd five years of No. 12,562, from the 31st day of March, 1891. Load Lifting Machine, 30th March, 1891.
2132. JOHN PTOLEMY, 2nd five years of No. 23,769, from the 7th day of April, 1891. Improvements in Drying Frames for Lace Curtains, 30th March, 1891.
2133. CHARLES CLARENCE LONGARD, JOHN S. LONGARD, GEORGE E. LONGARD, and WILLIAM T. LONGARD, 3rd five years of No. 12,809, from the 14th day of May, 1891. Improvements on Apparatus for Heating Buildings by means of Hot Water, 30th March, 1891.
2134. THE BYAM MANUFACTURING COMPANY, (assignee), 2nd five years of No. 23,701, from the 31st day of March, 1891. Improvement on Curtain Fixtures, 30th March, 1891.
2135. THE BYAM MANUFACTURING COMPANY, (assignee), 2nd five years of No. 23,715, from the 31st day of March, 1891. Improvement on Sash Balances, 30th March, 1891.
2136. THE BYAM MANUFACTURING COMPANY, (assignee), 2nd five years of No. 23,716, from the 31st day of March, 1891. Improvement on Sash Locks, 30th March, 1891.
2137. WILLIAM HURBERT DENSLOW, JAMES MATHER and PHILIP C. GORI, 2nd five years of No. 23,761, from the 5th day of April, 1891. Improvements in Heaters, 30th March, 1891.

MARCH LIST OF TRADE MARKS.

Registered at the Department of Agriculture—Copyright and Trade Mark Branch.

3961. CHASE'S LIQUID GLUE CO., of Montreal, Que., and St. John, N.B., Glue, 4th March, 1891.
3962. ARTHUR BOAKE and FREDERICK GEORGE ADAIR ROBERTS, trading as A. BOAKE, ROBERTS & CO., in Stratford, London, England, An Ale and Beer Preservative, 4th March, 1891.
3963. WALWORTH M. MOONEY, of Au Sable Chasm, Essex Co., N.Y., U.S.A., Horse Shoe Nails, 6th March, 1891.
3964. THE FARBENFABRIKEN, vormals, FREDERICK BAYER & CO., of Elberfeld, Empire of Germany. A new Pharmaceutical Product, 10th March, 1891.
3965. FRANCIS ADAM SHIRRIFF, of Toronto, Ont., Baking Powder, 10th March, 1891.
3966. EDWARD JOHN MAHON, of Montreal, Que., Bread, Rolls, Cakes, Pastry, and Bakers' Wares generally, 11th March, 1891.
3967. JAMES LEGGAT, of Montreal, Que., Boots and Shoes, 12th March, 1891.
3968. THE CHARLES WRIGHT MEDICINE CO., of Detroit, Michigan, U.S.A. A Preparation for Cleansing the Teeth, 13th March, 1891.
3969. T. S. CLEAVER & SONS, of 32, 33, and 34, Red Lion Street, Holborn, London, England, Perfumery, Soaps, Pomades, Powders, Cosmetics, Washes, Lotions, Creams, Ointments, and all Toilet articles, 14th March, 1891.
3970. L. C. BAILEY & SONS, of Colborne, Co. Northumberland, Ont., Soap, 14th March, 1891.
3971. } THE REMINGTON STANDARD TYPEWRITER MANUFACTURING CO., of
3972. } Iilon, N.Y., U.S.A., Typewriting Machines, 18th March, 1891.
3973. FRANK REDDAWAY, of Manchester, England, Cotton Duck Belting, 18th March, 1891.
3974. THE REMINGTON STANDARD TYPEWRITER MANUFACTURING CO., of Iilon, N.Y., U.S.A. Typewriting Machines, 20th March, 1891.
3975. LANDERS, FRARY & CLARK, of New Britain, Connecticut, U.S.A., Cutlery for Household Use, 21st March, 1891.
3976. H. PAXTON BAIRD, of Woodstock, N.B., Medicinal or other Preparations for Man and Beast for internal and external use, 23rd March, 1891.
3977. BOSTON RUBBER SHOE COMPANY, of Malden and Boston, Massachusetts, U.S.A., Rubber Shoes, 23rd March, 1891.
3978. S. DAVIS & SONS, of Montreal, Que., Cigars, Cigarettes and Tobaccos, 24th March, 1891.
3979. J. F. LEFEBVRE, of Montreal, Que., Cigares, 24th March, 1891.
3980. JOHN UNDERWOOD & CO., of New York, N.Y., U.S.A., and Toronto, Ont., General Trade Mark, 26th March, 1891.
3981. THE GUTTA PERCHA AND RUBBER MANUFACTURING COMPANY, of Toronto, Ont., Any kind of Hose used for conveying water, 26th March, 1891.
3982. HICKSON, DUNCAN & CO., of Toronto, Ont., Pipes, 26th March, 1891.
3983. ALFRED RUGGLES WILLIAMS, of Toronto, Ont., Babbitt Metal, 26th March, 1891.
3984. J. STEVENS & SON, of London, England, and Toronto, Canada, Clinical Thermometers, 31st March, 1891.
3985. AURELIUS S. HINDS, of Portland, Maine, U.S.A., A Lotion for the Skin, 31st March, 1891.

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5827. INSURANCE PLANS OF AILSA CRAIG, AMHERSTBURG, AYLMER, BLENHEIM, COMBER, DUTTON, ESSEX CENTRE, FOREST, KINGSVILLE, LEAMINGTON, NORWICH, PARKHILL, RODNEY, ST. THOMAS, SIMCOE, THAMESVILLE, TILBURY CENTRE, TILSONBURG, WATERLOO, WATFORD, WEST LORNE, WALKERVILLE, in ONTARIO, Charles Edward Goad, Montreal, Que., 2nd March, 1891.
5828. THE COMMON SENSE BILL BOOK (Bills Receivable). Henry Goodchild, Montreal, Que., 2nd March, 1891.
5829. CANADIAN STUDIES IN COMPARATIVE POLITICS, by John George Bourinet, Ottawa, Ont., 3rd March, 1891.
5830. ONE HUNDRED LESSONS IN BUSINESS, by Seymour Eaton. A. Riley, Toronto, Ont., 4th March, 1891.
5831. SILVERY RIPPLES. Valse Brillante, by Lottie Talcott, Bloomfield, Ont., 4th March, 1891.
5832. THE PRINCIPLES AND PRACTICE OF VETERINARY SURGERY, PART I. }
 5833. THE PRINCIPLES AND PRACTICE OF VETERINARY MEDICINE. PART I. }
 by William Williams, F.R.C.V.S., F.R.S.E., Edinburgh, Scotland, 6th March, 1891.
5834. BELL TELEPHONE COMPANY OF CANADA, LONDON EXCHANGE, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, FEBRUARY, 1891. The Bell Telephone Company, of Canada, Montreal, Que., 6th March, 1891.
5835. THE STORY OF THE REAR COLUMN OF THE EMIN PASHA RELIEF EXPEDITION, by the late James S. Jameson, Naturalist to the Expedition, Edited by Mrs. J. S. Jameson. The National Publishing Company, Toronto, Ont., 7th March, 1891.
5836. PINE, ROSE AND FLEUR DE LIS, by S. Frances Harrison (Seranus) }
 5837. THE SONG OF THE EXILE. A Canadian Epic, by Wilfred S. Skeats. }
 Hart & Co., Toronto, Ont., 7th March, 1891.
5838. COUPON OF THE CONSUMERS' AND MERCHANTS' BENEFIT SCRIP ASSOCIATION, Joseph Sheets, Toronto, Ont., 7th March, 1891.
5839. AN AMERICAN GIRL IN LONDON, Part I. (The Queen's Drawing Room). By Sara Jeannette Duncan, Brantford, Ont., 7th March, 1891.
5840. PUBLIC SCHOOL EXERCISE BOOK, EYE-SIGHT SERIES, WITH RULES. The Copp, Clark Co., Ltd., Toronto, Ont., 10th March, 1891.
5841. BUSTE DE L'HONORABLE HONORÉ MERCIER, Premier Ministre de la Province de Quebec. Aural Bethonie & Cie., Paroisse de St. Joseph de Levis, Que., 10 Mars, 1891.
5842. ILLUSTRATED CATALOGUE OF MILITARY, POLICE, FIRE BRIGADE AND BAND EQUIPMENTS, ETC. John Martin, Montreal, Que., 11th March, 1891.
5843. OUR PRIZE COMPETITIONS. (advertising card.) The Merchants' Co-Operative Supply Co., Toronto, Ont., 11th March 1891.
5844. THE FIRST READER. }
 5845. THE SECOND READER. } Dominion School Readers.
 5846. THE THIRD READER. }
 5847. THE FOURTH READER. }
 John Bowerman Ferguson, Winnipeg, Man., 11th March, 1891.
5848. } No. 1. Jan. 28, 1891.
 5849. } " 2. Feb. 4, "
 5850. } " 3. " 11, "
 5851. } " 4. " 18, "
 THE YOUNG CANADIAN. Vol. 1. }
 Margaret Polson Murray, Montreal, Que., 12th March, 1891.
5852. THE CHURCH OF THE POPE AND PRIMITIVE CHRISTIANITY. A Comparison, by J. A. Allen, Kingston, Ont., 13th March, 1891.
5853. VETERINARY NOTES, being a Work on Causes, Symptoms and Treatment of the Diseases of Domestic Animals, by A. Smith, V.S., Second Edition. J. A. Carveth & Co., Toronto, Ont., 14th March, 1891.
5854. NOTICE BIOGRAPHIQUE, S. E. LE CARDINAL TASCHEREAU, Archevêque de Quebec, par Mgr. Henri Tétu. Narcisse Siméon Hardy, Québec, Que., 16 Mars, 1891.
5855. AUTUMN LEAF, Waltz, by A. E. Bell, Ottawa, Ont., 16th March, 1891.
5856. THE GEORGIAN BAY, Waltz, by Miss Theresa Cunningham, Hector Lamont, Colingwood, Ont., 17th March, 1891.

5857. THE CANADIAN ANTHEM BOOK, No. 2. Christopher Willis Coates, Montreal, Que., 18th March, 1891.
5858. SELECTIONS FROM TENNYSON, so far as regards the following Poems: "The May Queen," "Love Thou Thy Land," "You Ask Me Why," "Ulysses," "Enid," "The Revenge," "In the Children's Hospital." Macmillan & Co., London, England, 19th March, 1891.
5859. CALENDRIER DU DIOCÈSE DE NICOLET, 1891. Edouard Sicard de Carufel, Trois Rivières, Que., 23 Mars, 1891.
5860. MOTHER, I'LL TAKE CARE OF YOU. Words and Music by Will. F. McNulty, }
Arranged by George Morton Pierce.
5861. THE SHIP WITH THE FLAG OF BLUE. Words and Music by Mary Frances }
Boylan.
A. & S. Nordheimer, Toronto, Ont., 23rd March, 1891.
5862. THE DOCTRINE AND DISCIPLINE OF THE METHODIST CHURCH, 1890. Wm. Briggs, Toronto, Ont., 24th March, 1891.
5863. KING OF CLUBS, Polka, by Alex. Toski. The Anglo-Canadian Music Publishers' Association, Ltd., London, England, 24th March, 1891.
5864. BROOKE'S DAUGHTER, by Adeline Sergeant. }
5865. A HIDDEN FOE. A Story of Love and Mystery, by G. A. Henty. }
5866. PRETTY MISS SMITH, by Florence Warden. }
5867. THE RISEN DEAD, by Florence Marryat. }
John Lovell & Son, Montreal, Que., 26th March, 1891
5868. FARMER'S FRIEND AND ACCOUNT BOOK, by Geo. A. Reid, Peterborough, Ont. 26th March, 1891.
5869. THE CRIME OF PAUL SACRISTAN, a Tale, by Arthur Campbell, Ottawa, Ont., 26th March, 1891.
5870. IN A GARDEN OF ROSES, Song, by Henry Vaughan, Music by Paul Rodney. The Anglo-Canadian Music Publishers' Association, Ltd., London, England, 26th March, 1891.
5871. THE CAMP AT LES ERABLES, 1890. Samuel Verschoyle Blake, Toronto, Ont., 28th March, 1891.
5872. ST. GEORGE'S Valse, par Geo. R. Joseph. Ernest Lavigne, Montreal, Que., 28 Mars, 1891.
5873. CLASSIFICATION OF PLANTS, WITH REFERENCE TO THE LIFE HISTORY, by D. P. Penhallow, B. Sc. (chart). W. Drysdale & Co., Montreal, Que., 28th March, 1891.
5874. ATLAS OF MONTREAL, VOLUME II., Comprising St. Gabriel, St. Jean Baptiste and Hochelags Wards, with St. Henri, St. Cunegonde, Côte St. Antoine, Côte St. Louis, St. Louis du Mile End, also parts of Cote St. Paul, Cote St. Pierre, Cote La Visitation and Maisonneuve. November, 1890. Chas. Ed. Goad, Montreal. Que., 31st March, 1891.
5875. THE MESSAGE OF A ROSE. Song. Words by Clifton Bingham, Music by }
Frederic H. Cowen. }
5876. INNAMORATA. Waltz, by Florence Fare. }
The Anglo-Canadian Music Publishers' Association Ltd., London, }
England, 31st March, 1891.

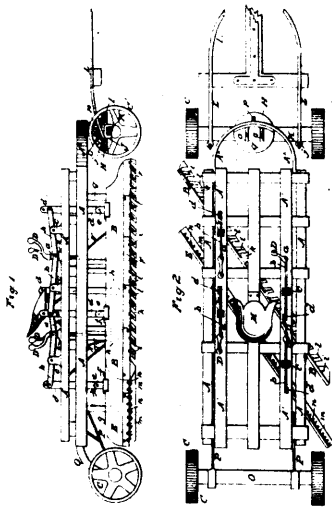
THE
CANADIAN PATENT OFFICE RECORD

ILLUSTRATIONS.

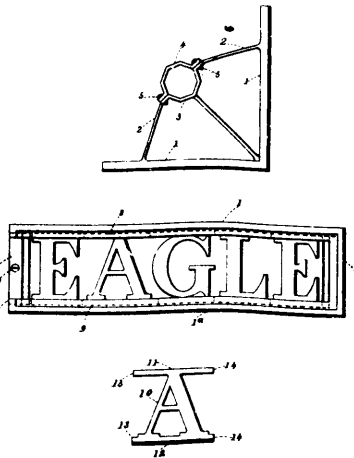
Vol. XIX.

MARCH, 1891.

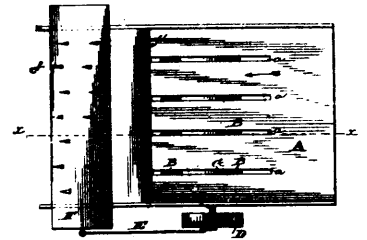
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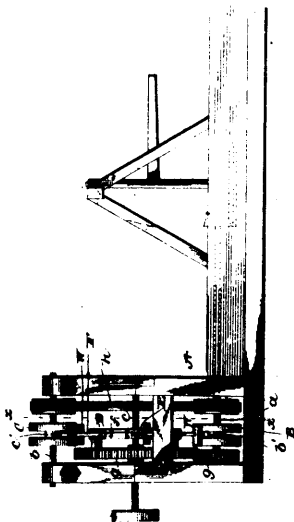
36059 Griffin's Ross's Scraping Machine.



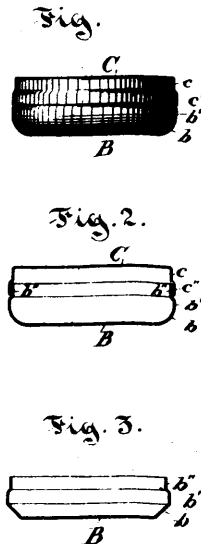
38060 O'Brien's Sign.



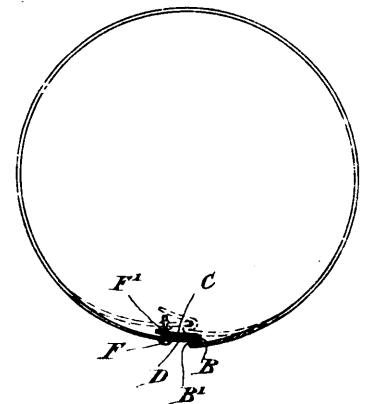
36061 Naylor's Band Cutter and Feeder for Thrashing Machines.



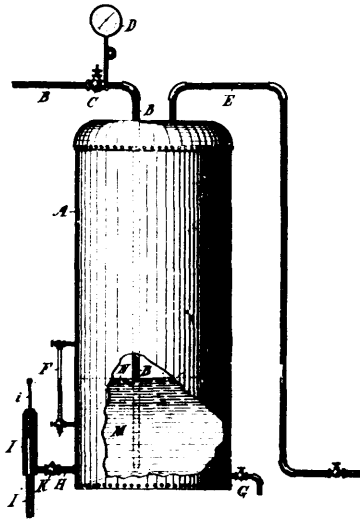
36062 Cameron and Chenault's Fly Wheel.



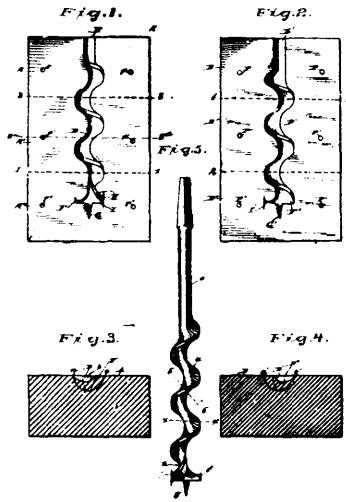
36063 MacLeod's Paste Box.



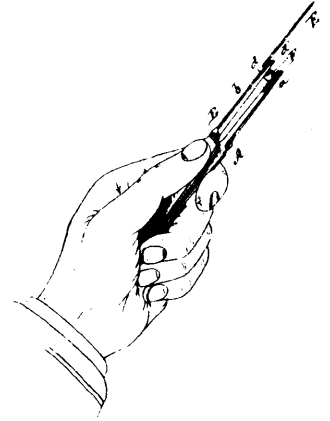
36064 Stuart's Stove Pipe.



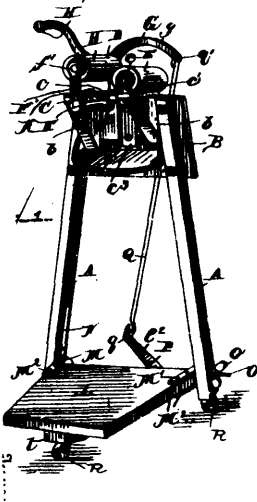
36085 Farmer's Gas Apparatus.



36086 Bailey's Die for Forming Auger Bits.



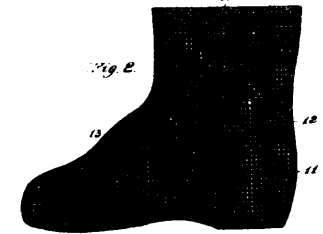
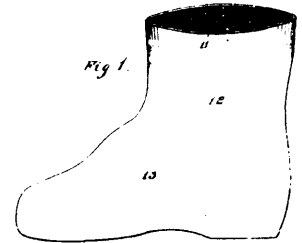
36067 Greer's Soldering Tweezers.



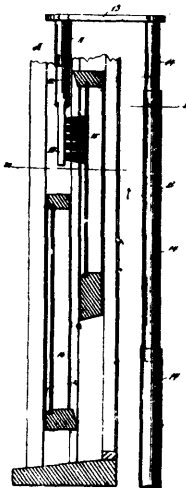
36088 Noble's Mop Wringer.



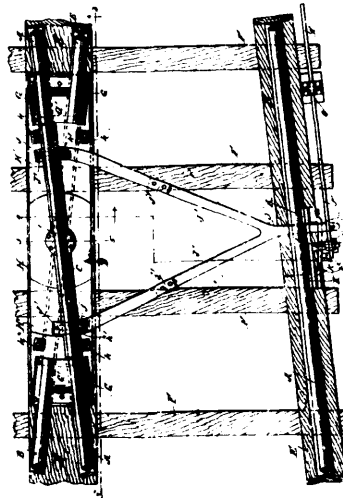
36069 Weatherhead's Waggon Jack.



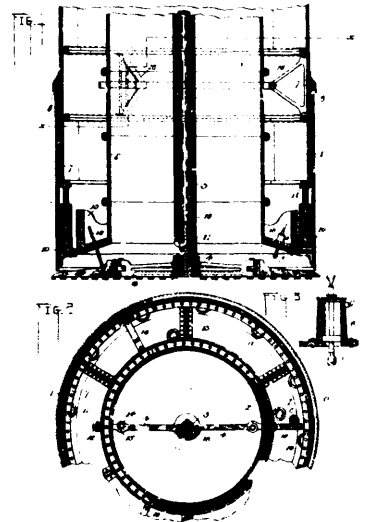
36070 Martinet's Foot Bath Tub.



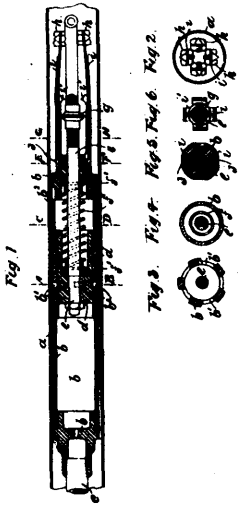
36071 Martinet's Window Cleaning Brush.



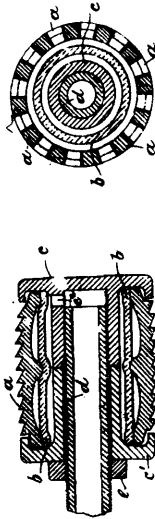
36072 Baird's Railroad Frog.



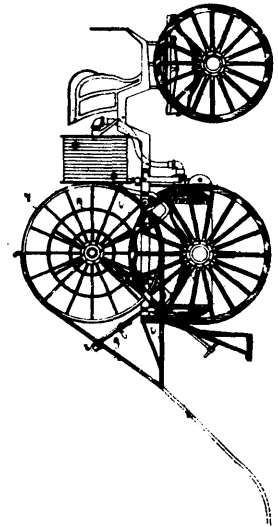
36073 Bothwell's Apparatus for Sinking Shifts.



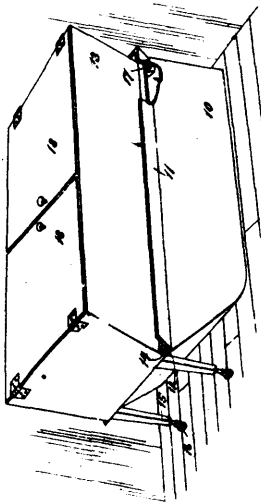
36074 Platt and Thorp's Apparatus for Removing Incrustation from Steam Boilers.



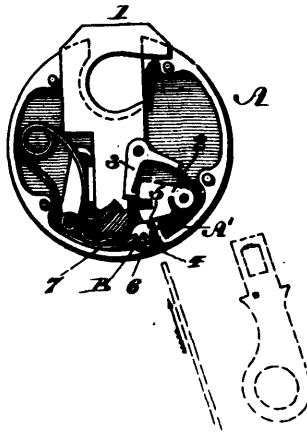
36075 Platt and Thorp's Apparatus for Cleaning the Interior of Boiler Tubes, etc.



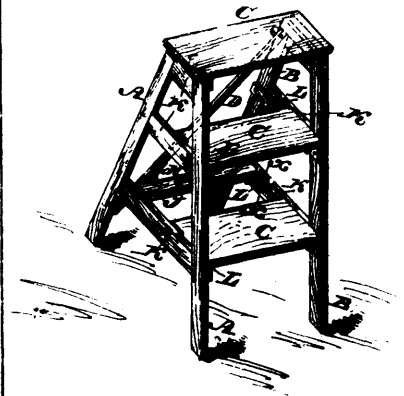
36076 Morrison's Chemical Fire Engine.



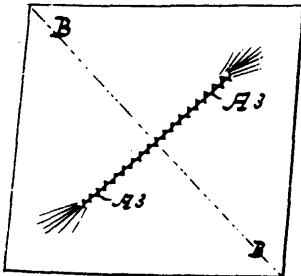
36078 Martinot's Combined Bath and Wash Tub.



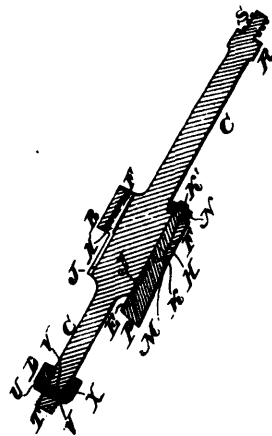
36079 Williams' Key-Hole Guard.



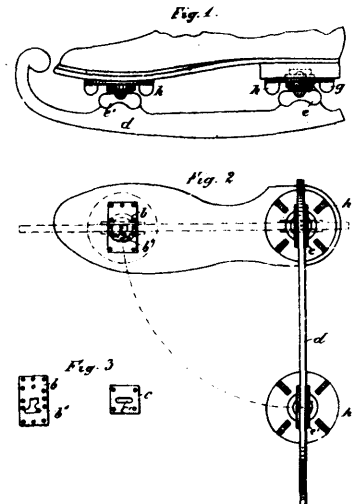
36080 Goldberg's Folding Step Ladder.



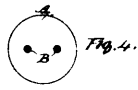
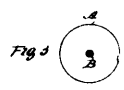
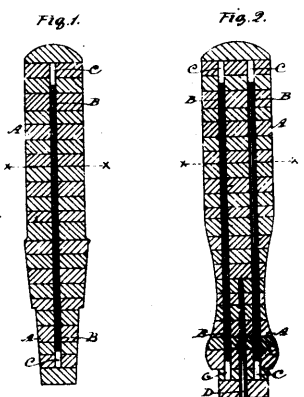
36081 Arnold's Diaper.



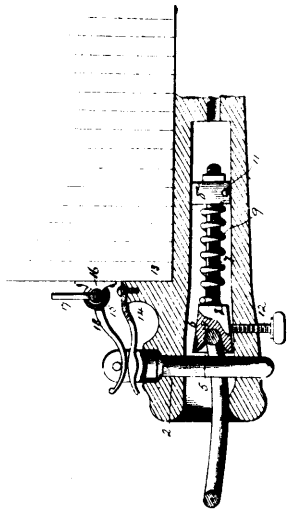
36082 Muirhead's Drill.



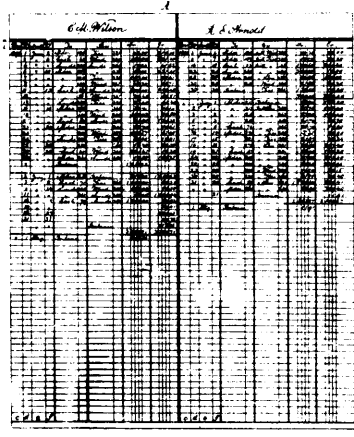
36084 Robency's Skate.



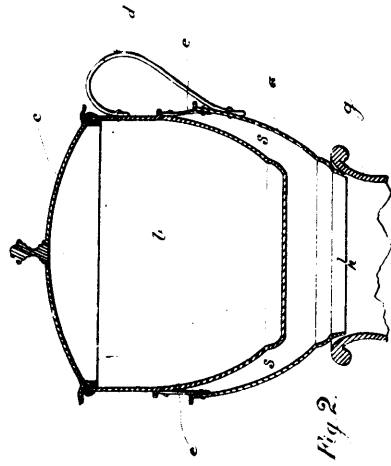
36085 Robertson's Leather Handle



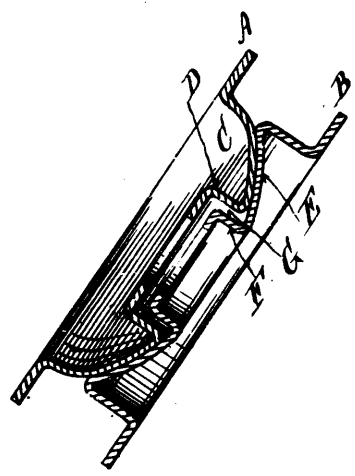
36086 Goett's Car Coupling.



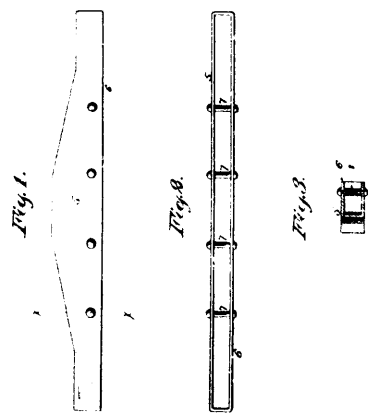
36087 Wilson's Ledger Sheet.



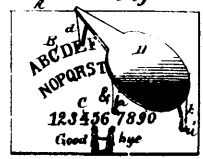
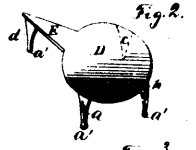
36088 Ptolemy's Appliance for Heating Food on an Ordinary Lamp.



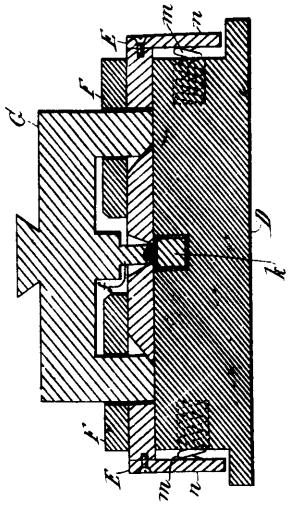
36090 Hughes' Bearing Plate for Trucks.



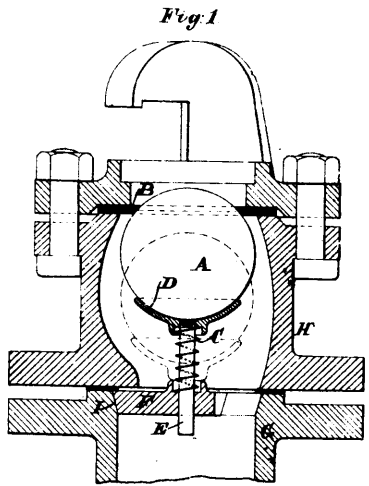
36091 Hughes' Brake Beam.



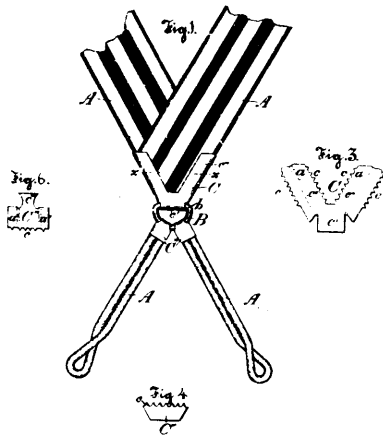
36092 Bond's Game.



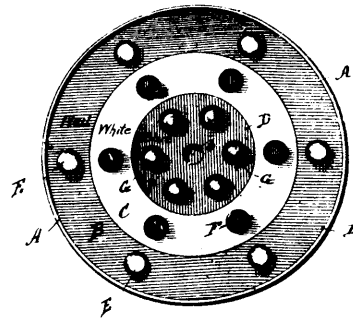
36093 Betts' Machine for Making Metal Tubes.



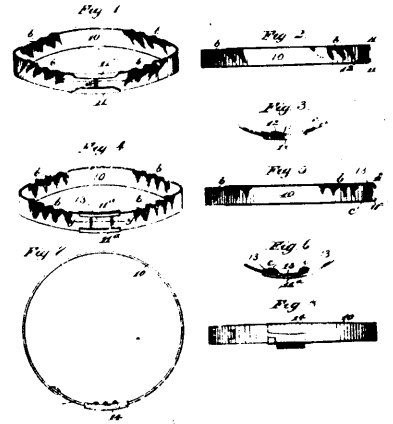
36094 Swinboarn's Ball Valve for Hydrants and Fire Plugs.



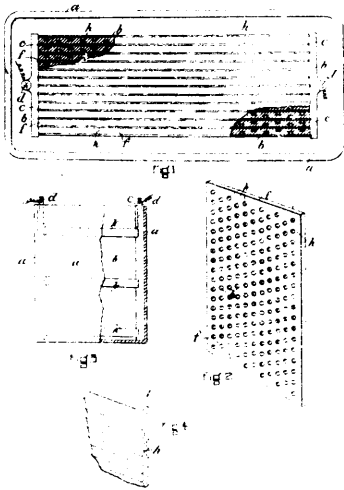
36095 Doran's Suspender.



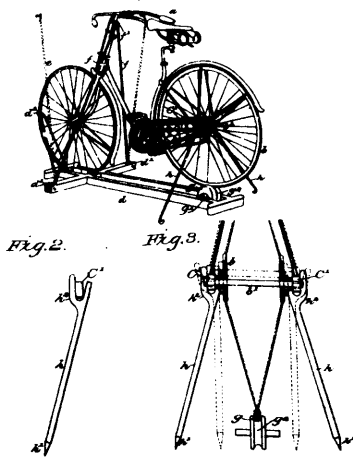
36096 Wheeler's Puzzle.



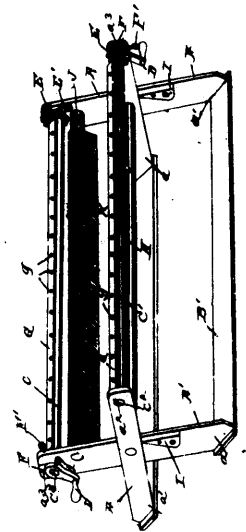
36097 Frost's Hoop for Coopers' Ware.



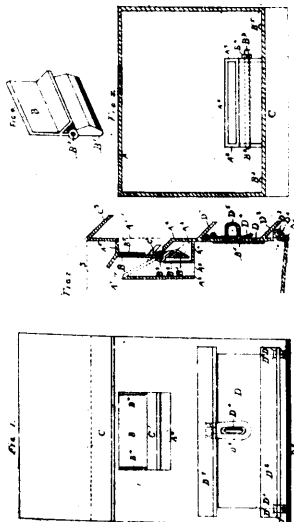
36098 Hutche's Storage Battery



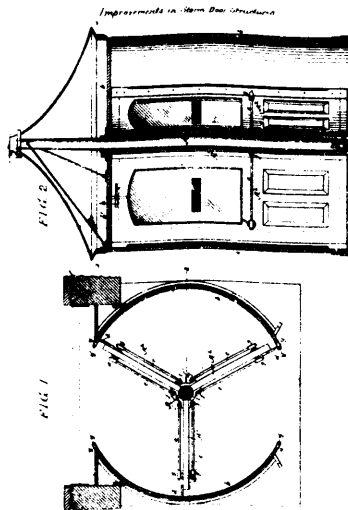
36099 Curtis' Safety Stand and Trainer for Bicycles.



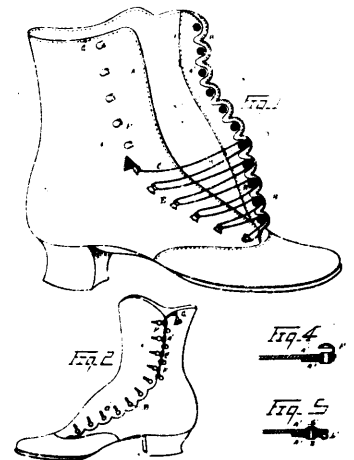
36100 White's Quilting Frame.



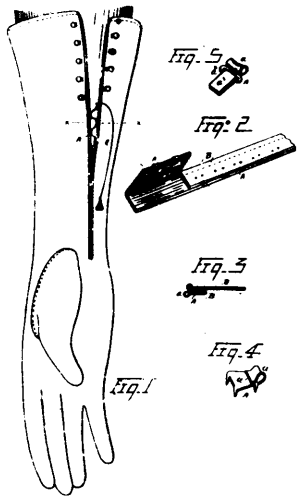
36101 Johnson's Letter Box.



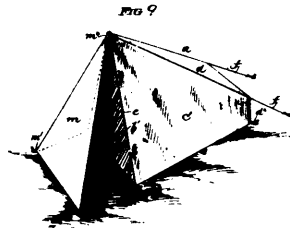
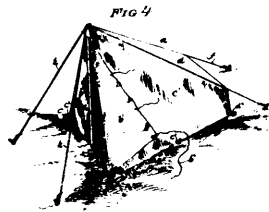
36102 Van Kennel's Storm Door Structure.



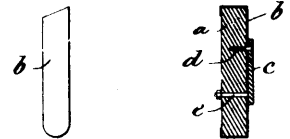
36103 McKenney's Lacing.



36104 McKenney's Fastening for Lacing Purposes.



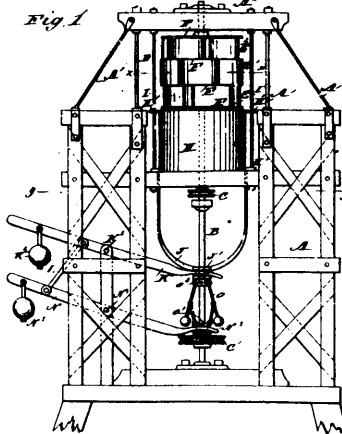
36105 Comstock's Tent.



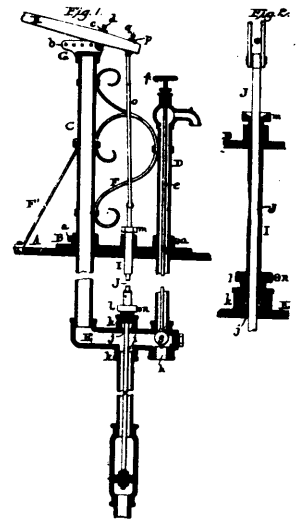
36106 Brown's Sign.



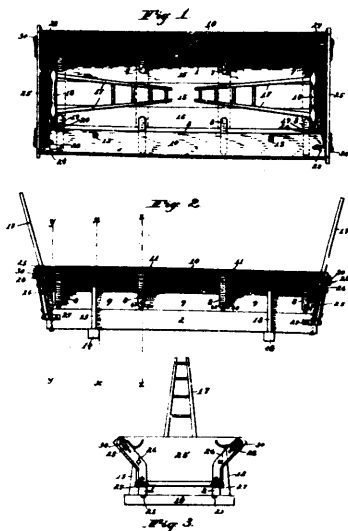
36108 Sisson's Device for Preventing Horses from Kicking.



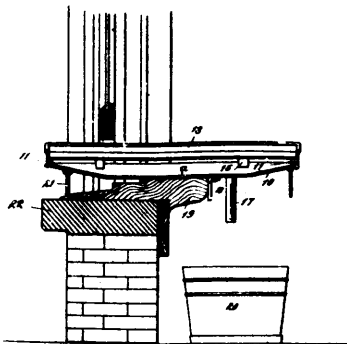
36109 Soli's Wind Mill.



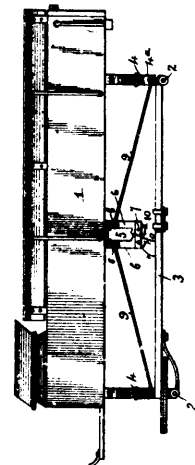
36110 Canfield's Pump.



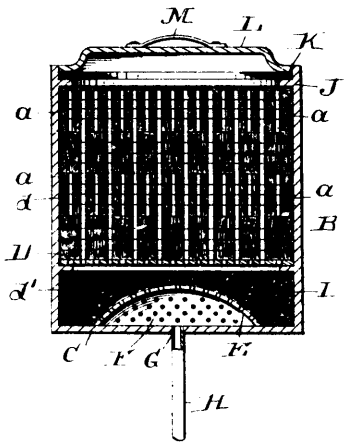
36111 McClellan's Farm Vehicle.



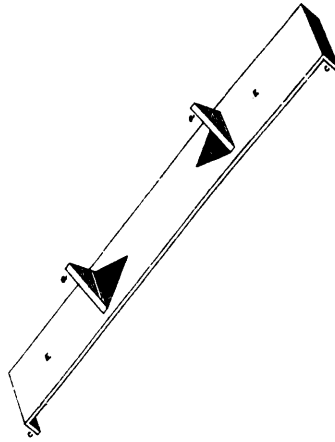
36112 Martinot's Window Tray.



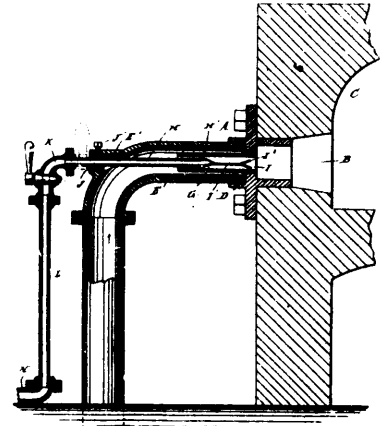
36113 Trumbore's Waggon Spring Brace.



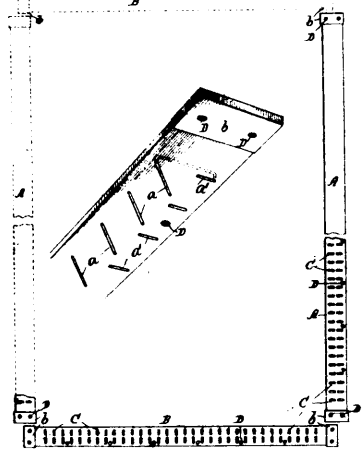
36114 Guenther's Fire Kindler.



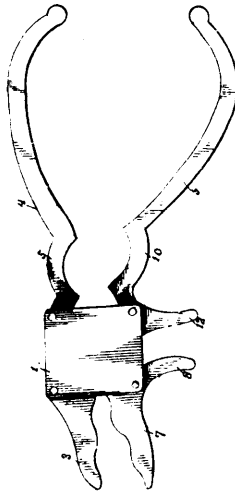
36115 Weese's Brace for Hollow Walls.



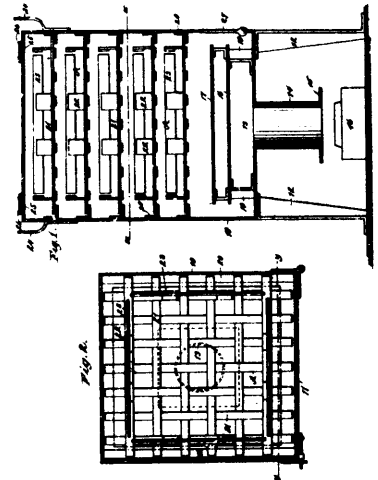
36116 Burns' Hydrocarbon Burner.



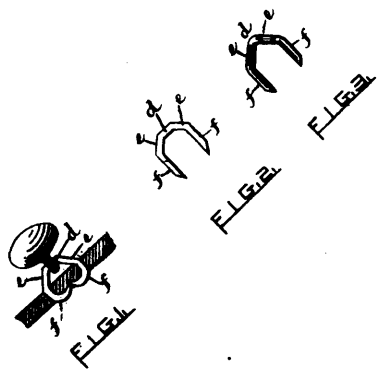
36117 Holmes' Device for Stretching and Drying Curtains.



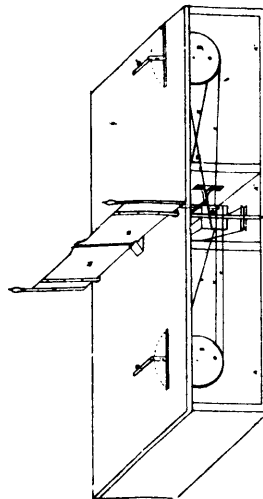
36118 Farnham's Cow Tail Holder.



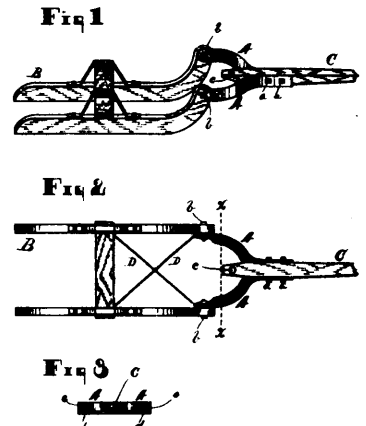
36119 Martinot's Clothes Drier.



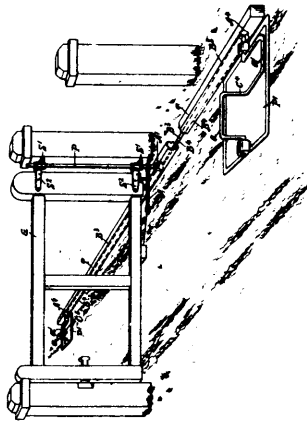
36120 Smith's Button Fastener.



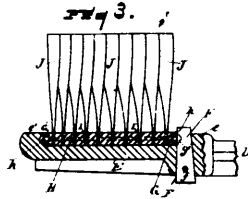
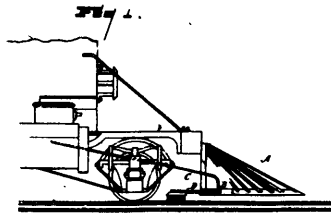
36121 Laporte's Automatic Gate.



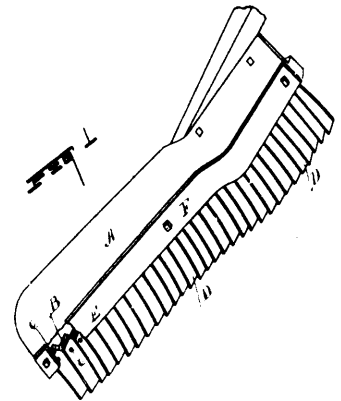
36122 Lynch's Rollerless Sleigh Pole.



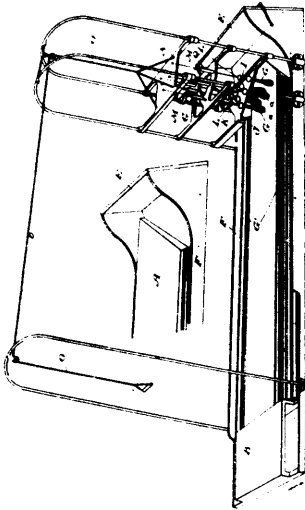
36123 Anderson's Self-Opening and Closing Gate.



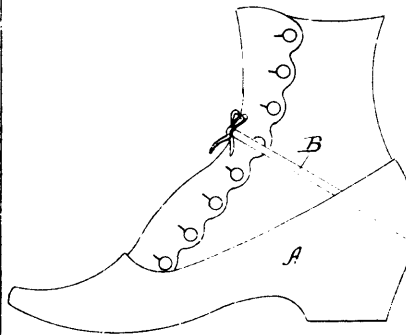
36124 Day's Railway Track Cleaner.



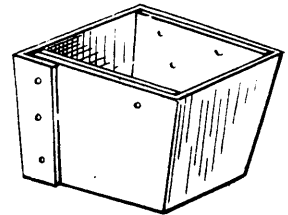
36125 Day's Track Cleaner.



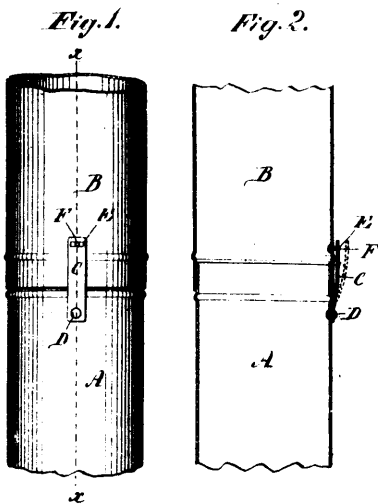
36126 Roberts' Bowling Creaser.



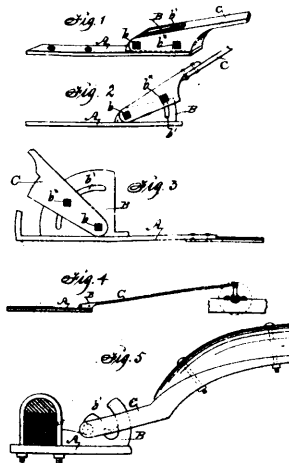
36127 Byrnes' Shoe Attachment.



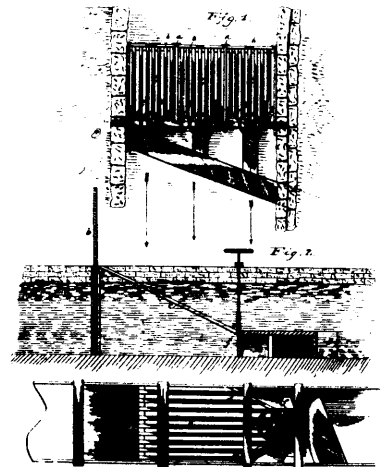
36128 Rice and Spillman's Fruit Box.



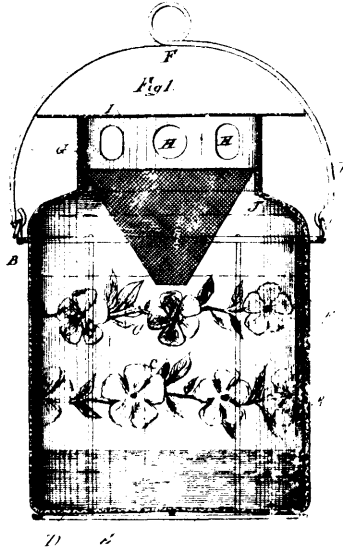
36129 WashLurn's Stove Pipe Fastener.



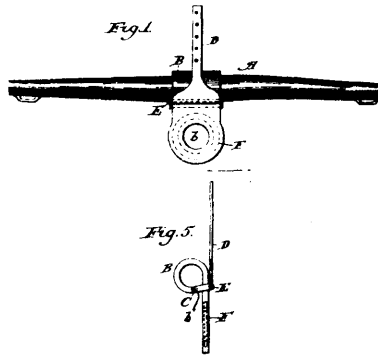
36130 Shults' Pitman Coupling.



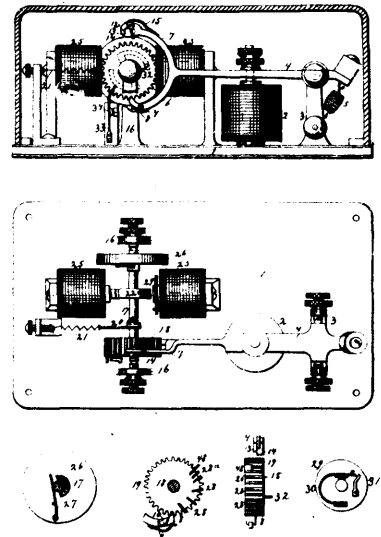
36131 Robinson's Rack for Canals and Flumes.



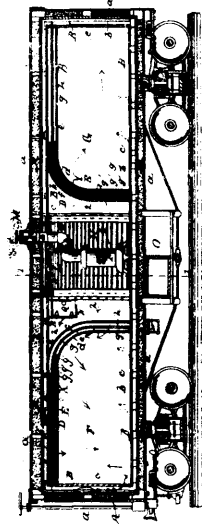
36132 Barnard's Moth Trap.



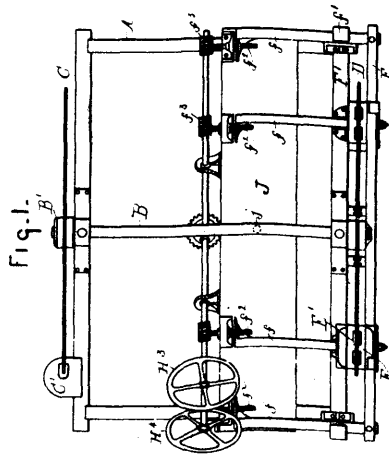
36134 Chapman's Neck Yoke.



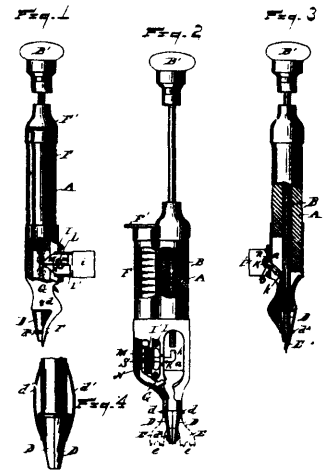
36135 Gill's Electric Current Controlling Apparatus.



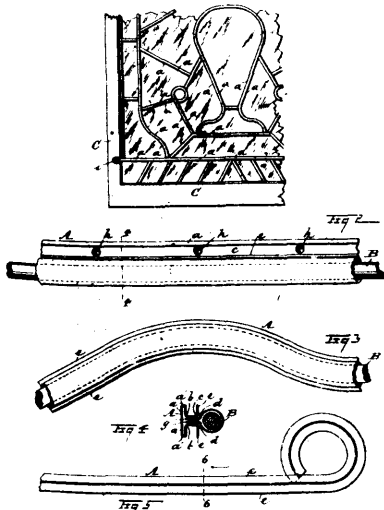
36136 Kimball's Freight Car.



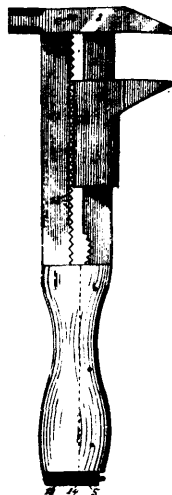
36137 Hazard's Automatic Guide for Circular Saws.



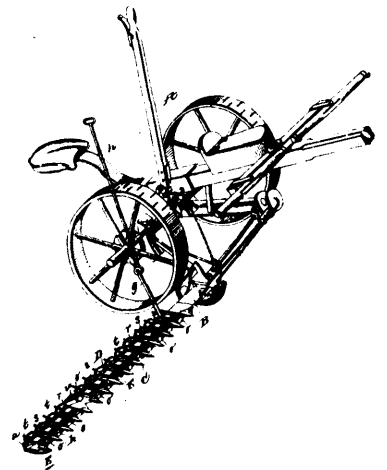
36138 Barnes' Tack Driver.



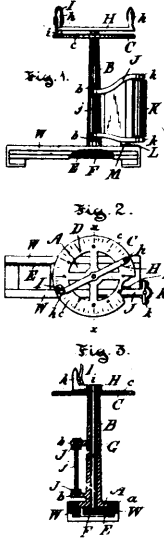
36139 Mills' Sheet Metal Bar.



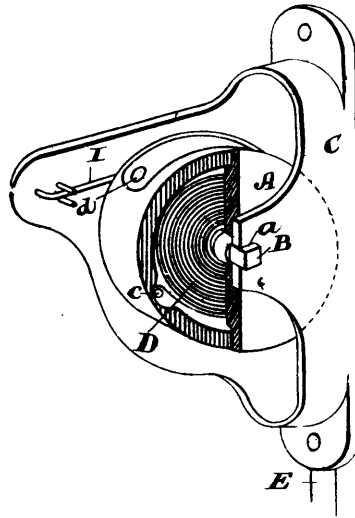
36140 Marshal's Wrench.



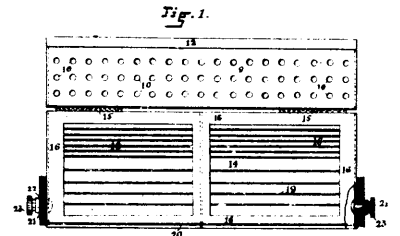
36141 Kellogg's Grinding Attachment for Mowing Machines.



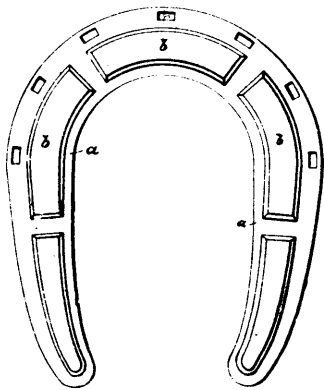
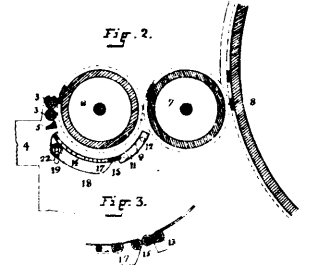
36142 Fatten's Lumber Gauge.



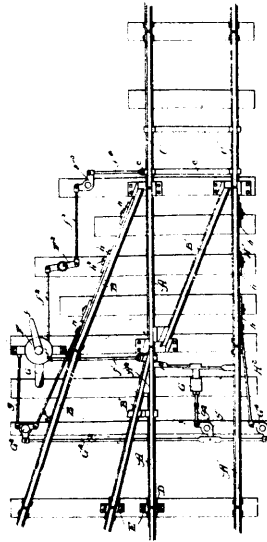
36143 Nixon and Waite's Window Sash Balance.



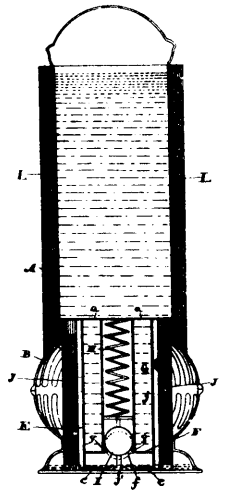
36144 Shoefelt and Mayor's Carding Machine.



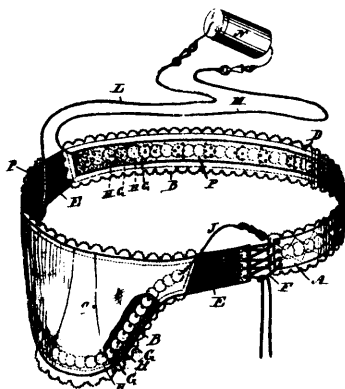
36145 Thompson's Horse Shoe.



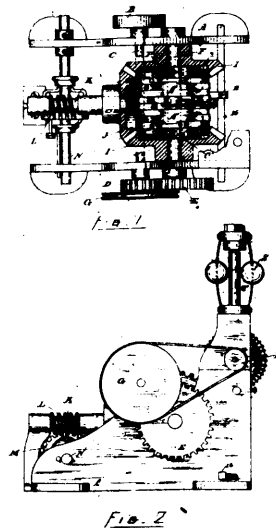
36147 Ackerly's Railway Switch.



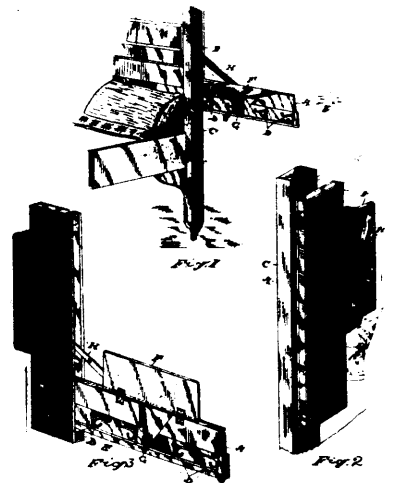
36148 Gibbons' Odour Diffusing Apparatus.



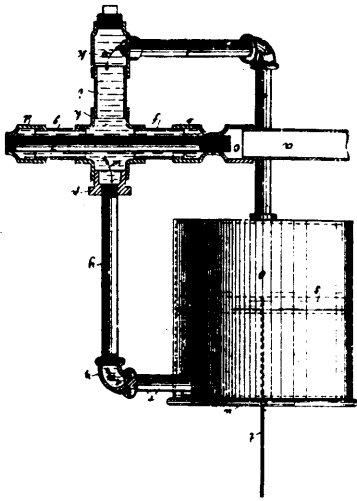
36149 Cortland's Electric Waist Belt and Abdominal Supporter.



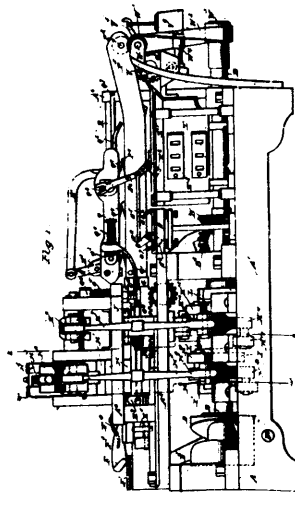
36150 Coulter's Water Wheel Governor.



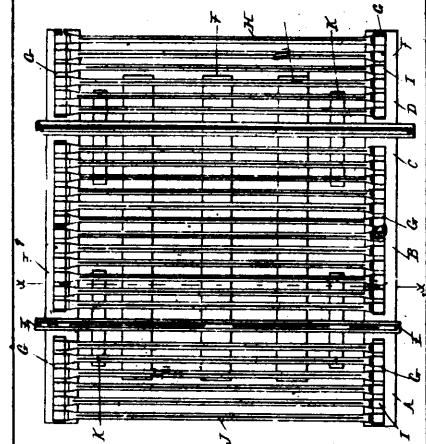
36151 Shoenberger's Folding Clothes Rack.



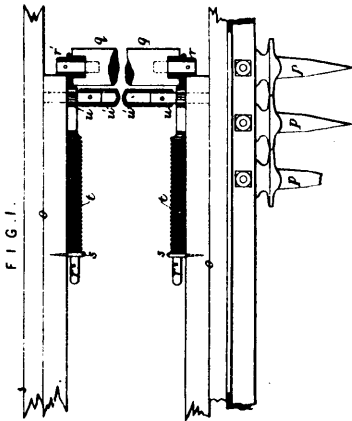
36152 Vincent's Tuyere Cooler.



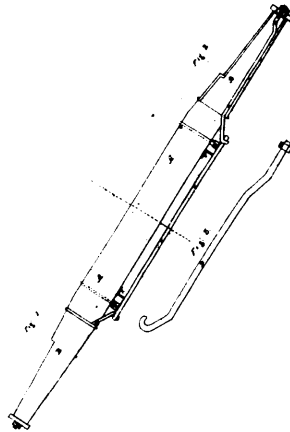
36153 Jensen's Machine for Forming Sheet Metal Can Bodies.



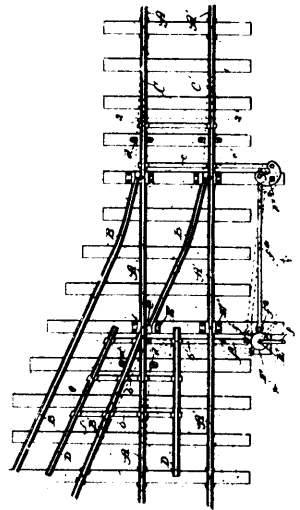
36154 Hall's Cattle Guard.



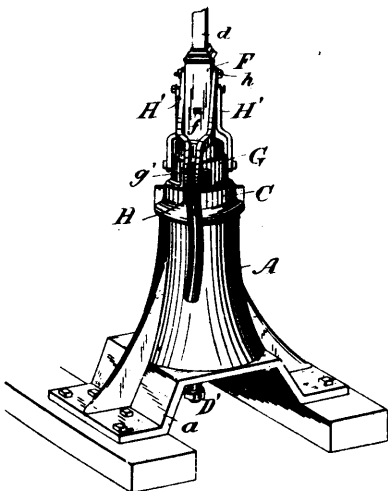
36155 Hornsby, Innocent and Smith's Reaping and Harvesting Machine.



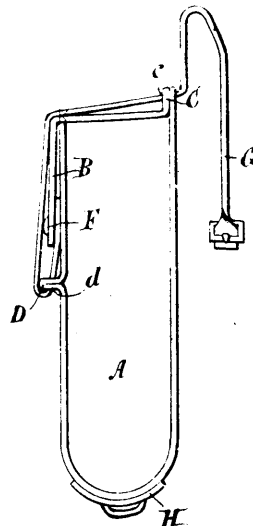
36156 Wood's Method of Attaching a Truss Rod to and under Waggon Axles.



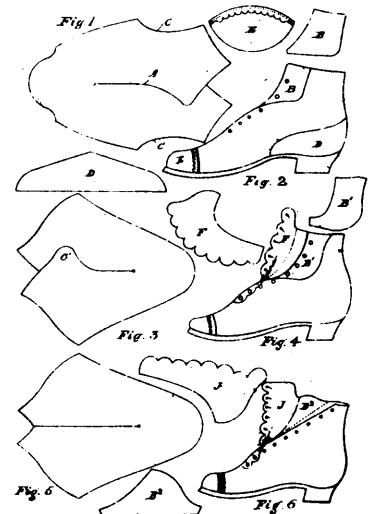
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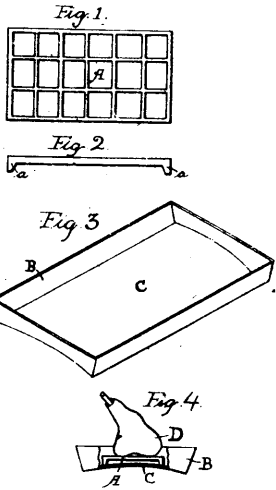
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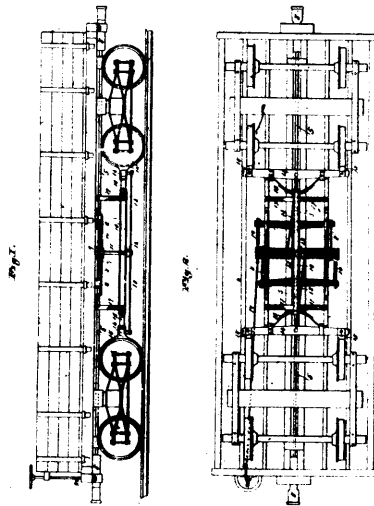
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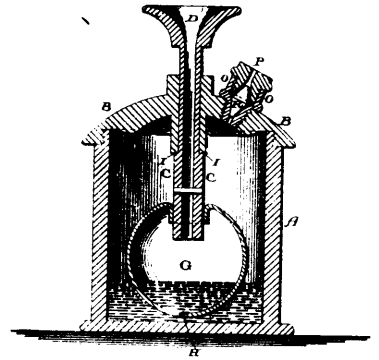
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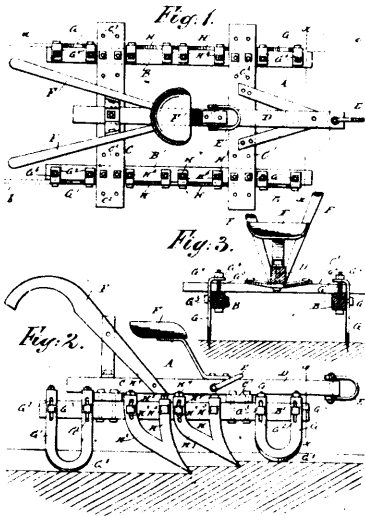
36161 Williams' Meat Roaster.



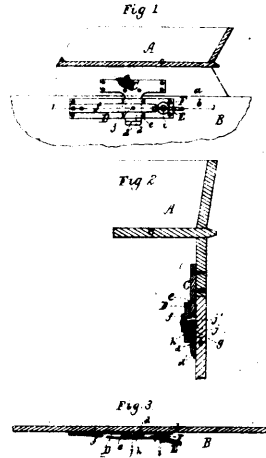
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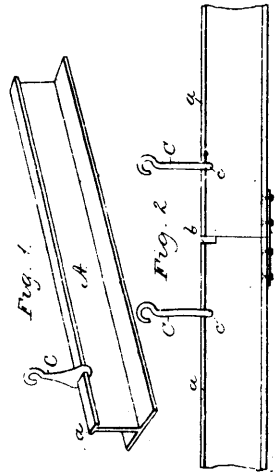
36163 Larkin's Ink Stand.



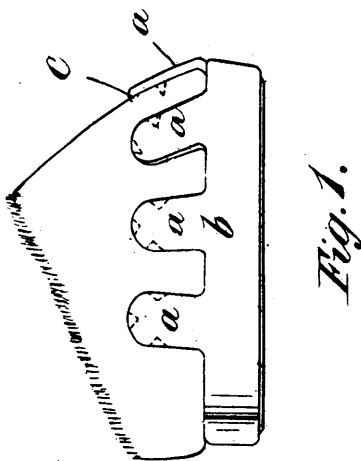
36164 Pray's Ice Plow.



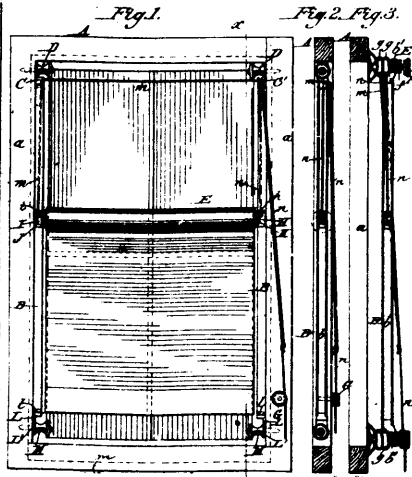
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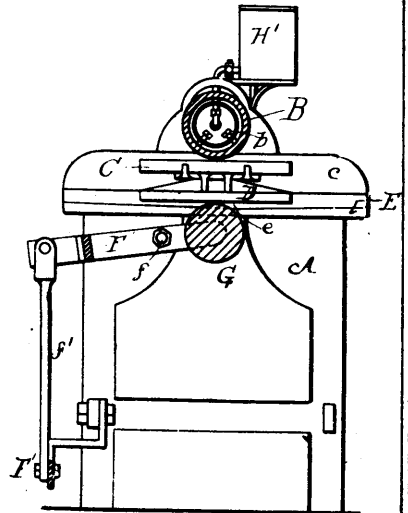
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36169 Adams' Ironing Machine.

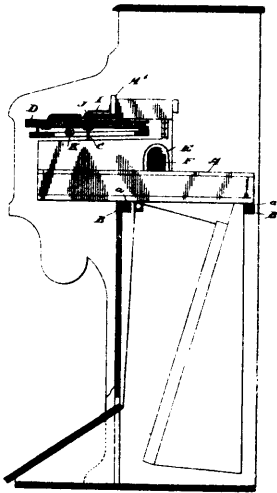
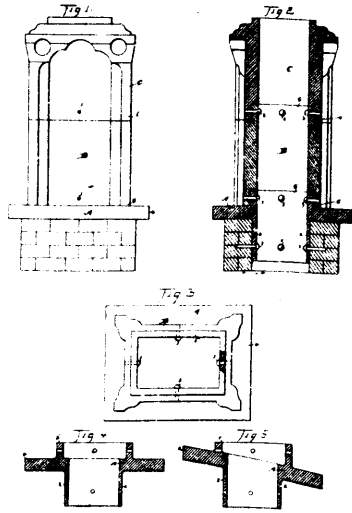
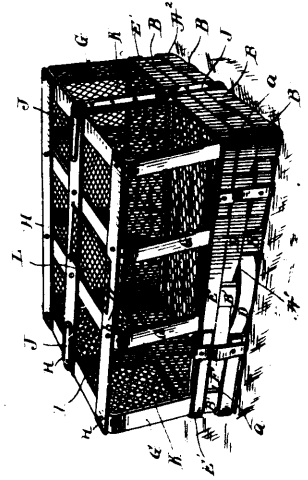


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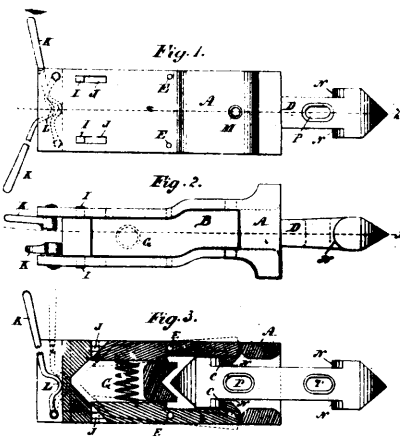
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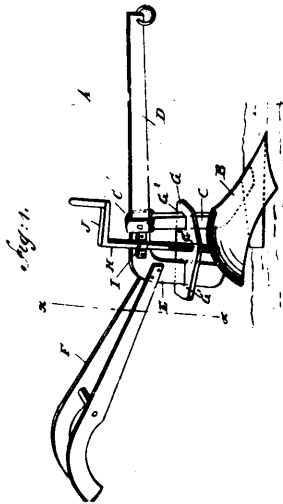
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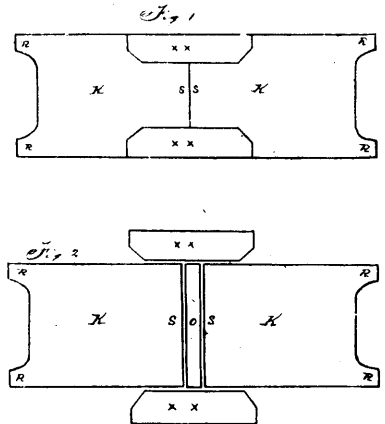
36172 Thomas's Chicken Coop.



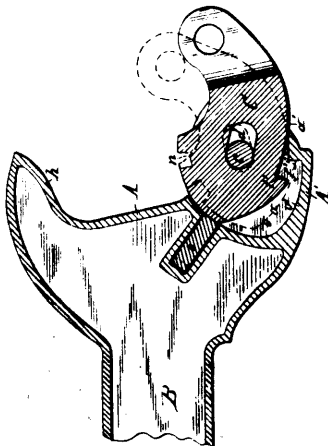
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36174 Swiedom's Plow.



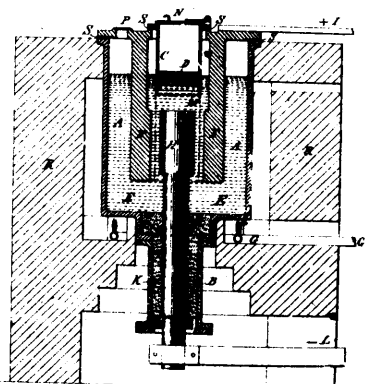
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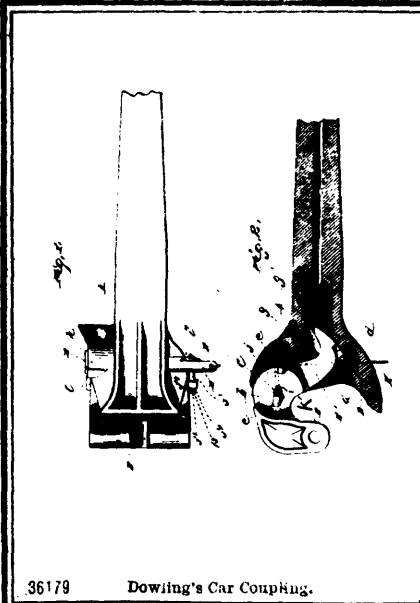
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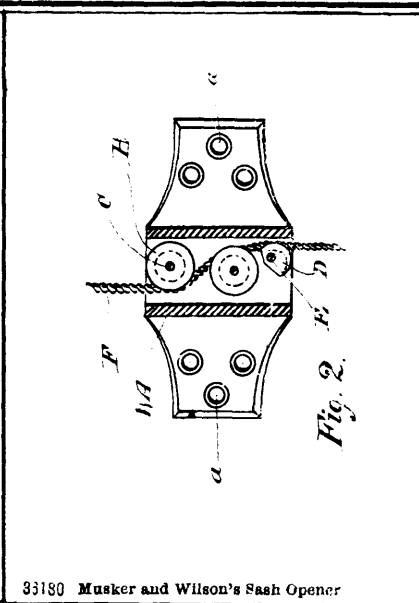
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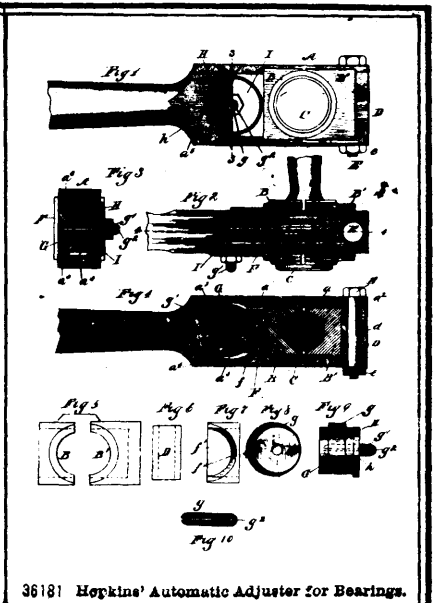
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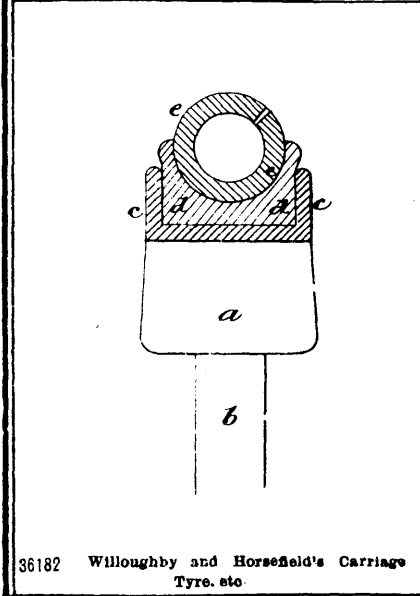
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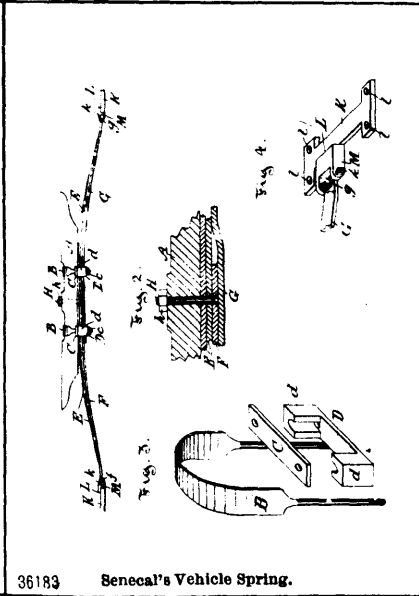
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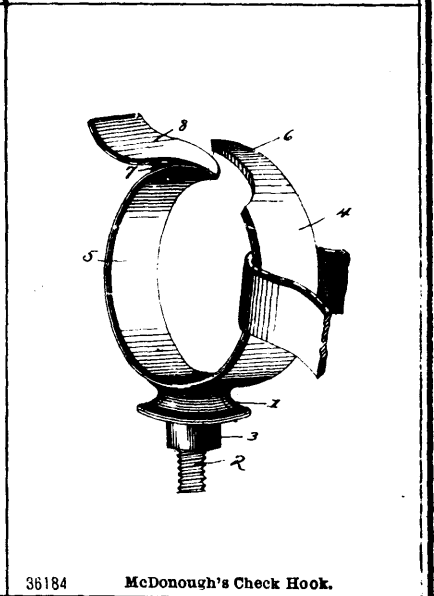
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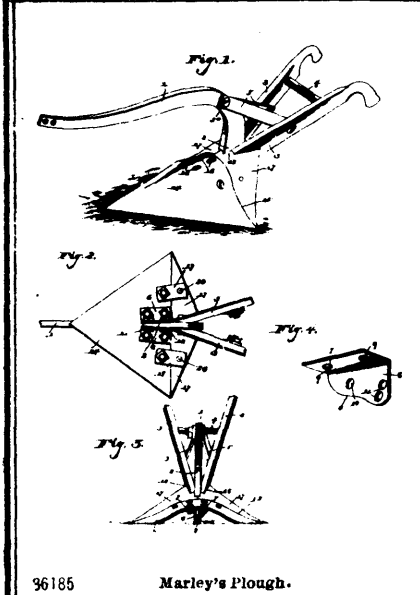
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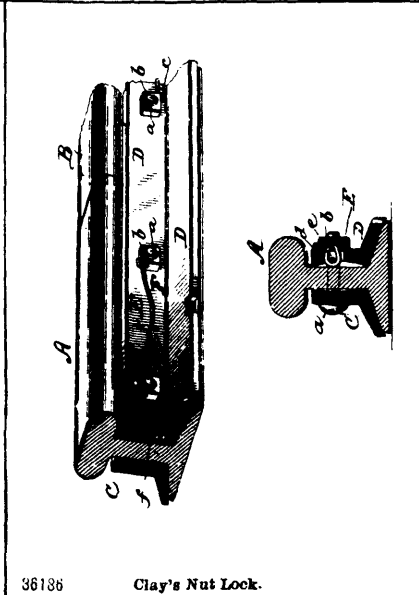
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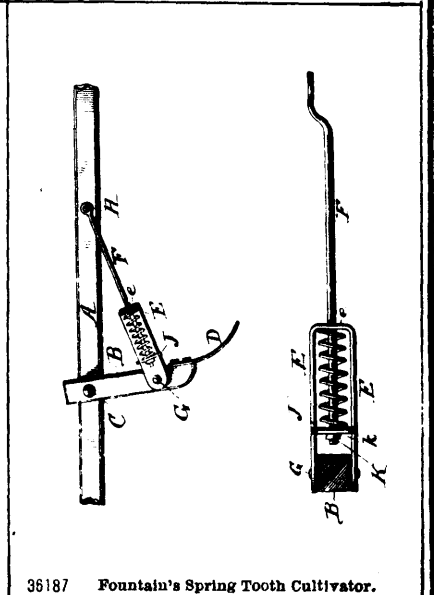
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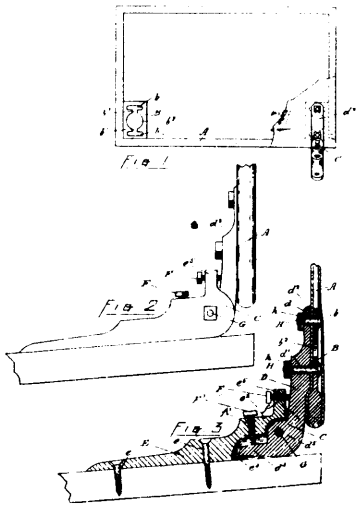
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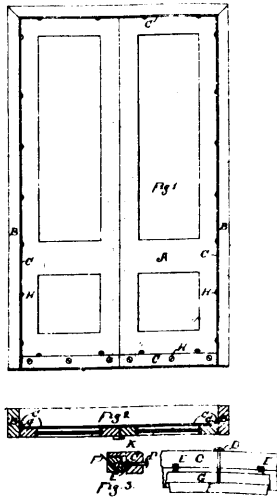
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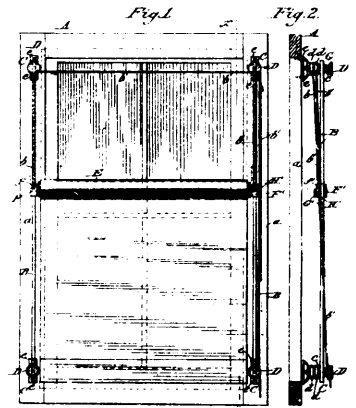
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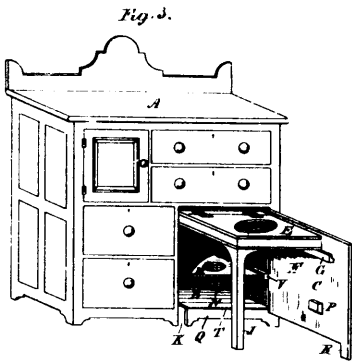
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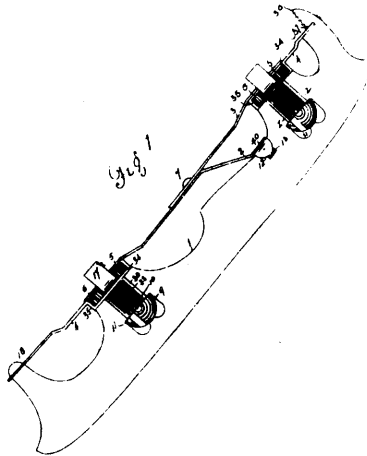
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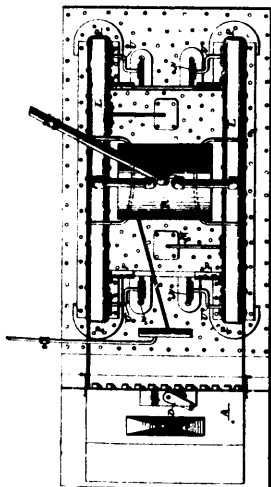
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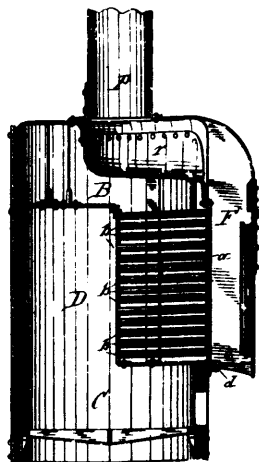
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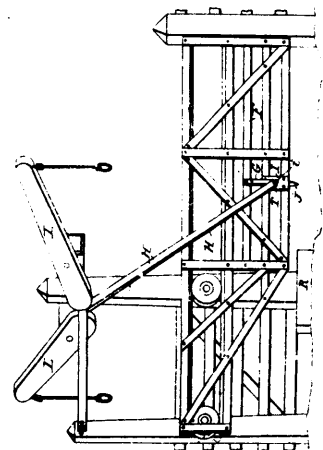
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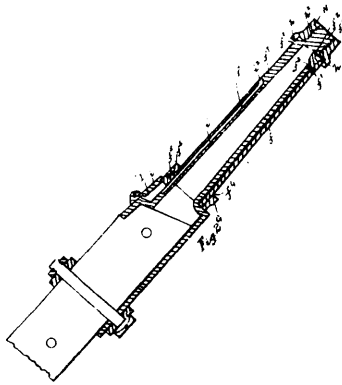
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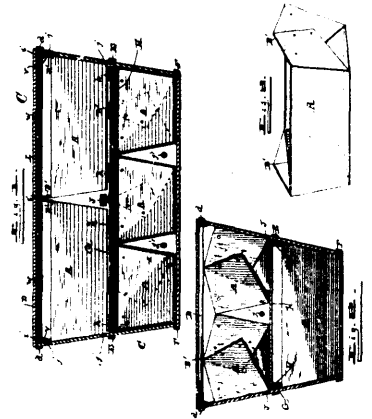
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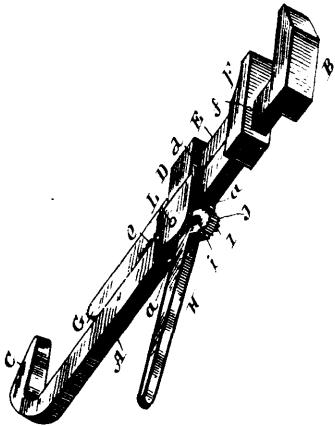
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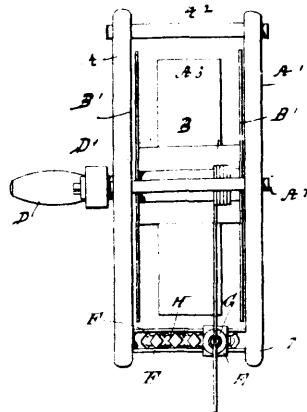
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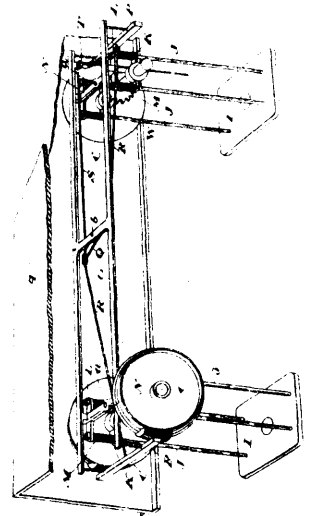
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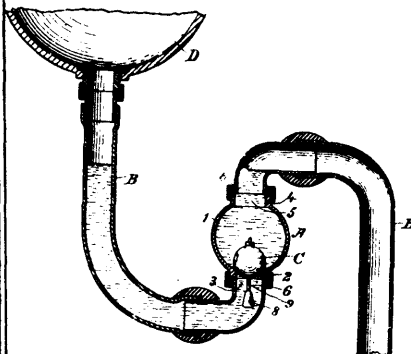
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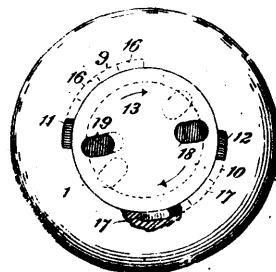
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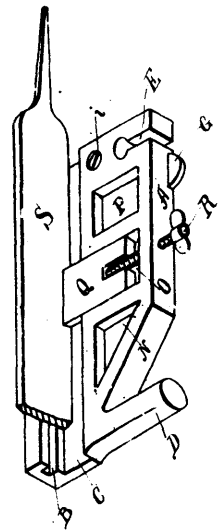
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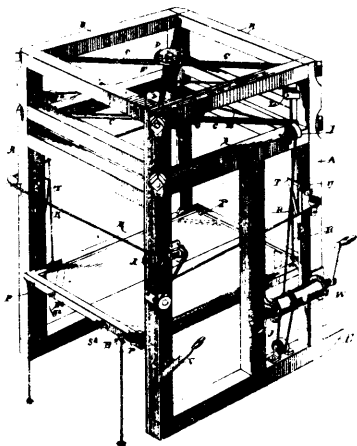
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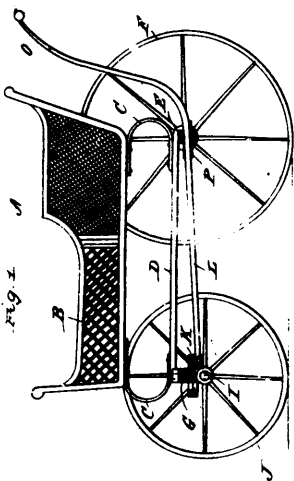
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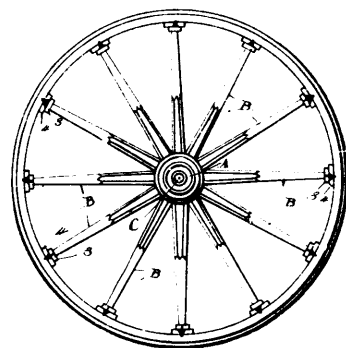
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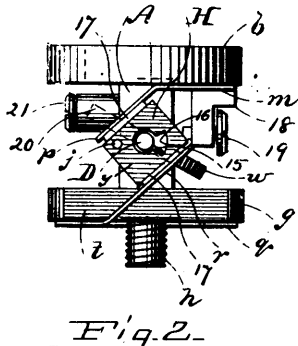
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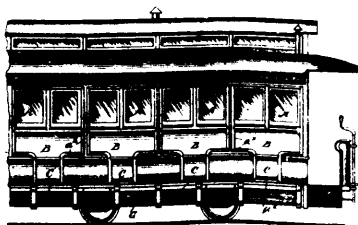
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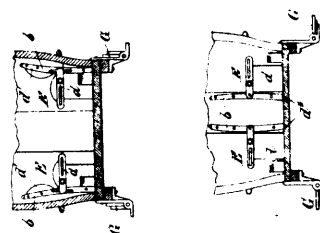
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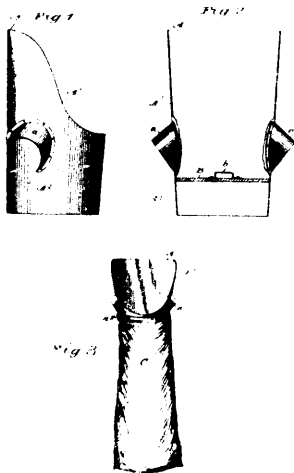
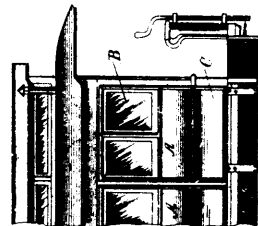
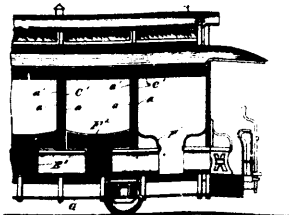
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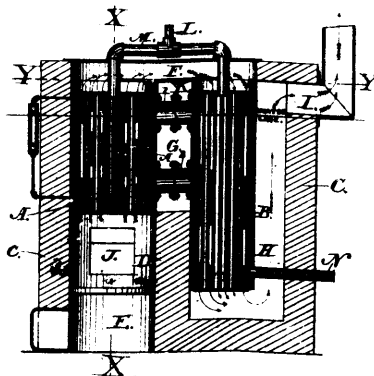
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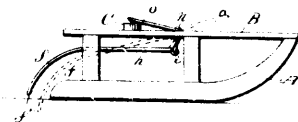
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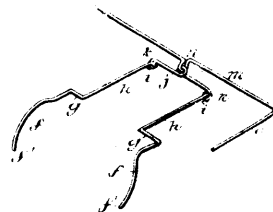
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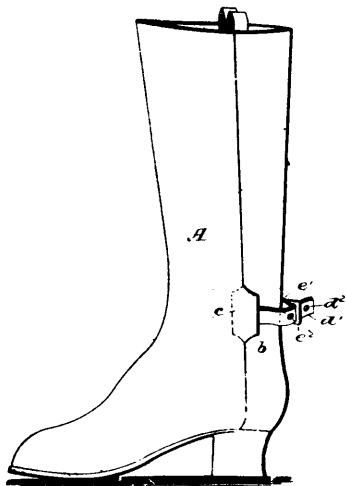


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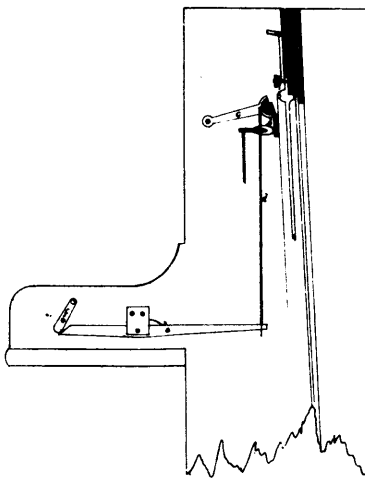


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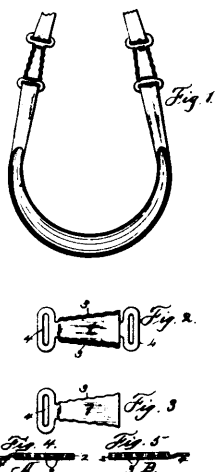
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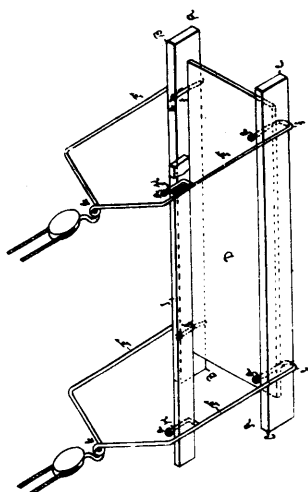
36217 Thomas' Piano.



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36220 Davis' Crupper Fastening Device.



36221 Ferguson and Otter's Hanging Stage.

Fig. 1.

KITTREDGE FREE RIDE DEVICE.

No.
 LESSON
 LESSON
 LEASED AT
 Floor board from
 Feet board from Cents
 And board for Cents
 Good For Days From

WE, THE
 Hereby lease this device to you and for amount
 mentioned above and agree to return said
 amount less 10 cents if returned at office
 where leased by the first and unless the time
 above mentioned shall be longer than
 recited herein in our presence. That we do not in
 any way guarantee the durability of this device.

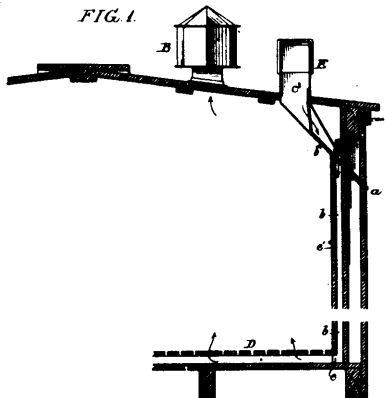
Received from
 Amount due me according to terms of above lease

The Original Lessee.

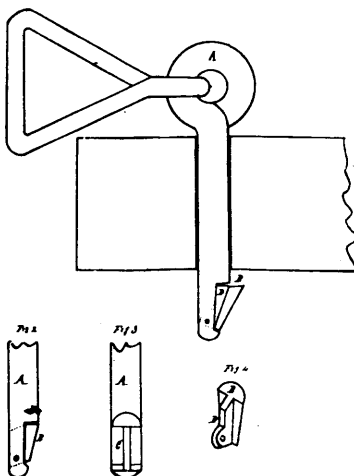
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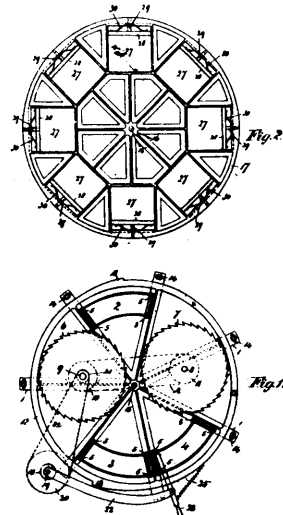
FIG. 1.



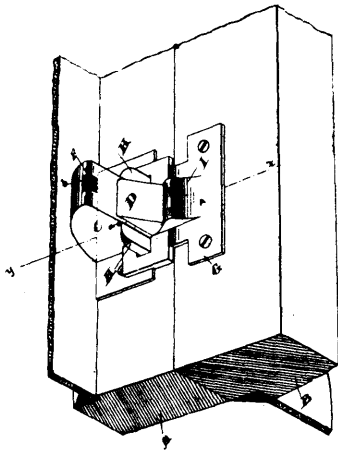
36223 Pancoast's Ventilating Device.



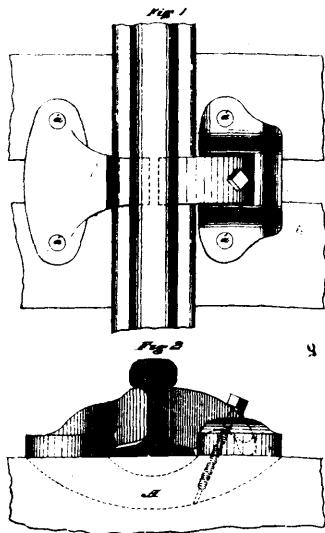
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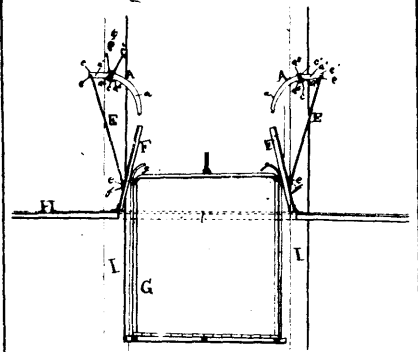
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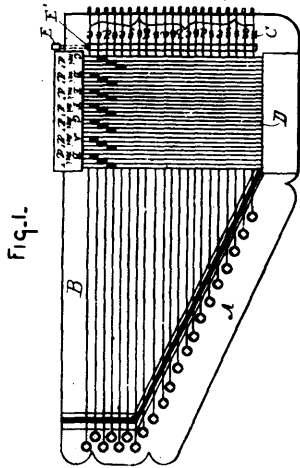
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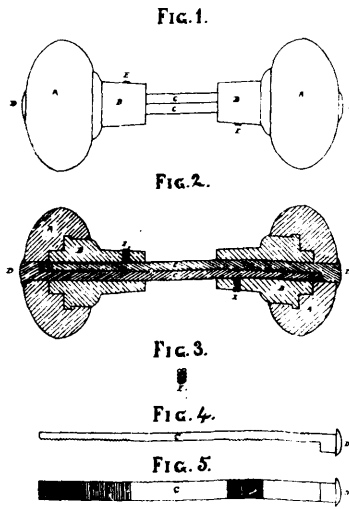
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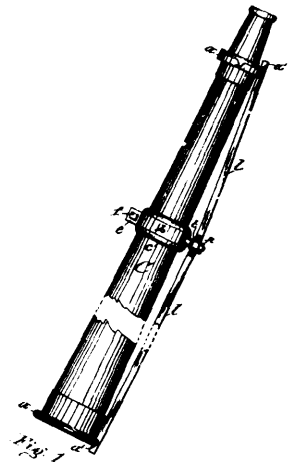
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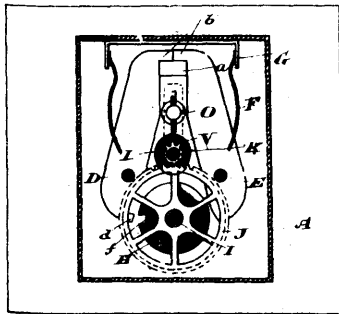
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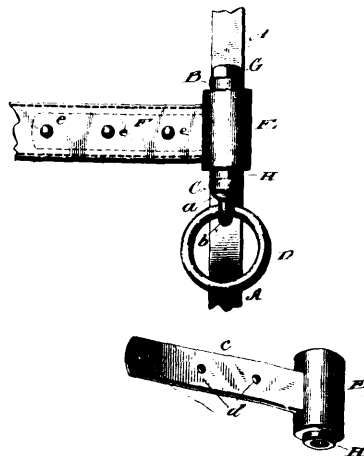
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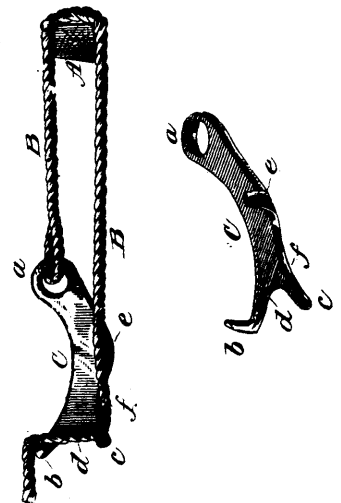
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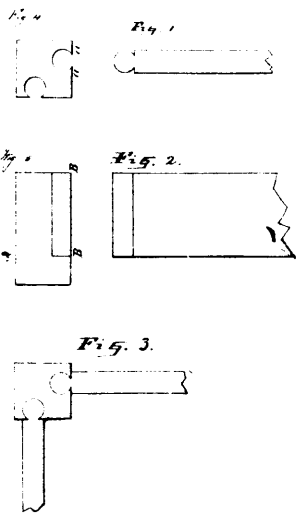
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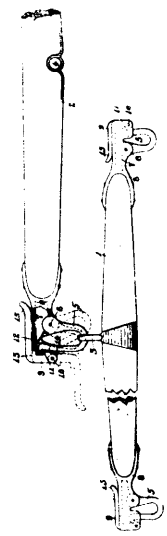
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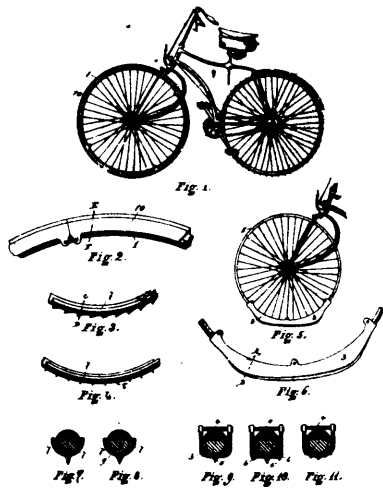
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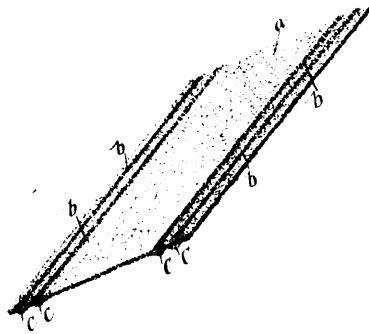
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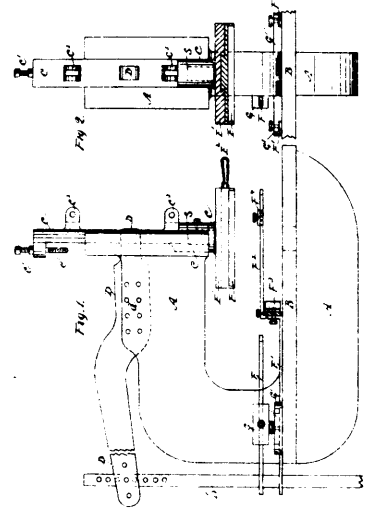
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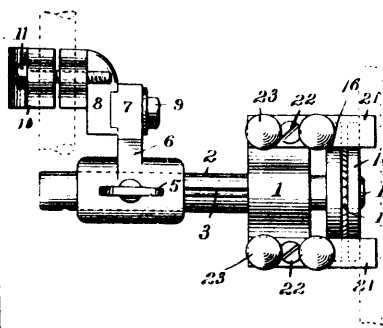
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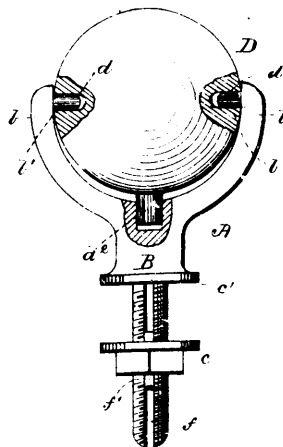
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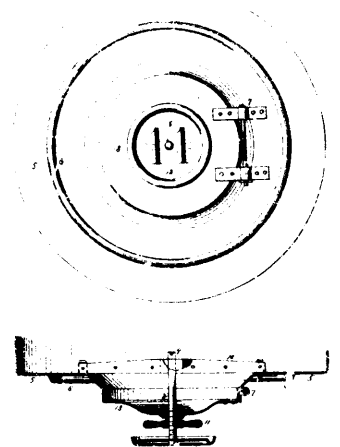
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