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# The Canadian Patent Office

## RECORD




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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. 36,502. Steam Syphon. (*Siphon à vapeur.*)

Charles Ashley Merriam, Belleville, Ontario, Canada, 1st May, 1891; 5 years.

*Claim.*—A steam syphon for feeding air and steam to furnaces, consisting of a uniformly tapering discharge section *a*, a uniformly tapering inlet section *b*, both sections connected at the smaller ends, the inlet section closed by a head *h*, at the larger end, an air inlet section *c*, connecting by an elbow *c'*, with said section *b*, near the said head, and provided with a door *d*, at the open end, and a steam pipe *e*, passing through said head and terminating between the air inlet elbow *c'*, and the smaller end of said section *b*, as set forth.

#### No. 36,503. Machine for Ornamenting Wood, etc. (*Machine à orner le bois, etc.*)

Henry Seibert, Brooklyn, New York (assignee of Edward W. Leigh, Chicago, Illinois), U.S.A., 1st May, 1891; 15 years.

*Claim.*—1st. In a wood ornamenting machine, the combination of a table A, provided at one end with standards B, B, a die-supporting arm C, connected at one end with said standards and vertically adjustable thereon, a die Y, revolvably supported by said arm, a feed roll G, revolvably supported below said die, and means for operating said feed roll, substantially as shown and described. 2nd. In a wood ornamenting machine, the combination of a table A, provided with standards B, B, at one end thereof, a die-supporting arm C, having downwardly projecting portions D, Q, at each end thereof, connected with said standards and adjustable thereon by means of a screw I, which passes through one end of said arm, a revolvable die Y, mounted on a shaft E, having bearings in said downwardly projecting portions of said arm, a feed roll G, mounted in the top of the table below the die, and means for operating the feed roll, substantially as shown and described. 3rd. The combination, in a wood ornamenting machine, of a supporting table A, having standards B, B, at one end thereof, a vertically adjustable die-supporting arm C, connected at one end with said standards and having downwardly projecting portions D, Q, at each end thereof, a die Y, mounted upon a shaft E, having bearings in said downwardly projecting portions, a feed roll G, mounted in the top of said table in line with the die supports, and means for operating said feed roll, substantially as shown and described. 4th. In a wood ornamenting machine, the combination of the table or support A, the standards B, B, connected therewith at one end thereof, a die support C, provided with downwardly projecting portions D, Q, one of which is adjustably connected with said standards, and a die Y, mounted on a shaft E, having bearings in the downwardly projecting portions of the die support, substantially as shown and described. 5th. In a machine for ornamenting wood, the combination of a support A, provided with standards B, B, at one end thereof, having grooves on their inner sides, the die support C, having the depending portions D, Q, one of which is provided with ribs K, K, adapted to enter said grooves, the die Y, mounted on the shaft E, the table D, the feed roll G, the top of which extends slightly above the table, and means for operating the feed roll, substantially as shown and described. 6th. In machines for ornamenting wood, the arm C, provided with a depending guide Q, carrying the ribs K, K, and the depending portion D, and each depending portion provided with a bearing for the shaft E, and the die Y, thereon, in combination with the support A, and standards B, B, at the sides of the guide portion Q, with grooves therein to engage the ribs K, K, the table D, the roller G, projecting through it, the screw I, gears b, c, and lever F, as and for the purpose specified.

#### No. 36,504. Cylinder and Die for Ornamenting Wood, etc. (*Cylindre et coussinet pour orner le bois, etc.*)

Henry Seibert, Brooklyn, New York (assignee of Edward W. Leigh, Chicago, Illinois), U.S.A., 1st May, 1891; 15 years.

*Claim.*—1st. In a machine for ornamenting wood, a cylinder or die support consisting of a series of parts G, H, A, securely fastened together and adapted to turn as one cylinder upon a common shaft F, a circumferential groove E, at the junction of the parts, and a die B, provided with a flange or rib *f*, on its under surface, adapted to enter said groove, the die being placed in position before the parts of the cylinder are united, substantially as shown and described. 2nd. In a machine for ornamenting wood, a cylinder or die support consisting of a series of parts G, H, A, securely fastened together and adapted to turn as one cylinder upon a common shaft F, a circumferential groove E, at the junction of the parts, and a die B, provided with a flange or rib *f*, on its under surface adapted to enter said groove, substantially as shown and described. 3rd. In a machine for ornamenting wood, a cylinder or die support consisting of two parts G, H, A, securely fastened together, the cylinder being provided with a circumferential groove E, at the junction of the parts, in combination with a die B, having a rib or projections *f*, on its inner or concave surface adapted to enter said groove, substantially as shown and described. 4th. In a machine for ornamenting wood, a two-part cylinder G, H, A, provided with a circumferential groove E, at the junction of the parts, in combination with die B, of greater length than half the circumference of the cylinder and having a rib or projections *f*, on its inner surface adapted to enter said groove, the parts of the cylinder being securely fastened together, substantially as shown and described. 5th. In a machine for ornamenting wood, a two-part cylinder or die support G, A, one part of which is provided with a hub H, on which is placed the other part, a groove E, surrounding the cylinder at the junction of the parts, and a die B, provided with a rib or projections *f*, on its under surface adapted to enter said groove, substantially as shown and described. 6th. In mechanism for ornamenting wood, the two-part cylinder G, A, provided with an annular groove E, between said parts, in combination with the die B, removably secured thereto, and a groove E, engaging the sectional ribs *f, f*, of the die, as and for the purpose specified. 7th. In mechanism for ornamenting wood, a two-part cylinder consisting of the part G, provided with the hub H, and the part A, placed on said hub, and the part G, with its hub H, provided with a continuous bearing for the supporting shaft F, and the periphery of the cylinder provided with an annular groove E, between said parts, in combination with a segment die B, provided with a rib *f*, engaging said groove and fastened at one end to the two-part cylinder, as specified and shown.

#### No. 36,505. Bottle for Medicine.

(*Bouteille à médecine.*)

Joseph Adelard Trotter, Valleyfield, Quebec, Canada, 1st May, 1891; 5 years.

*Claim.*—1st. A bottle for poisons and the like, having an open bottomed chamber constructed in its lower part, this chamber containing a gong and suitable striking mechanism, the said striking mechanism operated by a weight falling through the open bottom of the said chamber, substantially as set forth. 2nd. A bottle for poisons and the like, having an open bottomed chamber containing a gong and suitable striking mechanism, the said striking mechanism operated by a weighted cord or band passing over a drum, and means for winding automatically the said cord on the said drum when the strain of the weight is taken off the said cord, substantially as set forth. 3rd. In a bottle for poisons and the like, the combination, with the bottle A, and open bottomed chamber B, of the framework D, secured by the arms C, the gong E secured to the said framework, the hammer F, the escapement G, H, operated by the gear wheel I, J, the said gear wheel J, connected to the shaft K, by the pawl and ratchet L, M, the drum N, operated by the weighted band O, the band O, weight P, and the spring S, substantially as set forth. 4th. In a bottle for poisons and the like, the combination, with a bottle having an open bottomed chamber containing a gong operated by suitable mechanism set in motion by a weighted band of the spring S, substantially as set forth.

**No. 36,506. Combination Lock and Power Equalizer.** (*Serrure à combinaison et regulateur de la force.*)

William Walter Alexander, Kansas City, Missouri, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. The combination of a wheel having upon its periphery a series of notches at irregular intervals, a lever 6, having one end pivoted upon the shaft of said wheel, a pawl pivoted upon said lever and having one end adapted to engage with the notches of said wheel, and the opposite end provided with a T-shaped head, the adjustable stop pins adapted to engage alternately with the arms of said head, with a lever F, connected to the lever 6, a lever A<sup>2</sup>, and means to actuate the said lever A<sup>2</sup>, substantially as described. 2nd. The combination of a wheel having upon its periphery a series of notches at irregular intervals, and teeth of different widths, a nearly counterbalanced retaining pawl, a pivoted lever 6, a pawl pivoted upon said lever and stop pins to react upon said pawl with a pivoted lever F, a pivoted lever A<sup>2</sup>, and means to actuate said lever A<sup>2</sup>, substantially as set forth. 3rd. The combination of a wheel having upon its periphery a series of notches at irregular intervals, a pivoted lever 6, a pawl upon said lever and stop pins to react upon said pawl, a coiled spring wound upon the shaft of the wheel to propel it in one direction and forming a part of an electric circuit, a contact pin upon said wheel, and a spring finger adapted to close the electric circuit by contact with said pin, substantially as and for the purpose described. 4th. The combination of a wheel having upon its periphery a series of notches at irregular intervals, a pivoted lever 6, a pawl upon said lever, a coiled spring wound upon the shaft of the wheel to propel it in one direction, a pivoted lever F, connected with the lever 6, a dash pot piston rod at one end of the lever F, a disk upon said rod and a dash pot to receive said rod and disk with a lever A<sup>2</sup>, bearing against the opposite end of the lever F, and means to actuate said lever A<sup>2</sup>, substantially as set forth. 5th. The combination of a wheel having upon its periphery a series of notches at irregular intervals and teeth of different widths, a pivoted lever 6, a pawl upon said lever, a coiled spring wound upon the shaft of the wheel to propel it in one direction, a pivoted lever F, connected with the lever 6, a dash pot, a piston rod connected to one end of the lever F, and entering said dash pot, a perforated movable piston and a stationary disk upon said rod, substantially as and for the purpose described. 6th. The combination of an electric circuit, a wheel, its shaft, and a coiled spring, said wheel, shaft and spring forming part of said circuit, and the wheel carrying a contact to actuate said circuit, and a stationary metal connection in the path of said contact, whereby the contact forming a part of said wheel is adapted to close the circuit, substantially as and for the purpose described. 7th. The combination of an electro-magnet and a toggle, with an armature having one end hinged to one pole of said electro-magnet, and the other end connected to said toggle, substantially as and for the purpose set forth. 8th. An electro-magnet and a pivoted armature, in combination with a pair of toggle links, one of which is pivoted at its free end to said armature and a body fixed to the other link and adapted to rotate therewith. 9th. The combination of an electro-magnet, its armature hinged to one pole of said electro-magnet, a toggle connected with said armature and a spring connected with said toggle, substantially as and for the purpose described.

**No. 36,507. Protector for Dust.**

(*Garde-poussière.*)

Miles Cowan, Windsor, Ontario, Canada, 1st May, 1891; 5 years.

*Claim.*—A dust protector to be worn about the neck, consisting of a floating collar made of cotton, linen, silk, or other suitable material, about four inches in diameter, but varying in width and length, so shaped as to fit neatly over neck and upper part of shoulders, with a narrow hem at the top through which a spring steel wire or other band with a natural coil is pushed, capable of being distended as to pass easily about the neck and to securely hold the protector in position.

**No. 36,508. Apparatus for the Continuous Manufacture of Sulphite Lye.**

(*Appareil pour la fabrication continue de sulphite de lessive.*)

Alexander Wendler and Julius Spiro, both of Watertown, New York, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. The combination of the saturating tank K, having drip shelves a, a, with a lower gas supply pipe, an upper lime-water supply pipe 7, and upper weak lye supply pipe 8, substantially as herein shown and described. 2nd. The combination of a saturating tank K, having drip shelves a, a, with the lower vats A, B, gas supply pipe entering said vats, weak lye pipe 2, leading from said vats, upper weak lye supply pipe 8, vat C, communicating with pipes 2, and 8, and with the top of tank K, and lime-water supply pipe 7, to upper part of tank K, as described. 3rd. The elevated vats C, D, combined with the saturating tank K, having drip shelves a, a, and connecting pipes at its upper end leading to said vats, and with the lower vats A, B, pipes connecting them with the lower part of tank K, with the gas supply pipe 1, leading into the vats A, B, and with the pipe 2, connecting the lower vats A, B, with the elevated vat C, substantially as herein shown and described.

**No. 36,509. Car Coupler.** (*Attelage de chars.*)

Charles F. Mowll, East Cambridge, Massachusetts, U.S.A., 1st May, 1891; 5 years.

*Claim.*—In a car coupling, the combination, with a draw-head having a vertical pin opening, a transverse opening entirely through the draw-head intersecting said pin opening, and a recess in the

bottom of said opening, of a pin passing vertically through said pin opening, and a link of a size to fit in said recess and to project beyond the end of the draw-head, as and for the purpose hereinbefore set forth.

**No. 36,510. Guide for Saws.** (*Garde-scie.*)

John Edward Bill, Evansville, Indiana, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. In a saw guide, the combination, with an outer casing of the cylindrical sleeve, having the guide arm at its forward end and the threaded rear end, the shaft having the guide arm at its forward end and the threaded rear end, and the threaded sleeve and adjusting screw, substantially as set forth. 2nd. In a saw guide, the combination, with the cylindrical sleeve and shaft carrying the guide arms, of the outer casing consisting of the lower half formed integral with the stem and base, and the upper half secured thereon by the screw bolts, substantially as set forth. 3rd. In a saw guide, the combination, with an outer casing, of the cylindrical sleeve formed with the threaded rear end and the integral guide arm at its forward end, the shaft formed with the threaded rear end and the integral guide arm at its forward end, and the threaded sleeve and adjusting screw, substantially as set forth. 4th. The combination, with the outer casing, of the cylindrical sleeve having the threaded rear end and the guide arm, the shaft having the threaded rear end and the guide arm, the threaded adjusting sleeve and rod, the shaft having the eccentric disk, the ring having the ball and socket joint, the hand lever having the spring-catch and the curved rack, substantially as set forth. 5th. In a saw guide, the combination, with the guide arms, of the apertured wooden guide pins, and the tube 2, 3, conveying water to the said pins, substantially as set forth. 6th. In a saw guide, the combination, with the reversible guide arms, of the reversible support, substantially as set forth. 7th. The combination of the outer casing having the two thumb screws, the cylindrical sleeve having the threaded rear end and the guide arm, and the longitudinal recess formed in its outer surface, the inner shaft having the threaded rear end and the guide arm, and the threaded sleeve and adjusting screw, substantially as set forth. 8th. In a saw guide, the combination, with the adjustable cylindrical sleeve and inner shaft, of the guide arms having at their rear ends the registering apertures, the metal pin passing through said apertures, and the thumb screw, substantially as set forth. 9th. The combination of the outer casing formed with the annular oil chamber and the top feed opening, the cylindrical sleeve having the oil holes, the threaded rear end and the guide arm and the threaded adjusting sleeve and screw, substantially as set forth. 10th. The combination of the outer casing formed with the annular oil chamber, the rabbeted inner ends, and the top feed opening, the cylindrical sleeve having the oil holes, the threaded rear end and the guide arm, the inner shaft having the threaded rear end and the guide arm, and the threaded adjusting sleeve and screws, substantially as set forth.

**No. 36,511. Muzzle for Dogs.** (*Muselière de chien.*)

Francois Louis Antoine Canary, Dragnignan, France, 1st May, 1891; 5 years.

*Claim.*—1st. A dog muzzle having a yielding spring pressed under part which covers the mouth to prevent biting, but allows the dog to eat and drink without the removal of the said muzzle, substantially as set forth. 2nd. The combination of the pivoted frame b, extending down before the dog's mouth with the frame d, having sliding connection at each end the loops or guideways e, the spring h, bearing upward against frame d, and the main part of the dog muzzle from which these parts b, d, e, h, are suspended, as set forth.

**No. 36,512. Process of Reducing Rice to Compressed Flakes.** (*Procédé de réduction du riz en facon compressé.*)

Frank Lanhoff, Detroit, Michigan, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. As a new article of manufacture, the herein described product from rice, consisting of drawn and compressed films formed from the rice in its normally dry and raw condition, substantially as described. 2nd. The herein described process of producing films from rice, consisting of subjecting the normally dry and raw material to a drawing compression, substantially as described. 3rd. The herein-described process of producing films from rice, consisting of subjecting the normally dry and raw material to compression between rollers, one of which has a faster rotation than the other, whereby the material is simultaneously drawn out and compressed into the said film, substantially as described.

**No. 36,513. Car Coupler.** (*Attelage de chars.*)

William J. Walker, St. Louis, Missouri, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. In a car-coupler of the class described, a rotary hook adapted to be pivotally secured to a drawbar, an opening formed in said hook, and a locking device adapted to enter the said opening, whereby the strain or draft is brought against the solid portion of the drawhead, substantially as described. 2nd. A car-coupler consisting of a drawbar, a rotary hook adapted to be secured thereto, and a locking device provided with ears adapted to be inserted within the said drawbar through a suitable opening formed in the same, substantially as described. 3rd. In a car-coupler, a locking device provided with an enlargement 11, which is adapted to bear against the solid portion of the drawhead when strain or draft is applied, substantially as described. 4th. In a car-coupler, the herein described locking device provided with hooked portion 9, ears 6, formed integral with the said locking device, and a depending lug or extension formed upon the lower surface thereof, substantially as described. 5th. In a car-coupler of the class described, having a

hooked portion, ears formed integral therewith, and a rod or link such as 14 attached to the same for elevating the said locking device, substantially as described. 6th. In a car-coupler, a locking device having attached thereto a rod or link of sufficient length as to extend above the upper surface of the draw-head, and a head or enlargement formed upon the upper end thereof, substantially as described. 7th. In a car-coupler, the combination of the drawbar 1, the rotary hook 2, pivotally secured thereto, a slot or hole 4, formed in the tail end of the same, a locking device 5, having ears 6, and enlargement 11, formed integral with said locking device, and means whereby the said locking device is elevated in the act of uncoupling, substantially as described.

### No. 36,514. Electric Annunciator.

(Indicateur électrique.)

Harvey Cortland, Toronto, Ontario, Canada, 1st May, 1891; 5 years.

*Claim.*—1st. In an electric annunciator the combination of an L-shaped frame 4, a pair of electro magnets 5, connected by a bar 10, and fastened to the horizontal arm of said frame 4, an armature 12 carried by a notched arm 13, hinged to the vertical arm of said frame 4, and provided with a spring 16, resisting the attraction of the armature, a tilting plate or index 18, sleeved on a post 17, standing on the horizontal arm of frame 4, and having an arm 20 bent at the ends, and a spring 19, one of said bent ends engaging the notch in arm 13 of the armature 12, to retain the index plate edgewise and be released by the attraction of the armature by the magnets when vitalized, the spring 19 then reacting to tilt the index plate, whereby the number thereon will be observable from the front of the annunciator, as set forth. 2nd. In an electric annunciator the combination, with electro magnets 5, secured to the horizontal arm of an L-shaped frame 4, and an armature 12 hinged to the vertical arm of said frame and provided with a notched arm 13 and spring 16, an index plate 18, sleeved on a post 17, standing on the horizontal arm of said frame 4, and having an arm 20 bent at both ends, and a connecting spring 19, and a rock shaft B, provided with a finger E, and connected by arms D to a spring pull bar C, whereby the pulling of said bar will cause the finger to rock arm 20, to engagement with the notched arm of the armature to retain the index plate edgewise to the observer, and the armature release said arm when the electro magnets are vitalized, the spring 19 then tilting the index plate to visually reveal the number thereon, as set forth.

### No. 36,515. Brake for Cars or Locomotives.

(Frein de char ou locomotive.)

The Consolidated Brake Adjuster Company, Chicago, Illinois, U. S. A., assignees of Morris Peter Burgey, of Corning, New York, U. S. A., 1st May, 1891; 5 years.

*Claim.*—In a mechanism for taking up the slack in a brake-rigging caused by the wear of the brake-shoes, the combination of a brake-rod having one or more ribs washers designed to be carried on the rib or ribs, and to drop or be forced onto the rod where the rib or ribs end, and cases for carrying the washers adapted to slide the washers on the rod when moved in one direction, and to transmit a pull through the washers to the brake-rod, or from the brake-rod through the washers to the brake-lever, substantially as set forth.

### No. 36,516. Platform for Freight Cars.

(Plateforme de char à marchandises.)

William Lowe, Glendive, Montana, U.S.A., assignee of Thomas C. Tyrell, of Glendive aforesaid, 1st May, 1891; 5 years.

*Claim.*—1st. The combination, with a platform pivoted to the end of a car, of a link pivotally connected with one side of said platform, a lever pivoted to the side of the car and connected with said link, and a locking mechanism substantially as described, for locking said lever in position when the platform is extended or folded upon the end of the car, substantially as set forth. 2nd. The combination, with a platform pivoted to the end of a freight car, of a link pivotally connected with one side of said platform, a lever fulcrumed on one side of the car and connected with said link, a handle hinged on said lever, and two locks adapted to alternately engage the said handle to lock said lever in position when the platform extends horizontally or is folded upon the end of the car, substantially as shown and described. 3rd. The combination, with a platform pivoted to the end of a freight car, of an extension pivoted to the end of the said platform and extending in line with the same, and adapted to swing upward, substantially as shown and described. 4th. A platform for cars, comprising side bars, transverse rods connecting the side bars together, plates connecting the rods together and strips on said plates, substantially as described. 5th. A platform for cars, comprising side bars, transverse rods connecting the side bars together, plates connected to the rods, and corrugated strips on said plates, substantially as described. 6th. A platform for cars, consisting of side bars, transverse rods connecting the side bars together, plates connecting the rods together, strips on the plates, auxiliary side bars pivoted to one of the transverse rods and connected together by rods and a plate, substantially as herein shown and described. 7th. The combination, with a platform pivoted to the end of a car, of a jointed link pivoted to the platform, a hinged and pivoted lever pivoted to the link, a bar provided with flanges to receive the lever, and pivoted cam levers for locking the levers in the flanges of the bar, substantially as herein shown and described.

### No. 36,517. Car Coupler. (Attelage de chars.)

The Thurmond Car Coupling Company, New York, U.S.A., assignees of William D. Thurmond, Forsyth, Georgia, U.S.A., 1st May, 1891; 5 years.

*Claim.*—1st. In a car-coupling, the combination, with a draw-head of a pivoted hook, a coupling-bolt having a vertical movement in the

said draw-head in the path of the shank of the said hook, the said bolt having a curvilinear recess in its forward face, and having a step in its side contiguous to the said shank, as described. 2nd. In a car coupling, the combination, with a draw-head of a pivoted hook, a locking-bolt having a vertical movement in the said draw-head in the path of the shank of the said hook, a curvilinear recess on the forward face of the locking-bolt, a shoulder beneath the said recess, recesses having forward upper beveled faces in the rear of the said locking-bolt, and a latch having its lower end engaged by a covered slot in the rear of the locking-bolt, and having shoulders with forward upper beveled faces upon its sides, the said shoulder being received by the rear recesses in the locking-bolt, as described. 3rd. In a car-coupling, the combination, with a draw-head, of a pivoted hook, a locking-bolt having a vertical movement in the said draw-head in the path of the shank of the said hook, a curvilinear recess on the forward face of the shank of the said hook, a shoulder beneath the said recess, recesses having forward upper beveled faces in the rear of the said locking-bolt, and a latch having its lower end engaged in a covered slot in the rear of the locking-bolt, and having shoulders upon its sides received by the said recesses in the rear of the locking-bolt, the said shoulders having upper forward and rear lower beveled faces, as described. 4th. In a car-coupling, the combination, with a draw-head of a pivoted hook, a coupling-bolt having a vertical movement in the said draw-head in the path of the shank of the said hook, a curvilinear recess on the forward face of the locking-bolt, and a shoulder beneath the said recesses, recesses having upper forward and lower rear beveled faces on the back of the said locking-bolt, and a latch having shoulders upon its sides received by the said recesses in the rear of the locking-bolt, the said shoulders having upper forward and rear lower beveled faces, as described. 5th. In a car-coupling, the combination, with a draw-head having a hook pivotally attached thereto, of a vertically and laterally moving locking-bolt mounted in the said draw-head in the path of the shank of the said hook, the said locking-bolt having a recess in its forward face for the passage of the said shank, and a curved face on its side contiguous to the said shank, and on a level with the recess in its forward face, whereby the bolt will be forced backward upon a rotation of the hook, as described. 6th. In a car-coupling, the combination, with a draw-head having a hook pivotally attached thereto, of a vertically and laterally moving locking-bolt mounted in the said draw-head in the path of the shank of the said hook, the said shank having a tail-piece thereon, having a forward beveled edge, and the said locking-bolt having a curvilinear recess in its forward face for the passage of the said tail-piece, and a curved face on its side contiguous to the said tail-piece and on a level with the recess in its forward face, whereby the bolt will be forced backward, as described. 7th. In a car-coupling, the combination, with a draw-head of a pivoted hook having a step upon the upper part of the rear end of its shank, and a locking-bolt having a vertical movement in the said draw-bar, and in the path of the said shank, as described. 8th. In a car-coupling, the combination, with a draw-head of a pivoted hook and a locking-bolt having a vertical movement in the said draw-head in the path of the shank of the said hook, the said hook having a step upon the upper part of its shank, and the said locking-bolt having a step in its side contiguous to the said shank, as described. 9th. In a car-coupling, the combination, with a draw-head, of a hook pivoted therein and having a tail-piece upon its shank, and a vertically-moving locking-bolt having a recess in its face for the passage of the said tail-piece, and a step in its side contiguous to the said tail-piece and to the said recess in its face, as described. 10th. In a car-coupling, the combination, with a draw-head of a hook pivoted therein, a tail-piece on the shank of the said hook having a forward beveled edge, and a vertically and laterally moving locking-bolt mounted in the said draw-head in the path of the tail-piece, the said locking-bolt having a recess in its forward face for the passage of the said tail-piece, and a step in its side contiguous to the said tail-piece, and to the said recess in its face, as described. 11th. In a car-coupling, the combination, with a draw-head, of a hook pivoted therein and having a tail-piece upon its shank, and a vertically-moving locking-bolt having a recess in its face for the passage of the tail-piece, and a step in its side contiguous to the said tail-piece and to the recess in its face, and a shoulder in the said bolt, whereby it may be retained in a raised position. 12th. In a car-coupling, the combination, with a draw-head, of a hook pivoted therein, a vertically-movable locking-bolt mounted in the said draw-head, having a recess in its forward and in its locking side, a shoulder on the said bolt below the said recesses, the said shoulder being flush with the forward and locking sides of the bolt, a portion of the shank of the hook being constantly within one of the said recesses, whereby the upward movement of the locking-bolt will be limited, as described. 13th. In a car-coupling, the combination of the pivoted hook having a recess in the rear of its shank, a draw-head in which the said hook is mounted having a lug thereon, projecting into the said recess, and a vertically-moving locking-bolt arranged in the path of the said shank, and having a recess therein for the passage of the said shank, and a supporting shoulder upon its face, as described.

### No. 36,518. Electric Snap Switch.

(Commutateur électrique.)

Gerald Waldo Hart and George S. Hegeman, both of Kansas City, U. S. A., 1st May, 1891; 5 years.

*Claim.*—1st. The combination of the cam plate having cams 15, and let offs or inclines 16, with the slotted switch plate, spring plate, the spring, and the stud 20 carried by said spring plate and engaging said switch plate and cams, substantially as described and for the purpose specified. 2nd. The combination of the shaft, the spring plate mounted to revolve with the same and slotted as described, the stud or pin 22, fixed on said spring plate for one end of the spring, and the pivoted link carried by said spring plate, a swinging stud at the outer end of said link, a spring connected to said studs with a constant tendency to force them apart, the slotted switch plate having the swinging stud extended through its slot, and the cam plate for engaging the lower end of said swinging stud, substantially as described and for the purpose specified.



**No. 36,519. Combined Vehicle Shaft Support, Anti-Rattler and Eyebolt.**  
(*Support pour essieux de voiture, arrête-écrou et boulon combinés.*)

Adolph Jaenicke, Davenport, Iowa, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—The combination, with a vehicle axle clip bolt, having shackle bars and a pole or shaft eye, of the eyebolt provided with a head at one end, such head elongated at one side, such elongated side provided with two parallel upright posts, the horizontal pin through such posts, the swinging bar hinged to such pin, and when in an operative position resting upon the upper surface of the shackle bars, the inverted U-shaped spring pendently and centrally attached to such swinging bar, and when in an operative position located in the space between the shackle bars and the rear side of the shaft eye and front side of the clip bolt, substantially as described.

**No. 36,520. Electric Heating Apparatus.**  
(*Appareil de chauffage électrique.*)

Mark Wesley Dewey, Syracuse, New York, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—1st. A floor mat, composed partly or wholly of metallic material, and containing one or more heat developing and radiating electric conductors, and a suitable source of electricity connected to said mat. 2nd. A floor mat, composed partly of metallic electric conducting material, and partly of non-conducting material and containing one or more heat developing and radiating electric conductors, and a suitable source of electricity connected to said mat. 3rd. In an electric heating apparatus, a floor mat composed partly of electric conducting material and partly of non-conducting material, said non-conducting material projecting above the plane of the conducting material to serve as a protecting shield for the latter, one or more heat developing and radiating electric conductors in said mat, and a suitable source of electricity connected to said mat. 4th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, and a covering or shield of non-heat conducting material, and a suitable source of electricity connected to said mat. 5th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, and a ventilated covering or shield of non-heat conducting material, and a suitable source of electricity connected to said mat. 6th. A floor mat, comprising one or more flexible metallic heat developing electric conductors, and a suitable source of electricity connected to said mat. 7th. An electric heating apparatus comprising a suitable source of electricity, and a floor mat composed partly or wholly of heat developing electric conductors removably connected to the aforesaid source of electricity. 8th. An electric heater consisting of two or more floor mats comprising one or more heat developing electric conductors, a detachable electric connection between the mats, and a suitable source of electricity connected to said mats. 9th. An electric heating apparatus consisting of a suitable source of electricity, two or more floor mats comprising one or more heat developing electric conductors detachably connected to said source of electricity, and a detachable electric connection between the mats. 10th. In an electric heating apparatus, a floor mat comprising one or more heat developing electric conductors, a suitable source of electricity connected to said mat, and a thermostatic current controller to prevent an excessive heating of the mat. 11th. In an electric heating apparatus consisting of a suitable source of electricity, a floor mat comprising one or more heat developing electric conductors connected to said source of electricity, a thermostatic current controller to prevent an excessive heating of the mat, and a regulator for controlling the action of the said current controller, as set forth. 12th. In an electric heating apparatus consisting of a suitable source of electricity, a floor mat comprising one or more heat developing electric conductors connected to said source of electricity, a thermostatic current controller to prevent an excessive heating of the mat, a regulator for controlling the action of said current controller, and a stop for limiting the movement of the regulator, as set forth. 13th. In an electric heating apparatus, a removable floor mat comprising one or more heat developing electric conductors, a suitable source of electric heating current, and stationary clamps adapted to connect the said mat in circuit with the source of heating current. 14th. In an electric heater, a floor mat comprising one or more heat developing and radiating electric conductor or conductors countersunk in the floor, a suitable source of electricity and connections leading from said source and beneath the floor to said mat.

**No. 36,521. Repeater for Telegraphs.**

(*Appareil à répétition pour télégraphe.*)

Richard Johnston McIlhenny, Wilmington, North Carolina, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—1st. In a repeating telegraphic system, the combination of a relay in a main line circuit, and a local circuit closed through the relay contacts when its armature is in its attracted position, said relay being provided with a magnet located in a branch of said local circuit of greater resistance than the main local circuit, and adapted to hold the armature lever in its attracted position, substantially as described. 2nd. In a repeating telegraph system, the combination of a relay in a main line circuit, said relay being provided with an armature lever provided with two armatures on opposite faces, and on opposite sides of its pivot, and a local circuit closed through the relay contacts when the armature of the relay is in its attracted position, said relay being provided with a supplemental magnet located in a branch of said local circuit of greater resistance than the main local, and adapted to act upon one of the armatures of the relay, substantially as described. 3rd. In a re-

peating telegraph system, the combination of a relay in the main line circuit having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the said sounder and transmitter magnet and relay points, having a branch through the supplemental magnet and relay points, and through the magnet of the said sounder and transmitter, a repeating line circuit and a local repeating circuit, and an electric circuit controller in the local repeating circuit for closing the branch local circuit in the main line, substantially as described. 4th. In a repeating telegraph system, the combination of a relay in the main line circuit, having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the sounder and transmitter magnet, and through the relay points, having a loop or branch through the sounder and transmitter magnet, and through the supplemental magnet, a repeating line circuit, and a local repeating circuit, and an electric circuit controller in the local repeating circuit for closing the branch of the main line local through the main line sounder and transmitter, and the supplemental relay magnet, substantially as described. 5th. In a repeating telegraph system, the combination, with a relay and transmitter in the main line circuit, and a relay and transmitter in the repeating circuit, of a supplemental magnet for each relay adapted to close the relay points, a main local circuit through the relay points and the magnet of the main line transmitter, having a branch circuit through the supplemental relay magnet and through the magnet of the main line transmitter, a local repeating circuit through the repeating relay points, and the magnet of the repeating transmitter having a branch through the supplemental magnet of the repeating relay and the magnet of the repeating transmitter, the main line transmitter being provided with a circuit controller for closing the branch local of the repeating line, and the repeating transmitter having a circuit controller for closing the branch local of the main line, substantially as described. 6th. In a repeating telegraph system, the combination of a relay in the main circuit having a supplemental magnet for holding the relay armature in its attracted position, a combined sounder and transmitter, a main local circuit through the sounder and transmitter magnet, and through the relay points, having a loop or branch through the sounder and transmitter magnet and through the supplemental magnet, a repeating line circuit, a relay in the main local circuit, a local repeating circuit, a circuit controller in the local repeating circuit for closing the branch of the main line local through the main line sounder and transmitter magnet, the supplemental magnet of the main line relay, and points located on the main line transmitter for cutting the relay points of the main repeating line relay out of circuit when the circuit controller is operated to make the branch local, substantially as described.

**No. 36,522. Boat for Towing. (Remorqueur.)**

Alexander McDougall, Duluth, Minnesota, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—1st. The hull for a tow boat, having a curved bow with a top ellipsoidal in form for a greater part of its length, with straight sides and with a bottom rounded at the corners, substantially as set forth. 2nd. The hull for a tow boat, having a top ellipsoidal in form for the length of the main portion of the hull, a bow oval in cross-section for its greater part, and circular in cross-section at its extreme, and a similarly constructed stern provided with a skeag parallel sides for the length of the main portion of the hull, and a bottom rounded at the corners. 3rd. In a tow boat, a boiler located near its stern, a steam windlass near its bow, a line of steam conducting pipes extending from said boiler to the windlass on one side of the hatchways adjacent to the deck, and a return line of exhaust steam conducting pipe extending from said windlass to the said boiler, and on the other side of the hatchways adjacent to the deck so that said deck will be heated from said lines of conducting pipes, for the purposes mentioned.

**No. 36,523. Regulator for Dynamo Electric Machines. (Régulateur pour machines dynamo-électriques.)**

Royal E. Ball, New York, State of New York, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—1st. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and arranged in the yoke-piece of the field magnets adjacent to the commutator, substantially as described. 2nd. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and arranged in the yoke-piece of the field magnets adjacent to the commutator, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 3rd. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body having axes of different magnetic resistances carrying the commutator brushes and arranged in the yoke piece of the field magnets adjacent to the commutator, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 4th. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body suitably counterbalanced, and having axes of different magnetic resistances, and arranged in the yoke piece of the field magnets adjacent to the commutator supports for the commutator brushes carried by said magnetic body, and a sleeve extending from said yoke piece around the armature shaft for supporting said body, substantially as described. 5th. As a means for shifting the brushes to regulate a magneto-electric machine, a movable magnetic body carrying the commutator brushes and supported about the armature shaft by anti-friction ball bearings in the yoke piece of the field magnets adjacent to the commutator, substantially as described.

**No. 36,524. Coupling for Radiator Sections.***(Assemblage de sections de calorifère.)*

James Morrison, Toronto, Ontario, Canada, 2nd May, 1891; 5 years.

*Claim.*—1st. The combination, with two sections of a radiator, or their equivalent, of a nipple having a single thread *a*, and a double thread *b*, cut on its cylindrical surface and designed to screw into correspondingly threaded holes made in the said sections or their equivalent, substantially as and for the purpose specified. 2nd. The combination, with two sections of a radiator, or their equivalent, of a nipple having a single thread *a*, and a double thread *b*, cut on its cylindrical surface, the said threads being separated by a groove *d*, and designed to screw into correspondingly threaded holes made in the said sections or their equivalent, substantially as and for the purpose specified. 3rd. The combination, with two sections of a radiator, or their equivalent, of a nipple *C*, having formed on its cylindrical surface a double thread *b*, at one end, and a plain surface *e*, at its opposite end of less diameter than the threaded end, a single thread *a*, located at the base of the end *e*, and separated from the thread *b*, by the groove *d*, the said nipple screwed as described being designed to screw into correspondingly threaded holes made in the sections *A*, *B*, substantially as and for the purpose specified. 4th. The combination, with two sections of a radiator, or their equivalent, of a nipple having a bar *D*, connected to and inserted into its mouth, and having a single thread *a*, and a double thread *b*, cut on its cylindrical surface and designed to screw into correspondingly threaded holes made in the said sections or their equivalent, substantially as and for the purpose specified.

**No. 36,525. Engine Reversing Gear.***(Appareil de renversement de marche pour les machines.)*

John Barnes, Paxton, Illinois, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—1st. In a reversing gear for steam engines, the combination, with the main shaft, of a rhomboidal block mounted on said main shaft by a transverse perforation at right angles to its opposite sides, a slide mounted upon the base and having uprights provided with perforations fitting over the main shaft on opposite sides of said rhomboidal block, the eccentric disk having a transverse slot mounted upon the said block, and an annular groove engaging the eccentric ring, the vertically sliding uprights forming bearings for the said eccentric ring to prevent lateral movement of the latter and the hand lever for adjusting the transversely movable slide, substantially as and for the purpose set forth. 2nd. In a reversing gear for steam engines, having the rhomboidal block mounted slidingly upon the main shaft and engaging a transverse slot in the eccentric disk, the slide mounted to move transversely upon the base and having uprights provided with perforations admitting the main shaft and fitted against the opposite ends of the rhomboidal block, which latter may thus be moved longitudinally upon the main shaft, substantially as set forth.

**No. 36,526. Method of Casting Ingots.***(Coulage des lingots.)*

William Russell Hinsdale, Newark, New Jersey, U.S.A., 2nd May, 1891; 5 years.

*Claim.*—The process of forming ingots which consists in first casting the metal in a mold, secondly, chilling the upper end of the metal, and thirdly, placing the ingot in an inclined position and flowing the metal against such chilled end to distribute the shrinkage cavity along one side of the ingot.

**No. 36,527. Machine for Bending Vehicle Shafts and Poles.***(Machine à plier les essieux et timons de voiture.)*

Thomas E. Mcntague, West Lorne, Ontario, Canada, 2nd May, 1891; 5 years.

*Claim.*—1st. A shaft bending machine adjustable to admit of the bending of shafts of various lengths, substantially as and for the purpose specified. 2nd. A shaft bending machine, the main frame of which is made in two parts adjustable lengthwise, substantially as and for the purpose specified. 3rd. In a shaft bending machine, a main frame made in two parts connected by suitable slides, in combination with suitable means to adjust the two parts at any desired distance apart, substantially as and for the purpose specified. 4th. In a shaft bending machine, a main frame made in two parts connected by suitable slides 48, and 50, in combination with shaft 52, barrel 55, and suitable clamps 46, and 51, substantially as and for the purpose specified. 5th. In a shaft bending machine, the second bend or point formers normally lying below the machine bed, combined with means, substantially as specified, for lifting them above the bed, as and for the purposes set forth. 6th. In a shaft bending machine, the second bend or point formers normally lying below the machine bed and supported for vertical and lateral movements, substantially as herein set forth. 7th. In a shaft bending machine, the second bend or point formers normally lying below the machine bed and supported for vertical and lateral movements, combined with means, substantially as specified, for imparting said movements to them, substantially as herein set forth. 8th. In a shaft bending machine, the second bend or point formers normally lying below the machine bed, combined with wedge bar carrying wedges adapted to raise the formers, and a spring latch adapted to engage with an arm on a cam shaft carrying a cam to press the said formers outward and brace them laterally, substantially as and for the purpose specified. 9th. In a shaft bending machine, the second bend or point formers normally lying below the machine bed and supported for vertical and lateral movements, combined with springs normally drawing the formers inward, and a cam to spread them apart after they are

raised above the bed, substantially as herein set forth. 10th. In a shaft bending machine, the combination, with a bed or table, of a pair of first bend formers pivoted thereon at one end, a pair of second bend or point formers, presser bars adapted to bend the shafts to the formers, a cam fixed on a shaft journaled in the supporting plate, a lever fast on the shaft, and a sliding bar carrying a wedge separating the spreading bars, and presser bars to press the shafts to the first bend formers, said wedge bar having a spring latch actuating the lever, shaft, and cam which spread the second bend formers, substantially as herein set forth. 11th. In a shaft bending machine, the combination, with a bed or table, of a pair of first bend middle formers pivoted thereon at one end, a pair of second bend or point formers normally lying below the machine bed, and adjustable vertically and laterally, presser bars adapted to bend the shafts to the formers, a pair of spreader bars separating the first bend formers, and a sliding bar carrying a wedge separating the spreader bars and presser bars, said wedge bar having wedges to raise the point formers through their supporting plate and its legs, and a spring latch to subsequently spread the point formers by means of their lever cam shaft and cam, substantially as and for the purpose specified. 12th. In a shaft bending machine, the second bend formers *C*, sliding in a plate 7, having legs 6, a cam 10, cam shaft and lever 11, in combination with wedge bar *J*, carrying wedges 8, and spring latch 12, substantially as and for the purpose specified. 13th. In a shaft bending machine, the combination, with the point formers *C*, cam 10, cam shaft and lever 11, of the rock shaft 1', carrying an arm 13, connected suitably, as shown, to the said lever 11, substantially as and for the purpose specified. 14th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars and a sliding bar having a wedge actuating the levers to bend the shafts to the formers, substantially as herein set forth. 15th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars, a sliding bar having a wedge actuating the levers to bend the shafts to the formers, and latches retaining the shafts when bent to the formers, substantially as herein set forth. 16th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars, a sliding bar having a wedge actuating the levers to bend the shafts to the formers, and springs retracting the levers when the wedge is withdrawn from them, substantially as herein set forth. 17th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars for bending the shafts to the formers and provided with inner anti-friction rollers, and a sliding bar having a wedge operating between said rollers to press the shafts to the formers, substantially as herein set forth. 18th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars, and a wedge pivoted on a sliding bar so that in sliding heel first it will rise over the ends of the levers, and will then drop in front of them ready for operation on its return movement, substantially as and for the purpose specified. 19th. In a shaft bending machine, the combination, with the point formers and presser bars or plates adapted to bend the shafts to them, of levers adapted to the presser bars, latches retaining the levers when the shafts are bent to the formers, and a shaft provided with tappet arms disengaging the latches when the shaft is rocked, substantially as herein set forth. 20th. In a shaft bending machine, the combination, with first and second bend formers, spreader bars, bending bars, and levers adapted to press the shafts to the formers, and latches retaining the bent shafts at the second bend formers, substantially as specified, of a shaft 1', having crank arms 6, 7, 26, a rod 5, connecting the arm 6, to the presser bars *E*, through arm 4, the segmental rack 3, and block *e*', to which the bars *E*, are suitably connected, levers *B*', and rods *B*', connecting the levers to the shaft crank arms 7', said arms 26, located to disengage the second bend lever latches, substantially as described, whereby as the shaft 1', is rocked, the bent shafts will be unclamped endwise, and laterally, to loosen them for removal from the machine, substantially as and for the purpose specified. 21st. In a shaft bending machine, the combination, with the bed or table, of a pair of first bend formers fulcrumed thereto, a pair of second bend formers, a pair of spreader bars, flexible bars or plates actuated by the spreader bars to bend the shafts to the first formers, a pair of levers adapted to the flexible bars for bending the shafts to the second formers, and a reciprocating bar having two wedges set with their points facing each other, one wedge effecting the first bend of the shafts as the bar is moved in one direction, and the other wedge effecting the second bend of the shafts as the bar moves in the opposite direction, substantially as herein set forth. 22nd. In a shaft bending machine, the combination, with the bed or table, of formers *B*, *B*, fulcrumed thereto at *b*, *b*, spreader bars *E*', *E*', fulcrumed to the bed at *e*', *e*', blocks *F*, *F*, held to the free ends of the bars *E*', *E*', presser bars or plates *E*, *E*, connected at one end to the bed and at the other end to the blocks and adapted to the formers *B*, *B*, formers *C*, *C*, held in front of the formers *B*, *B*, presser bars or plates *G*, *G*, held at one end to the blocks *F*, *F*, and extending forward therefrom, and levers *O*, *O*, fulcrumed to the bed and having lugs *o*', *o*', adapted to the plates *G*, *G*, substantially as herein set forth. 23rd. In a shaft bending machine, the combination, with the first bend formers *B*, spreader bars *E*', and bending bars or plates *E*, connected thereto, and adapted to press the shafts to the formers, of a sliding bar provided with a wedge acting on the bars *E*', and having laterally adjustable front and side walls or acting faces, substantially as herein set forth. 24th. In a shaft bending machine, the combination, with the point formers *C*, levers *O*, and bending bars or plates *G*, of a sliding bar provided with a wedge acting on the levers, substantially as and for the purpose specified. 25th. In a shaft bending machine, the combination, with the bed *A*, spreader bars *E*', and bending bars or plates *E*, of springs *E*', retracting the bars *E*', substantially as herein set forth. 26th. In a shaft bending machine, the first and second bend formers provided, respectively, at their inner and outer faces with notches receiving fingers of the shaft clamp, substantially as herein set forth. 27th. In a shaft bending machine, the combination, with the formers, spreader bars,

and bending bars and levers, and a sliding bar operating the spreader and bending bars and levers to press the shafts to the formers, substantially as specified, of a rack on the wedge bar, a shaft  $X$ , carrying a pinion  $r$ , engaging said rack, and also carrying gear wheels  $R^1, R^2$ , substantially as and for the purpose specified. 28th. In a shaft bending machine, the combination, with the formers, spreader bars, and bending bars and levers, and a sliding bar operating the spreader and bending bars and levers to press the shafts to the formers, substantially as specified, of a rack on the sliding bar, a shaft  $R$ , carrying a pinion  $r$ , engaging said rack, and also carrying gear wheels  $R^1, R^2$ , a shaft carrying a pinion  $r^1$ , and pulley  $t^1$ , a pinion  $r^2$ , engaging the pinion  $r^1$ , and the wheel  $R^1$ , a shaft carrying a pinion  $t^1$ , engaging the wheel  $R^2$ , and also carrying a pulley  $t^2$ , a driving shaft  $T$ , carrying pulleys  $t^2, t^3$ , loose belts  $S^2, S^3$ , connecting the pulleys  $t^2, t^3$ , and  $t^3, t^4$ , respectively, and shippers for tightening the belts  $S^2, S^3$ , substantially as herein set forth. 29th. In a shaft bending machine, the combination, with the formers, spreader bars, and bending bars and levers, and a sliding bar operating the spreader and bending bars, and levers to press the shafts to the formers, substantially as specified, of a rack on the sliding bar, a shaft  $R$ , carrying a pinion  $r$ , engaging the rack, and also carrying gear wheels  $R^1, R^2$ , a shaft carrying a pinion  $r^1$ , and pulley  $t^1$ , a pinion  $r^2$ , engaging the pinion  $r^1$ , and gear wheel  $R^1$ , a shaft carrying a pinion  $t^1$ , engaging the gear wheel  $R^2$ , and also carrying a pulley  $t^2$ , a driving shaft  $T$ , carrying the pulleys  $t^2, t^3$ , loose belts  $S^2, S^3$ , connecting the pulleys  $t^2, t^3$ , and  $t^3, t^4$ , respectively, a sliding bar  $S^1$ , and tighteners, as  $r^2, r^3$ , on the bar  $S^1$ , for the belts  $S^2, S^3$ , all arranged for operation substantially as herein set forth. 30th. In a shaft bending machine, the combination, with a segmental rack operating the shaft heel bending device, of a crank arm on the segment shaft, a pulley driving the gearing actuating said segment, a lever, a shaft carrying a cam or eccentric sustaining one end of said lever, a crank arm on the cam shaft, a friction wheel supported by or from said lever and adapted to the driving pulley of the segmental rack, and rod connections from the cam shaft crank arm to the segment shaft crank arm, substantially as described, whereby as the segmental rack is raised to give the heel bend to the shafts the lever friction wheel will be moved toward the rack driving pulley and as the rack is lowered the friction wheel will be moved from the rack driving pulley, as and for the purposes set forth. 31st. In a shaft bending machine, the combination, with a segmental rack operating the shaft heel bending device, of a crank arm on the segment shaft, a pulley driving the gearing actuating said segment, a lever, a shaft carrying a cam or eccentric sustaining the free end of the lever, a crank arm on the cam shaft, rod connections from the cam shaft crank arm to the segment shaft crank arm for raising the lever as the segment is raised, and *vice versa*, a slide on the first named lever, a cam journaled in the slide and bearing on the lever, and a friction wheel on the slide adapted to the driving pulley of the segmental rack, substantially as described, whereby as said rack is raised both lever and slide will be raised to move the slide friction wheel part way to the rack driving pulley and said wheel will be pressed to the pulley by subsequent operation of the slide cam on the lever, and both lever and slide, with the friction wheel, will be carried from the rack driving pulley automatically as the rack is lowered or retracted, as and for the purposes herein set forth. 32nd. In a shaft bending machine, the combination, with the machine bed and frame, of a flexible device bending the heel of the shafts, a segmental rack  $V^1$ , connected to said flexible device for operating it, a crank arm  $w^0$ , on the segment shaft, a lever  $W^1$ , fulcrumed at  $w^0$ , to the machine frame, a shaft  $w^0$ , on the frame, and cam  $W^2$ , on the shaft  $w^0$ , and under the free end of the lever  $W^1$ , a slide  $W$ , on the lever  $W^1$ , a friction wheel  $W^3$ , on the lever  $W^1$ , adapted to the driving pulley of the segmental rack, a cam 36, journaled in the slide  $W$ , and bearing on the lever  $W^1$ , a pulley  $w$ , revolving with wheel  $W^3$ , a pulley  $t^{13}$ , on a main driving shaft, and a loose belt  $T^2$ , connecting the pulleys  $t^{13}, w$ , all arranged for operation, substantially as described, for the purposes set forth. 33rd. In a shaft bending machine, the combination, with the machine bed and frame, bend formers, and devices clamping the shafts to said formers, a shaft, a lever thereon, tappet arms on the shaft, and connections from said arms to the shaft bending bars, formers, and levers for unclamping the bent shafts from the formers, of a driving pulley actuating the heel bend forming device, a slide carrying a friction pulley adapted to said driving pulley, a cam on the friction wheel slide, and a rod connecting the cam with the lever on the shaft carrying the tappet arms, substantially as described, whereby as the tappet arm shaft is rocked by its lever to free the bent shafts from the formers the driving wheel of the shaft bending device will be engaged by the friction wheel on the cam lever for retracting the shaft heel bending device, as herein set forth. 34th. In a shaft-bending machine, the combination, with the machine bed and frame, body, point, and heel formers thereon, of flexible bars and levers pressing the shafts to these formers, a shaft  $I^1$ , provided with arms 6,  $11$ , 26 a rod 5, connecting the arm 6, with the endwise-movable bending-bars through the arm 4, segmental rack 3 and block  $e^1$ , to which the bars  $E$  are suitably connected, levers  $B^2$ , behind the body-formers, bars  $B^1$ , connecting said levers  $B^2$  with the shaft arms  $P^1$ , latches  $P$ , holding the bending-bars to the point-formers and adapted for operation by the shaft arms  $P^2$ , a lever  $I$ , on the shaft  $I^1$ , a segmental rack  $V^1$ , connected to the heel-bending device, a crank arm  $W^0$ , on the segment-shaft, a lever  $W^1$ , fulcrumed at  $W^0$  to the machine-frame, a shaft  $W^0$ , on the frame, a cam  $W^2$ , on the shaft  $W^0$ , and under the free end of the lever  $W^1$ , a slide  $W$ , on the lever  $W^1$ , a friction wheel  $W^3$ , on the slide  $W$ , adapted to the driving pulley of the segmental rack, a cam 36, journaled in the slide  $W$ , and bearing on the lever  $W^1$ , and a rod  $W^0$ , connecting the cam 36 with the lever  $I$ , all arranged for operation, substantially as described, for the purposes set forth. 35th. In a shaft-bending machine, the combination, with a lever sustained at its free end by a cam and carrying a friction-wheel and driving pulley, and the wheel adapted for contact with the driving pulley of the shaft-heel bend-forming devices, substantially as specified, of a driving shaft, a pulley thereon, a loose belt running from said pulley to the pulley of the lever friction wheel, and a tightener for the belt, substantially as herein set forth. 36th. In a shaft-bending machine, the combination, with the heel-bending chain and the segmental rack operating it, of a pin on the outer

box-link of the chain adapted for projection through the wall of said link into an aperture in the strap-box of the heel-clamp, substantially as herein set forth. 37th. In a shaft-bending machine, the combination, with the outer link of the heel-bending chain provided with a stem or projection, and the segmental rack operating said chain and provided with a lug having a slot receiving the stem of the outer chain-link, of a pin fitted to the chain-link and a spring normally forcing the pin outward, substantially as described, whereby the pin will be withdrawn from the strap-box of the heel-clamp on the chain as the chain is raised by the segmental rack, and will be projected to engage the clamp-strap box as the chain is lowered, as and for the purposes set forth. 38th. In a shaft-bending machine, the combination, with the segmental rack  $V^1$ , having a lug  $V^2$ , slotted at  $v^2$ , and the heel-bending chain having an outer link  $h$ , provided with a stem  $h^1$ , entering said slot, of a pin  $Z$ , fitted to slide on the stem and to be pushed inward by the lug  $V^2$  as the rack and chain are lowered, and a spring normally moving the pin  $Z$  outward as the rack and chain are raised, substantially as herein set forth. 39th. In a shaft-bending machine, the combination, with the first-bend formers  $B$ , of the presser bars  $E$ , so connected to the frame of the machine as to be adjustable closer to or farther from the formers  $B$ , to suit different thicknesses of shafts, substantially as and for the purpose specified. 40th. In a shaft-bending machine, the combination, with the first-bend formers  $B$ , of the bending bars  $E$ , nuts  $e$ , block  $e^1$ , right and left hand threaded screw  $L$ , operated in any suitable way, substantially as and for the purpose specified. 41st. In a shaft-bending machine, the combination, with the point formers  $C$ , of the presser bars  $G$ , operated by levers having adjustable arms to regulate the inward throw of the presser bars  $C$ , for different thicknesses of shafts, when said levers are operated by the wedge  $J^2$ , substantially as and for the purpose specified. 42nd. In a shaft-bending machine, the combination, with the point formers  $C$ , of the presser bars  $G$ , operated by levers  $O$ , having a lower arm  $19$ , in two parts, one rigid with the upper arm  $18$ , and the other engaging with the wedge  $J^2$ , adjustable on it by means of set screw  $21$ , substantially as and for the purpose specified. 43rd. In a shaft-bending machine, a sliding bar  $J$ , having a lug 56, in combination with a shaft 52, having stops 57, substantially as and for the purpose specified. 44th. In a shaft-bending machine, a sliding bar  $J$ , having a lug 56, in combination with a shaft 52, stops 57, and spring stop 59, substantially as and for the purpose specified. 45th. In a shaft-bending machine, a sliding bar  $J$ , in combination with spring stop 59, rod 61, tappet arm 60, and shaft  $T^1$ , substantially as and for the purpose specified. 46th. In a shaft-bending machine, the segmental rack  $V$ , arranged to press a brake 35, against the pulley  $e^2$ , substantially as and for the purpose specified. 47th. In a shaft-bending machine, the combination, with the segmental rack  $V^1$ , having an adjustable lug 31, thereon, of an arm 32, shaft 33, arm 34, and ratchet brake 35, substantially as and for the purpose specified. 48th. In a shaft-bending machine, a latch 40, pivoted on the segmental rack  $V^1$ , in combination with machine bed  $A$ , substantially as and for the purpose specified. 49th. In a shaft-bending machine, a latch 40, pivoted on the segmental rack  $V^1$ , in combination with machine bed  $A$ , crank-shaft 42, connected by a rod to arm 44, shaft  $t^{12}$ , and foot lever  $T^2$ , substantially as and for the purpose specified. 50th. In a shaft-bending machine, the combination, with a heel-bending device, of a former  $D$ , hung from a movable block whose vertical movement is limited by an adjustable stop to allow shafts of different thicknesses to be bent, substantially as and for the purpose specified. 51st. In a shaft-bending machine, the shaft-releasing rods 67, suitably supported in the frame of the machine, combined with suitable means to give them vertical motion, substantially as and for the purpose specified. 52nd. In a shaft-bending machine, the rods 67, and cross-head 68, in combination with pivoted lever 69, and springs 70, substantially as and for the purpose specified. 53rd. In a shaft-bending machine, a heel-bending chain, the joint between the outer two links of which is stiffened by a spring, substantially as and for the purpose specified. 54th. In a shaft-bending machine, the shipper bar  $S$ , having a lug formed thereon, in combination with a shaft fast to the frame of the machine, carrying springs bearing on the said lug, and designed to keep the bar  $S$  in a normal position, substantially as and for the purpose specified. 55th. In a shaft-bending machine, the heel-bending chain  $H$ , its outer link provided with a stem  $h^1$ , in combination with lug  $V^2$  and segmental rack  $V^1$ , the said stem  $h^1$ , being provided with a spring 39, so arranged as to tend to keep the stem  $h^1$  and lug  $U^2$  in a normal position as regards one another, substantially as and for the purpose specified. 56th. In a shaft-bending machine, the combination, with a heel-bending device, of a trough 82, fitted to the bed of the machine, and an adjustable block 64, substantially as and for the purpose specified.

### No. 36,528. Cravat. (*Cravate*.)

James Alexander Sword, Toronto, Ontario, Canada, 4th May, 1891, 5 years.

*Claim*.—As an improved article of manufacture, a flat cravat made in two pieces and provided with means for detachably connecting them together.

### No. 36,529. Knee for Sleighs.

(*Courbe de traîneau*.)

Seth C. Doane, Englewood, Illinois, U.S.A., 4th May, 1891, 5 years.

*Claim*.—1st. The combination, with the runner  $A$ , and beam  $D$ , of the socket  $B$ , having flanges  $a$ , and provided with the spherical cavity  $b$ , the knee  $C$  having flanges  $c, d$ , and the bolts  $f$ , substantially as specified. 2nd. The combination, with the runner  $A$ , and beam  $D$  of the socket  $B$ , having flanges  $a$ , and provided with the spherical cavity  $b$ , the knee  $C$  having a spherical end, the bolts  $f$ , the bolts  $e$ , and the rave  $E$ , substantially as specified.

### No. 36,530. Heater for Sad Irons.

(*Poêle de chauffage des fers à repasser*.)

James Gage Bailey, New Glasgow, Nova Scotia, Canada, 4th May, 1891, 5 years.

*Claim.*—1st. In a sad iron heater, the combination of the circular plate A, having lifter holes  $a$  and bearing ribs  $a'$ , the box B integrally formed with said plate and depending therefrom, and having the upward projecting rim  $b$ , and the lug  $b'$ , and the cover C pivoted to the lug  $b'$ , and provided with knob  $c'$ , substantially as set forth. 2nd. In a sad iron heater, the combination of the circular plate A, having holes  $a$  and bearing ribs  $a'$ , the box B, integrally formed with said plate and depending therefrom, and having the upward projecting rim  $b$  and lugs  $b'$  and  $b''$ , and the cover C, in two halves each pivoted to the lug  $b'$ , and having openings  $c$ , and downwardly projecting lugs  $c'$ , at the inner meeting edges checks  $c''$ , to fit against the lug  $b''$ , and knobs  $c''$ , substantially as set forth.

### No. 36,531. Governor for Gas Pressure.

(*Regulateur de la pression du gaz.*)

William Bowman and Charles F. Hanson, both of London, Ontario, Canada, 4th May, 1891; 5 years.

*Claim.*—The automatic governor composed of valve B, working on pivot M, in the chamber L, and operated by the diaphragm C.

### No. 36,532. Clock. (*Horloge.*)

Samuel Davison, assignee of Stephen Willcock, both of Toronto, Ontario, Canada, 4th May, 1891, 5 years.

*Claim.*—1st. In combination, with two or more bells and hammers therefor, a rotary wheel having a series of teeth cut on the periphery thereof and bent to engage with different hammers, substantially as described. 2nd. The combination of a driving mechanism, two or more bells and corresponding hammers therefor, with a wheel having a series of fingers projecting from the same, and constructed and arranged to be removed without breaking the connection of the driving mechanism, substantially as described. 3rd. In combination, with a driving mechanism, a wheel having a series of fingers projecting from it and driven by and independently geared to said driving mechanism, whereby said wheel may be detached from said mechanism without affecting the latter, in combination with two or more pivoted bell-hammers arranged in the path of the fingers formed on said wheel, substantially as and for the purpose specified. 4th. In combination, with a driving mechanism, a wheel having a series of fingers projecting from it and driven by and independently geared to said driving mechanism, whereby said wheel may be detached from said mechanism without affecting the latter, two or more pivoted bell hammers arranged in the path of the finger formed on the said wheel, in combination with mechanism arranged to start and stop the driving mechanism, substantially as and for the purpose specified. 5th. A wheel having a series of fingers B, projecting from its rim or periphery and independently geared to an ordinary striking mechanism of a clock, a rim or wheel F, fixed to the wheel A, and having notches  $a$ , made in its periphery, in combination with the arms G, I, and L, fixed to the rock shaft H, and arranged to operate in connection with the notches  $a$ , cam J, and pin M, substantially as and for the purpose specified. 6th. The arm G, fixed to the rock-shaft H, and extending to the notched wheel F, the arm I, fixed to the rock-shaft H, and extending to the cam J, the arm L, fixed to the shaft H, and extending to the path of the pin M, in the spur wheel K, in combination with an arm N, fixed to the rock-shaft O, and extending to a point below the arm L, the finger P, fixed to the rock-shaft O, and extending to a point in the path of the pin Q, the arm S, fixed to the rock-shaft O, extending to a point in the path of the pin M, substantially as and for the purpose specified.

### No. 36,533. Car Coupler. (*Attelage de chars.*)

Thurmond Car Coupling Company, New York, State of New York, U.S.A., assignee of William D. Thurmond, Forsyth, Georgia, U.S.A., 4th May, 1891, 5 years.

*Claim.*—1st. In a hook coupler, the combination of a coupling hook and draw-head, provided with a plurality of pivot bearings for said hook, and in combination therewith, of a locking-bar having a motion at right angles to the hook-shanks, substantially as and for the purpose specified. 2nd. In a hook coupler, the combination of a coupling hook and a draw head provided with a plurality of pivot bearings for said hook, one of said pivot bearings D being arranged in the plane of the inner or engaging face of the hook, substantially as and for the purposes specified. 3rd. In a hook coupler, the combination of a coupling hook and a draw head provided with a pivot bearing D, and one or more pivot bearings formed on arcs of circles drawn from the centre of said bearing D, substantially as and for the purposes specified. 4th. In a hook coupler, the combination of a coupling hook and a draw head provided with a plurality of pivotal bearings for said hook, whereby the function of the hook is not impaired should one of the bearings give way, substantially as and for the purposes specified. 5th. In a hook coupler, the combination of a coupling hook and draw head provided with a plurality of pivotal bearings for said hook, and a stop to limit the rotation of the hook on said bearings, substantially as and for the purposes specified. 6th. In a hook coupler, the combination of a coupling hook and a chambered draw head for the reception of the hook shank, said parts being provided with a plurality of bearings connecting them pivotally together, and a stop to limit the rotation of the hook on said bearings, and prevent its swinging completely out of the chamber, whereby said hook cannot be withdrawn from the draw head should one of the bearings give way, substantially as and for the purposes specified. 7th. In a hook coupler, the combination of a coupling hook provided with a pivot bearing and a shoulder  $b^1$ , and tongue  $b^2$ , on the shank thereof, and forming segmental bearings, said segments being arcs of circles, the centre of which is that of the pivot bearing and a draw head provided with a chamber for the reception of the shank of the hook, also with pivot bearings  $a^1$ , a groove  $a^2$ , and a shoulder  $a^3$ , in the opposite faces thereof and co-operating with the bearing shoulder and tongue of the hook, substantially as and for the purposes specified. 8th. In a hook coupler, the combination, with a coupling hook provided with a pivot bearing

and a shoulder  $b^1$ , and tongue  $b^2$ , on the shank thereof, forming segmental bearings, said segments being arcs of circles, the centre of which is that of the pivot bearing, a draw head provided with a chamber for the reception of the shank of the hook, also with pivot bearings, a groove  $a^2$ , and shoulder  $a^3$ , in the opposite faces thereof, and co-operating with the bearing shoulder and tongue of the hook, of a stop to limit the rotation of the hook, and a locking bolt or bar provided with an attenuated shank and movable in a plane at right angles to the plane of motion of the hook, substantially as and for the purposes specified. 9th. In a hook coupler, the combination, with the draw head and the coupling hook pivoted thereto, of a locking bar C, provided with a segmental shank  $c$ , constructed to form the shoulder  $c^1$ , provided with the bevelled or inclined portion  $c^2$ , the shoulder  $c^3$ , the vertical groove  $c^4$ , and inclined recess  $c^5$ , and the lifting rod E, provided with the bevelled arm  $e$ , substantially as and for the purposes specified. 10th. In a hook coupler, the combination, with the draw bar and draw head provided with an opening in the wall intervening between the two, of the locking bar C, provided with an opening or perforation in the shank  $c$ , thereof, substantially as and for the purposes specified. 11th. In a hook coupler, the combination of the draw head provided with circular flanges on its front end, with a knuckle or coupling-head provided with corresponding grooves to receive the flanges, and which flanges and grooves are made to receive the buffing and drawing strain, substantially as described.

### No. 36,534. Car Coupler. (*Attelage de chars.*)

Thurmond Car Coupling Company, New York, State of New York, U.S.A., assignee of Thomas L. McKeen, Easton, Pennsylvania, U.S.A., 4th May, 1891; 5 years.

*Claim.*—1st. In a car coupling, the combination, with a pivoted nose provided with a tail piece having a recess in and projection on its rear edge of a locking pin arranged in the path of the tail piece, and having a recess in its face for the passage of the tail piece, and a recess in its locking side corresponding in location with that on its face, substantially as and for the purposes specified. 2nd. In a car coupling, the combination, with a pivoted nose provided with a tail piece having a recess and a projection on its rear edge, and a swell on the face of the projection of the tail piece, of a locking pin arranged in the path of the tail piece and having a recess in its face for the passage of the projection on the tail piece, and a suspension shoulder on its locking side just below the head of the locking pin, substantially as and for the purposes specified. 3rd. In a car coupling, the combination, with a pivoted nose having a tail piece provided with a recess or projection, and a swell on the face of the projection, of a locking pin arranged in the path of the tail piece and having a recess in its face, a recess in its locking side corresponding in location with the first named recess, and a suspension shoulder just below the head of the pin on the locking side thereof, substantially as and for the purposes specified. 4th. In a car coupling, the combination, with a pivoted nose having a tail piece provided with a swell or boss for tripping the locking pin, of a locking pin arranged in the path of the tail piece provided with a recess in its face for the passage of the tail piece, and a suspension shoulder on its locking side, substantially as and for the purposes specified. 5th. In a car coupling, the combination, with a pivoted nose having a tail piece, and a swell or boss on the face of the tail piece for tripping the locking pin, of a locking pin arranged in the path of the tail piece and having a recess in its face, and a suspension shoulder just below the head of the pin on the locking side thereof, substantially as and for the purposes specified. 6th. In a car coupling, the combination of a pivoted nose having a tail piece, a locking pin recessed for the passage of the tail piece and a lifting lever arranged at one side of the central line of the coupling and connected with the locking pin, substantially as and for the purposes specified. 7th. In a car coupling, the combination of a pivoted nose having a tail piece provided on its face with a swell or boss for tripping the locking pin, of a locking pin recessed for the passage of the tail piece, said pin having a suspension shoulder and a lifting lever arranged at one side of the central line of the coupling and connected with the locking pin, substantially as and for the purposes specified.

### No. 36,535. Car Coupler. (*Attelage de chars.*)

Thurmond Car Coupling Company, New York, State of New York, U.S.A., assignee of Thomas L. McKeen, Easton, Pennsylvania, U.S.A., 4th May, 1891; 5 years.

*Claim.*—1st. In a car coupling, the combination, with a recessed draw head, of a pivoted nose having a tail piece which enters the recess of the head, and a locking pin having a projection or offset on its lower end, which offset projects beneath and beyond the tail piece, substantially as and for the purposes specified. 2nd. In a car coupler, the combination, with a recessed draw-head, of a pivoted nose having a tail piece which enters the recess of the head, and a locking pin having a diagonal or lateral corner projection which extends beneath the tail piece of the pivoted nose when the tail piece is within the recess of the head, substantially as and for the purposes specified. 3rd. The combination, with the tail piece of a pivoted nose coupler, of a locking pin having a recess on its face for the passage of the tail piece, and a lateral projection which extends beneath the tail piece, substantially as and for the purposes specified. 4th. In a car coupler, the combination, with a recessed draw head, of a pivoted nose, having a tail piece which enters the recess of the head, and a locking pin having the offset or projection 15 at its lower end, substantially as and for the purposes specified.

### No. 36,536. Artificial Denture.

(*Dent artificielle.*)

The Hydro Carbon Furnace Company, Toronto, Ontario, assignee of Charles H. Land, Detroit, Michigan, U.S.A., 4th May, 1891, 5 years.

*Claim.*—1st. As an article of manufacture, an artificial tooth sec-



tion having a metallic surface applied in solution on the proximal surface of the said section, and fused thereto, said metallic surface constituting a means for attaching said section, substantially as and in the manner described. 2nd. As an article of manufacture, an artificial tooth section provided with a porous or "biscuit" surface, substantially as set forth. 3rd. As an article of manufacture, an artificial tooth section having a porous or "biscuit" surface provided with metal united with said surface, substantially as set forth. 4th. As an article of manufacture, an artificial tooth section provided with a surface of metal and having amalgam united with said metal surface, substantially as set forth. 5th. The process, herein described, of applying an artificial tooth section to a base consisting of coating the proximal surface of said section with metal and uniting the section to the base by means of amalgam, substantially as set forth. 6th. The process, herein described, of restoring defective teeth consisting of first, securing an impression of the surface of the tooth portion to be restored by means of a thin sheet of metal fitted upon said surface to form a matrix or mold, second causing the tooth section to conform to said mold and hardening said section, third, uniting said section to the tooth by means of amalgam, substantially as set forth.

### No. 36,537. Electrical Fire Alarm System.

(*Système d'avertisseur d'incendie électrique.*)

The Bell Telephone Company of Canada, assignees of Charles Warren Brown, all of Montreal, Quebec, Canada, 4th May, 1891, 5 years.

*Claim.*—1st. An electrical fire alarm system comprising a series of magneto-calls from which the alarm is originally given, a central station containing indicators, connected with said magneto calls and adapted to be operated by currents sent from same, and repeating mechanism located in said central station under the control of the operator thereof and connected on an electric circuit with the tower striker and mechanical gongs of the system. 2nd. An electrical fire alarm system comprising a series of magneto-calls from which the alarm is originally given, a central station containing indicators connected with said magneto calls and adapted to be operated by currents sent from same, and repeating mechanism located in said central station, under the control of the operator thereof and consisting of a series of break-wheels, the peripheries of which contain breaks corresponding in number to the alarms required, insulated spring contacts bearing upon said break-wheels, clock-work or other mechanical means for rotating said break-wheels with means for controlling its action, and a switch key and contacts, the former connected with one terminal of an electric circuit containing the tower striker and mechanical gongs of the system and the latter connected with all but one of the said insulated spring contacts, the opposite terminal of the said circuit being connected to the remaining spring contact, as shown and described.

### No. 36,538. Food Composition.

(*Composition alimentaire.*)

Julius Maggi, Kempthall, Switzerland, 4th May, 1891; 5 years.

*Claim.*—1st. Extracts of meat, extracts of vegetables or any other alimentary substances (including those for preparing beverages) in sufficiently condensed or solid form which in suitable mixture, and eventually in single layers, are put into tubes (for instance of gelatine) being dissolvable in water with the contents thereof. 2nd. The production of concentrated alimentary substances, according to claim 1. 3rd. The employment of tubes provided with fillings according to claim 1, for the production of alimentary substances which are to be consumed in liquid or pulpy form.

### No. 36,539. Beater for Eggs. (*Vergette de cuisine.*)

George Smyth, Hamilton, Ontario, Canada, 4th May, 1891; 5 years.

*Claim.*—1st. In an egg beating utensil, the combination of the spindle B, with the blades C, thereon set in the vessel A, at an angle between the point D, in the circular bottom F, and the top rim of said vessel, in connection with the annular corrugated tapering belt E, and the circular bottom F, said blade C, being equal in radius to the periphery of the corrugated belt E, as described. 2nd. In an egg beating utensil A, the combination of the spindle B, having a pinion K to gear with the cog-wheel I, working in bearings in the upright H, and operated by the crank V with the handle M, to revolve said spindle B, and blades C, as described. 3rd. In an egg beating utensil A, the combination of the spindle B, with the cap O, of the upright H, and a studd formed thereon, and through which studd and cap the said spindle is journaled, in connection with the slots R, in said cap and studd and the ring W, with the slot P, to hold said spindle in its bearings and release the same as described. 4th. In an egg beating utensil A, the combination of the support H, and socket G in connection with the gear wheel I, making said parts detachable from the vessel A, as described all operating, substantially as and for the purposes set forth.

### No. 36,540. Roundabout. (*Tourniquet.*)

George Kay, Fred Wilkinson and Robert Fisher, all of Jamestown, New York, U.S.A., 5th May, 1891; 5 years.

*Claim.*—1st. In a merry-go-round, the combination, with a rotating frame work, brackets mounted thereon, yokes pivoted in said brackets, boats pivoted in said yokes at right angles to the pivots of the latter in the brackets, and means, substantially as described, for imparting a longitudinal rocking motion to said yokes, of a stationary toothed ring, a shaft journaled radially in said frame work and having a gear engaging said ring, a short shaft connected by gearing with said radial shaft and having a crank, and a pitman connecting said crank with the boats, as and for the purpose set forth. 2nd. In a merry-go-round, the combination, with the support F and upright

U, rising from the same, a toothed ring T, surrounding said upright, a frame M, journaled on the upright, a bracket V, carried by said frame, and a yoke Y, pivoted in said bracket, of a seat mounted in pivots in the yoke at its front and rear ends, a shaft S, journaled in hangers h beneath the frame, a gear wheel O on its inner end engaging said toothed ring, a crank C on its outer end, a pitman c, connecting said crank with the end of said yoke, the shaft S', journaled in a bracket h', beneath the frame and driven from said shaft S, by intermeshing gears l, a crank C', on said shafts S', and a pitman c', connecting said crank with the seat, all as and for the purpose set forth.

### No. 36,541. Ornament for Walls.

(*Ornement pour les murs.*)

Malachi E. Conegan, Rochester, State of New York, U. S. A., 5th May, 1891; 5 years.

*Claim.*—1st. An ornament for the wall, consisting of a back plate and shelf and a hanger therefor, in combination, with fans held by the device, two above and two below the shelf, and holders for the fans secured to the hanger and the back plate respectively, substantially as shown and described. 2nd. An ornamental device for the wall, consisting of a shelf, a back plate, and a hanger, and a brace for the shelf, the shelf and the brace being joined to the back plate by hinges so as to fold back against the adjacent parts, and fans secured to the parts, substantially as shown and described.

### No. 36,542. Machine for Forming Type Bars. (*Machine à faire les barres de caractères.*)

Ottmar Mergenthaler, Baltimore, Maryland, U.S.A., 5th May, 1891; 5 years.

*Claim.*—1st. The type matrix having the two ends of equal width, and opposing shoulders Y, Y', in one edge. 2nd. The type matrix having two ends of equal width, and two opposing shoulders in each of its edges, substantially as described and shown. 3rd. A type matrix provided near its opposite end with opposing shoulders, whereby it is adapted to receive a tensile strain by devices acting against said shoulders. 4th. A type matrix having its two ends of equal width, with shoulders in one edge to engage escapement devices. 5th. The combination of a series of matrices provided with sustaining shoulders, and a series of space bars having shouldered ends, of a width greater than the matrices, whereby the space bars are adapted to extend edgewise beyond the matrices when assembled in line therewith. 6th. The matrices having the shouldered ends, and the relatively narrow bodies with parallel edges, in combination with the space bars having their body portions of the same width as the matrix bodies, but their ends of greater width than the extreme width of the matrices. 7th. In combination, with the matrices and a grooved or channeled guide to sustain them, the space bars having their ends widened beyond the matrices and seated on distinct supporting surfaces on the guide. 8th. In a composing mechanism, a magazine having its channels or conductors curved longitudinally, whereby the two ends are brought nearer together. 9th. In a composing mechanism, a magazine having its channels or conductors with their upper ends, substantially over the lower ends, and with their intermediate portions bent in vertical planes, whereby the magazine is adapted to receive a large number of matrices without giving the machine an objectionable height. 10th. The magazine having its channels inclined upward from the receiving end, and then returned with a downward inclination, substantially as shown and described. 11th. In a magazine, the combination of the base plate and the series of ribs or bars seated thereon and provided with ears extended therethrough, and secured at the back. 12th. In a magazine, the combination of the base plate and the tapered ribs or bars secured thereto, whereby a series of converging non-communicating channels are produced. 13th. In a magazine having a series of channels or passages, the grooved bars forming the walls of the channels. 14th. The magazine consisting of the upper ribbed plate the underlying ribbed plate, and the curved channeled connection between them, substantially as described and shown. 15th. In combination, with the channeled magazine the channeled mouth piece hinged to admit of access to its interior. 16th. In combination, with the channeled magazine, the channeled mouth piece, and the wiper, substantially as described, to advance the matrices from the mouth piece to the magazine. 17th. The magazine, the channeled mouth piece with shoulders at the delivery end to retain the matrices, and the rotary wiper to advance the matrices past the shoulder, said members constructed and combined, substantially as described. 18th. In combination, with the magazine and mouth piece with the matrix-sustaining shoulders, the wiper or feeder, and the beveled bar to compel the engagement of the matrices behind the shoulders. 19th. In a composing mechanism, a magazine extending upward from its receiving end in combination with a shoulder or detent to prevent a retrograde movement of the inserted matrices. 20th. In a composing mechanism, a magazine extending upward from its receiving end and then downward to the delivery end, in combination with a feeder or wiper, substantially as shown, acting to lift the matrices into the receiving end, and an escapement at the opposite end to control their delivery. 21st. A distributing mechanism from which the matrices are dropped, in combination with a channeled mouth piece to receive them, a magazine rising from the mouth piece into the magazine. 22nd. In combination, with the magazine channel and the alternately rising pins or stops, the series of matrices each having a stop shoulder on its edge, whereby the matrix is twice engaged and its delivery effected by the two actions, as described. 23rd. In combination, with the magazine and matrices, the two alternately acting pins and their actuating lever, the spring tending to depress the upper pin, the finger key and a connection, substantially as shown, between the key and the lever, whereby the matrix is discharged when the finger key is released. 24th. In combination, with the magazine and the escapement, a weight connected to the escapement to actuate the same, and a finger key acting upon the weight

to lift the same, whereby the momentum of the weight is rendered available to actuate the escapement and prolong its action in the event of the finger key being suddenly released. 25th. The finger key, the independently movable weight, and the pin or like device through which the key lifts the weight, in combination with the escapement and the escapement operating rod actuated by the weight. 26th. The finger key, the weight actuated thereby, the arm pivoted to the weight, the rod, the adjustable connection between the arm and rod, and the escapement connected to the rod, all combined, substantially as described and shown. 27th. In combination, with a channeled magazine and escapements to deliver the matrices one at a time therefrom, the traveling belt beneath the magazines to receive the matrices, the assembling block H, to receive the matrices from the belt, and the polygonal wheel acting to sustain the belt and to advance the matrices within the block. 28th. The magazine and escapement mechanism to deliver the matrices, in combination with the inclined traveling belt and the assembling block to receive the matrices from the belt. 29th. The magazine and escapement mechanism to deliver the matrices therefrom, in combination with the channels F, and the inclined traveling belt. 30th. In combination, with the assembling block grooved to admit the assembled matrices, the yielding resistant i, and the angular wheel acting to advance the matrices against the resistant. 31st. The vertically movable assembling block into which the matrices are delivered from one end, in combination with the horizontal slide having the rigid resisting finger thereon, whereby the assembled matrices are permitted to rise with the block without interference on the part of the resistant. 32nd. The vertically movable assembling block, the horizontal slide with its matrix-resisting finger, the weight and intermediate connections to retract the slide and the dog to prevent retrograde motion, said elements combined, substantially as shown. 33rd. In combination, with the vertically movable block or support for the aligned matrices, the horizontally movable shifter having two arms between which the matrices are presented by the block. 34th. The vertically movable block channeled to admit of the matrices passing therethrough from one side to the other, in combination with mechanism located at a low level to deliver the matrices to the block, and the horizontally movable shifter located at a higher level to remove the assembled matrices from the block. 35th. The shifter, consisting of the two arms J, J', fixed to horizontal slides, and the spring, substantially as shown, tending to approximate the arms. 36th. The vertically movable assembling block, in combination with the horizontally movable resistant, the horizontally movable shifter having the spring actuated arms, one of which engages the resistant, and the dog to hold the other arm, whereby the shifter is gradually opened, the aligned matrices delivered thereto and the shifter closed upon the line preparatory to the shifting action. 37th. The assembling block grooved or channeled to receive the matrices and mounted to move vertically, in combination with the yielding resistant and retracting devices therefor, the dog to hold the resistant as it is advanced, and the lever adapted to raise and lower the composing block and to disengage the dog, whereby the elevation of a completed line of matrices and the restoration of the detent to the position for starting a new line are secured by one operation. 38th. In combination, the vertically movable block in which the matrix line is assembled, the horizontally movable shifting device, the vertically movable yoke to which the shifting device delivers the matrices, and the casting mechanism to which the matrices are lowered by the yoke. 39th. In combination, with the vertically movable assembling block, the horizontally movable resistant i, to oppose the incoming matrices, the shifter having the horizontally and independently movable arm J, J', one of which engages the resistant, the spring tending to draw the shifter arms together, and the latch to hold the arm J, as its companion recedes during the assemblage of the matrices. 40th. The horizontally movable shifter, consisting of the two arms and their independent sustaining slides secured against vertical motion, and the spring, substantially as shown, to approximate the arms. 41st. In combination, with the horizontally sliding shifter I, the rock shaft having its arms connected to the shifter, the second arm and its actuating cam to advance the shifter, and the weight or its equivalent to retract the shifter. 42nd. The matrices having opposing shoulders at opposite ends, in combination with the supporting yoke acting against the upper shoulders, the mold adapted to engage the lower shoulders, and mechanism, substantially as described, for moving the yoke to apply tensile strain to the matrices. 43rd. The combination of a series of matrices, a series of tapered space bars, a support against which the matrices are seated and aligned, a pressure device to hold the matrices against said support, and a pressure device acting to move the space bars in the same direction that the matrices are urged, whereby the action of the space bars in justifying the line is prevented from disturbing the alignment of the matrices. 44th. The matrices and the tapered space bars, in combination with suitable supports to maintain the space bars and matrices in line, and pressure devices acting in the same direction against the space bars and matrices respectively. 45th. In combination, with the matrices having shoulders thereon, the grooved mold to engage said shoulders, the movable support for the mold, the vertically movable yoke to sustain the matrices, the vise or clamp opposing the mold, and the cam and suitable intermediate connections for raising and lowering the yoke. 46th. In combination, with the mold, the vertically movable yoke to sustain the matrices, the vise opposing the mold and provided with yielding face M', to sustain the yoke against the mold. 47th. In combination, with the vise or clamp and the matrix-sustaining yoke, the mold provided with the adjustable bearing N', to act against the yoke. 48th. In combination, with the slide and the mold wheel pivoted on an arm on the slide the mold wheel gear, its actuating pinion and the stop motion gear, as described and shown, connected to said pinion. 49th. In combination, with the vertically movable yoke L, its actuating lever provided with projection P', and roller P'', and the actuating wheel having projection P'', and the peripheral cam surface, as described. 50th. In combination, with a horizontal guide to deliver the line of matrices, a mold at a lower level, a distributing mechanism at a higher level, a series of matrices shouldered to engage the mold and resist upward motion, a vertically movable yoke to sustain the matrices, and a yoke operating lever and cam wheel, the wheel shaped to present the yoke successively

to the guide, the mold and the distributor and to exert an upward pressure on the yoke while the matrices are engaged with the mold wheel. 51st. In a linotype machine and in combination with the independently sustained mold and clamping mechanism, the melting pot mounted on long supports, whereby the excessive transmission of heat from the pot to the other parts is avoided. 52nd. In combination, with the main frame, the melting pot sustained thereon by long legs, the mold sustaining slide extended past the pot out of contact therewith, and the actuating cams for said parts located in rear of the pot. 53rd. In a type casting machine, a main frame and a mold sustained thereon, in combination with a melting pot connected to the frame solely by long legs or arms, the latter having their points of attachment widely separated from the mold. 54th. In combination, with a mold and a melting pot provided with a delivery mouth co-operating with the mold, an exhaust pipe communicating with said mouth, and a valve to close said communication. 55th. A mold and a melting pot having a delivery mouth to close the mold, in combination with an exhaust pipe communicating with said mouth, and a valve to close said communication. 56th. In a type casting machine, the combination of a mold, a melting pot and pump for filling said mold with metal, an exhaust passage for removing the air from the mold. 57th. In a type casting mechanism, the combination of the mold, the melting pot, the pump piston to drive the metal from the pot into the mold, the exhaust passage, the valve to close said passage, and the actuating lever and its connections for closing the valve when the pump is operated. 58th. In combination, with the melting pot having the isolated delivery passage, the piston in said passage to expel the metal, and the second piston acting to deliver the molten metal to the delivery passage. 59th. In combination, with the melting pot, the gas pipe leading thereunder, the mercury chamber through which the pipe communicates, and the second mercury chamber connected to the first. 60th. In a type casting mechanism, the melting pot, the mercury chamber through which the gas passes to heat the pot, the second mercury chamber connected to the first, and the adjustable screw or spindle to vary the level of the mercury. 61st. In combination, with the melting pot and its piston to eject the molten metal, the piston operating lever, its depressing spring and the lifting cam having an abrupt shoulder, whereby the spring is caused to give the piston a sudden action. 62nd. The melting pot mounted on pivoted legs, the pivoted arms S', and the intervening spring, in combination with the cam acting on arm S'. 63rd. The matrix clamp or vise N, hinged to the main frame, in combination with means, substantially as shown, for locking it rigidly in operative position. 64th. In combination, with the main frame and the hinged vise, the screws threaded into the vise and having T-heads seated in slots in the frame. 65th. In combination, with the main frame and supports for the matrices and space bars, a slide to actuate the space bars, and a frame M, to sustain said slide hinged to the main frame to swing out of operative position and locking devices to hold the same in place. 66th. In combination, with a mold and series of matrices, the vise frame with the jaw M', the sliding jaw, its closing spring and the dog, to hold it against the action of the spring. 67th. In a matrix clamping mechanism, the vise frame, its two jaws one of which is movable to and from the other, the spring to close the jaw, the dog to hold it open, the screw, and the nut on said screw to act against the movable jaw. 68th. The mold, the matrices, and the vertically movable yoke to sustain the matrices, in combination with the clamp having two jaws, the spring to close said jaws, the dog to hold them open, and the dog-releasing device actuated by the yoke, whereby the presentation of the matrices in front of the mold causes the action of the clamp to confine them. 69th. In combination, with the distributor rail toothed to engage the matrices, a screw lying parallel therewith to advance the matrices thereover. 70th. In combination, with the toothed distributor rail two screws extended along its opposite sides, substantially as shown, whereby the matrices are advanced along the rail and permitted to descend therefrom between the screws. 71st. In combination, with the matrices and the space bars having heads of greater width, the sustaining guide or channel O', having the horizontal ledges or shoulders to sustain the matrices and the oblique grooves O'', to release the space bars. 72nd. In combination, with the matrices and the space bars of greater width at the head, the guide or channel having horizontal shoulders to sustain the matrices, and grooves O'', to discharge the space bars and the overlying rail with teeth O'', to prevent the escape of the matrices. 73rd. In combination, with horizontal supports for the matrix line, the toothed distributor rail thereover, the feed screws lying beside the rail, and the lifter to present the successive matrices to the rail and screws. 74th. The horizontal matrix-sustaining lips O', O'', as shown, in combination with matrices adapted to engage said lips at their opposite ends, the horizontal slide to urge the line of matrices forward, and the lifter in position to act between the lips on the foremost matrix. 75th. The distributor rail, the feed screws and the lifter arm, in combination with the eccentric mounted on one of the screws as shown. 76th. In combination, with the distributor rail the two feed screws and the hinged supports for the forward screw.

### No. 36,543. Case for Samples.

(Caisse à échantillons.)

Marshal Lundy, Newmarket, Ontario, Canada, 5th May, 1891; 5 years.

*Claim.*—An improved sample case, consisting of the frames A, divided into compartments B, protected by a glass front, and by a removable back C, the said frames being arranged around a shaft G, and locked at their bottom to the base plate H, and at their top by a flanged cap I, the cap and base plate being journaled on the shaft G, substantially as and for the purpose hereinbefore described.

### No. 36,544. Valve. (Soupape.)

John Robert Meadowcroft, Montreal, Quebec, Canada, 5th May, 1891; 5 years.

*Claim.*—1st. In a valve, the combination, with the inlet and outlet sections forming a common passageway, of a central valve chamber,



guideways formed in same, a valve proper arranged to slide in such guideways and having a toothed rack on one of its sides, and a turn spindle with pinion thereon intermeshing with said rack and adapted to operate said valve proper as set forth. 2nd. In a valve, the combination, with the inlet and outlet sections forming a common passageway, of a central valve chamber with a bevelled side, guideways formed in such chamber, a valve proper arranged to slide in such guideways and having a toothed rack on one of its sides and bevelled on its other side correspondingly to the bevelled side of the valve chamber, and a turn spindle located out of the line of said passageway with pinion thereon intermeshing with said rack and adapted to operate said valve proper as set forth. 3rd. In a valve, the combination, with the inlet and outlet sections forming a common passageway and with a valve chamber and a valve having a toothed rack on one of its sides, of a turn spindle located out of the line of said passageway with pinion thereon and intermeshing with said rack, and transverse bosses on both sides of the valve with caps attached to same and forming bearings for said turn spindle as set forth.

### No. 36,545. Tightener for Tires.

(Lien de jante.)

Henry Widdows, Newman, Illinois, U.S.A., 5th May, 1891; 5 years.

*Claim.*—1st. In a tire-tightener, the combination, with the tightening-screw disposed between the opposing ends, of two felly sections and comprising right and left hand threaded extensions, and the central cylindrical portion of a filling-block provided with a concave inner face corresponding to the periphery of said circular portion and adapted to be disposed between the latter and the tire, substantially as and for the purpose set forth. 2nd. In a vehicle-wheel, the combination, with a tire-tightener comprising opposing caps mounted upon the opposing ends, of two felly sections and provided respectively with right and left hand screw threaded perforations, said caps being extended over the side edges of the tire, and a tightening-screw provided with right and left hand screw threaded extensions engaging the correspondingly-threaded perforations in the caps, and with a central cylindrical portion, of a filling-block provided with a concave inner face and a diametrically convex outer face, said block conforming to the contour of said circular portion and to the tire, and adapted to be disposed between the same, substantially as and for the purpose set forth. 3rd. In a tire-tightener, the combination, with the opposing caps provided respectively with right and left hand threaded perforations, of a right and left hand threaded tightening-screw engaging the corresponding perforations and provided with an enlarged portion, and a filling-block adapted to be disposed between said enlarged portion of the screw and the tire, substantially as set forth.

### No. 36,546. Method of Making Secondary Batteries. (Méthode de fabriquer les batteries secondaires.)

George Edward Heyl, Charlottenburg, Prussia, German Empire, 5th May, 1891; 5 years.

*Claim.*—The herein described method of making the electrodes of secondary batteries, which consists in suspending vertically a number of wires or threads of lead, then simultaneously directing against said suspended wires or threads a plurality of streams or currents of air in different directions, whereby the wires or threads are intertwined and entangled, and then subsequently compressing the intertwined and entangled wires or threads, substantially as set forth.

### No. 36,547. Cement. (Ciment.)

Adam Alexandre Wilson, Montreal, Quebec, Canada, 5th May, 1891; 5 years.

*Résumé.*—Un ciment élastique pour la construction en general composé de sable, orai, blanc de ceruse et d'huile animale perfectionnée dans les proportions données.

### No. 36,548. Loading Barrow and Turntable for Brick Machines. (Charge-barril et table tournante pour machine à briques.)

Edward New, Hamilton, Ontario, Canada, 5th May, 1891; 5 years.

*Claim.*—1st. In a loading barrow for brick machines, the combination of the barrow E, provided with the wheels c, and longitudinal pieces H, and M, and the dumping-boards I, with pallet boards J, and K, substantially as and for the purpose hereinbefore set forth. 2nd. In a loading barrow and turntable for brick machines, the barrow E, with dumping-boards I, in combination with the turntable A, provided with a raised track a, having rounded entrance a', the sides D, and end stops d, substantially as and for the purpose hereinbefore set forth.

### No. 36,549. Wrench. (Clé à écrou.)

Truman D. Keith, South Pasadena, California, U.S.A., 5th May, 1891; 5 years.

*Claim.*—1st. In a wrench of the class described, the combination, with the stock or shank bent at its upper end to form a fixed head or jaw, of a sleeve mounted loosely upon the shank, a pair of jaws pivoted to the upper end of the sleeve, embracing the shank and having an eccentrically curved toothed working face, a rib formed upon the inner side of the sleeve and adapted to engage recesses formed in the shank, and a spring for normally forcing the rib into the recesses and for pressing the jaws to the front, substantially as described. 2nd. In a wrench, the combination, with the stock or

shank provided upon its rear face with notches and having its upper end bent to form a rigid or fixed jaw or head, of a sleeve loosely fitting the shank, provided upon its interior with a rib for engaging the notches and at its front with a transverse opening, a pair of jaws connected and embracing the stock or shank, and a flat spring passed through the opening in the sleeve and having its lower portion pressing against the front face of the stock and its upper end terminating against the inner connecting portion of the jaws, substantially as specified. 3rd. In a wrench, the combination, with the stock bent at its upper end to form a fixed head or jaw, a sliding sleeve mounted thereon, and a pair of jaws embracing the stock and pivoted at their lower ends to the sleeve, of means for adjusting the sleeve upon the stock, substantially as specified. 4th. In a wrench, the combination, with the rectangular stock having its upper end bent to form a fixed head or jaw and having lateral extensions or shoulders projecting beyond the opposite faces of the stock, of a pair of spring-pressed jaws pivoted below the head and adapted to co-act therewith, said jaws embracing the stock below the shoulders, substantially as specified. 5th. In a wrench, the combination, with the rectangular stock the rear edge of which is provided with a series of notches, said stock being bent at an obtuse angle near its upper end and having its upper end bent at a right angle to said obtusely-bent portion and provided with laterally disposed shoulders, of a sleeve loosely fitting the stock, provided upon its inner rear side with a rib for engaging the notches of the stock, at its front side with a transverse opening, and at its upper opposite sides with substantially circular lugs, a pair of jaws loosely embracing the stock, provided with semi-circular recesses at their lower ends for engaging the lugs and having their working faces eccentrically curved and toothed with relation to their bearings, a bolt connecting the rear ends of the jaws and a plate connecting their front ends, and a flat spring bearing against said front end in rear thereof and having its lower end passed through the transverse opening of the sleeve and bearing against the front face of the stock, substantially as specified.

### No. 36,550. Support for Trolleys.

(Support de trôle.)

Reliance Electric Manufacturing Co., Waterford, Ontario, Canada, assignees of Frank Brankson Rae, Detroit, Michigan, U.S.A., 5th May, 1891; 5 years.

*Claim.*—1st. The combination, with the pivoted standard having a flat side, of a socket piece pivoted therein and having an extension projecting from one side of its lower portion and adapted to bear against the flat side of the standard, substantially as described. 2nd. The combination, with the pivoted standard, of the socket piece pivotally mounted therein, an extension for said socket piece, a rod connected to the standard and extension, and a spring upon the rod, substantially as described. 3rd. The combination, with the pivoted standard, of the socket piece having an extension, a rod passed through a slot in the standard extension, a sleeve upon the rod having trunnions bearing on the extension, and an adjustable spring bearing on the sleeve, substantially as described. 4th. The combination, with the pivoted standard, of a socket piece pivotally supported therein, an extension projecting from one side of the socket piece, a rod curved through a portion of its extent, passing through a slot in the standard and having trunnions bearing on a side of the standard, a sleeve upon the rod having trunnions bearing upon the extension, a coil-spring surrounding the rod and bearing against the sleeve, and adjusting devices for regulating the tension of the spring, substantially as described. 5th. The combination, with the base piece having flanges, with a central socket having recessed lower ends, of a headed stem fitting said socket, a standard secured to said stem, the said standard carrying pivoted socket for the trolley-arm, and means for adjusting the pressure of said arm upon the conductor, substantially as described.

### No. 36,551. Tire for Vehicle Wheels.

(Bandage de roue de voiture.)

John Boyd Dunlop, Belfast, Antrim, Ireland, 8th May, 1891; 5 years.

*Claim.*—1st. In an elastic tire for the wheels of velocipedes or other vehicles, the combination of a linen cloth or other non-elastic or only slightly elastic continuous band or strip D, and an outer or protective covering C, as set forth. 2nd. The combination of a hollow or tubular elastic India-rubber or other tire C, a linen cloth or other non-elastic or only slightly elastic continuous strip or band D, and an India-rubber or similar outer or protective covering C, as set forth. 3rd. The combination, with the thread of an elastic tire or that portion of the same which comes in contact with the ground, of a non-elastic or slightly elastic band of linen cloth or like material made integral with the material of the tread portion by cement and vulcanization, as set forth.

### No. 36,552. Tire for Vehicle Wheels and Means for Securing Them to Wheel Rims. (Bandage de roue de voiture et moyen de les attachés.)

John Boyd Dunlop, Belfast, Antrim, Ireland, 8th May, 1891; 5 years.

*Claim.*—1st. A wheel-tire for cycles and other vehicles, consisting of a hollow expandable tube, in combination with a non-expandable strengthening and confining cover of canvas, or the like, and an outer or bearing surface of India-rubber, as set forth. 2nd. A wheel-tire for cycles and other vehicles, consisting of a hollow expandable tube, in combination with a non-expandable strengthening and confining cover of canvas, or the like, and an outer covering of India-rubber thickened at that portion which comes in contact with the ground, as set forth. 3rd. The combination, with the wheel-tire of a cycle or other vehicle, of an inflated expandable tube, a

strengthening and confining cover of canvas or a like material enveloping said tube, said cover being formed or provided with edges or flaps enveloping and secured to the inner face of the rim, as set forth. 4th. The combination, with the rim of a cycle wheel, and an inflated expansible tubular tire, of a tubular non-expansible confining envelope surrounding the said tire and formed or provided with flaps or free edges turned over and cemented to the inner face of the rim, as set forth. 5th. The combination, with the rim of a cycle-wheel, and an inflated expansible tubular tire, of a tubular non-expansible confining envelope surrounding said tire and provided with flaps or free edges secured to the rim, and an outer protective covering of India-rubber, the edges of which are secured to the inner face of the rim, as set forth. 6th. The combination, with the rim of a cycle-wheel, of an inflated expansible tubular tire, a strengthening strip *c*, secured to the periphery of the rim, a strip *b*, of canvas or like material around the tire and rim, said strip being united to and forming with the strip *c*, a non-expansible envelope for the tire, as set forth. 7th. The combination, with the rim *C*, of an inner expansible tube *B*, and outer protective covering *A*, and strengthening folds or layers *b*, *c*, of cloth canvas or linen, and protective strips *D*, of caoutchouc interposed between the edges of the rim and the strengthening fold or layer *c*, as set forth. 8th. The improved non-return air-valve herein described, consisting of a plug contained in a tube of elastic material, as set forth. 9th. The valve consisting of a circumferentially grooved plug or cylinder of hard rubber or the like, in combination with an elastic tube surrounding the same and entering the compartment or space in which the air is to be compressed. 10th. An improved tire, comprising an outer or protective covering *A*, having cemented or molded therewith one or more layers or folds of canvas or other fabric elastic or giving in one direction, and in elastic or unyielding in the other the folds *b*, *c*, and an inflated tube *B*, as set forth.

**No. 36,553. Boot and Shoe Slugging Machine.** (*Machine à poser les clous métalliques pour la protection des chaussures.*)

Solomon M. Cutter, of Quebec, Quebec, Canada, 8th May, 1891; 5 years.

*Claim.*—1st. In a boot and shoe slugging machine, the combination of a vertically operating driver, a work supporting horn automatically adjustable vertically and means for effecting the automatic adjustment thereof, work feeding mechanism, a supply pot for the slugs, and an inclined guideway leading from such pot to the driver with means for feeding the slugs from the pot to the guideway, retaining devices for controlling the feed of the slugs to the driver, and means for supporting and operating the whole, as set forth. 2nd. In a boot and shoe slugging machine, the combination, with a vertically operating driver and means for feeding slugs to same, of a work supporting horn held at a normal height by yielding pressure devices and capable of movement above or below such normal height, and means for effecting such movement in either direction, as and for the purposes set forth. 3rd. In a boot and shoe slugging machine, the combination, with a vertically operating driver and a work supporting horn, of an inclined expansible guideway, means for supporting same and means for feeding slugs to same, as set forth. 4th. In a boot and shoe slugging machine, the combination, with a guideway, of a pot or receptacle for slugs, a plunger adapted to work vertically up through same, and having a hinged head normally flush with the bottom of such pot and extended in part out beyond the hinging point, a guard for preventing slugs interfering with such hinging point, an inclined guide plate extending from the top of said guideway to a point within the line of movement of the extended part of said head, and means for imparting a reciprocating movement to said plunger, as and for the purpose set forth. 5th. In a boot and shoe slugging machine, a driver for the slugs secured to a vertically reciprocating cross head, the upward movement of which is secured by means of a roller projection on the face of the driving shaft and the downward movement by a spring plunger, as shown and described. 6th. In a boot and shoe slugging machine, the combination, with an inclined guideway for the slugs, of an escapement device located at the foot of same and consisting of a spring with an end normally inserted in the way of the heads of the slugs, and a finger plate with bevelled end adapted to be inserted between the bodies of the slugs, and means for imparting to said spring and finger a reciprocating movement transversely to the guideway so that the spring will move out of the way of the slugs and the finger enter between the lowermost two, as and for the purpose set forth. 7th. In a boot and shoe slugging machine, the combination, with the chute *Q*, having a channel *Q*<sup>1</sup>, for the vertical driver to work in and a channel *Q*<sup>2</sup>, for the slugs to pass down, of a channel *Q*<sup>3</sup>, converging with that *Q*<sup>1</sup>, to a point of entry into the said channel *Q*<sup>1</sup>, a spring holder *Q*<sup>4</sup>, projecting transversely across the channel *Q*<sup>1</sup>, near the lower end thereof and a reciprocating "placer," with means for operating same, working through said channel *Q*<sup>2</sup>, and adapted to push the slug into position between the end of said holder and the side of the channel *Q*<sup>1</sup>, for the purpose set forth. 8th. The combination, with the perforated and grooved head *G*, and guiding channel *Q*<sup>1</sup>, in chute *Q*, of driver *O*, cross head *O*<sup>1</sup>, cut away at *O*<sup>2</sup>, means for securing said driver to said cross-head, driving shaft *F*, and roller projection *O*<sup>3</sup>, on the end of same, spring plunger *O*<sup>4</sup>, and means for supporting same as shown and described. 9th. The combination, with the horn *E*, its stand *D*, *D*<sup>1</sup>, and the driving shaft *F*, of lever *D*<sup>2</sup>, rods *K*<sup>1</sup>, and *L*<sup>1</sup>, ledge *L*<sup>2</sup>, clamp plates *K*<sup>2</sup>, *K*<sup>3</sup>, springs *K*<sup>4</sup>, *K*<sup>5</sup>, and *k*<sup>1</sup>, bar *K*<sup>2</sup>, and cams *K* and *L*, as shown and described. 10th. The raceway composed of body *S*, and cover strips *S*<sup>1</sup>, *S*<sup>2</sup>, inclined and bevelled for the purpose set forth. 11th. The combination of the raceway body *S*, cover strips *S*<sup>1</sup>, *S*<sup>2</sup>, having transverse slots *s*, *s*, and set screws *S*<sup>3</sup> for the purpose set forth. 12th. The combination, with the raceway cover strip *S*<sup>1</sup>, and screws *S*<sup>3</sup>, of the removable cover *X*, for the purposes set forth. 13th. The agitating rod *X*<sup>1</sup>, located in the raceway and means for carrying and operating same for the purpose set forth. 14th. The combination, with the raceway support *S*<sup>2</sup>, of the set screw *X*<sup>4</sup>, projecting into the line of movement of the rise *k*, on the cam *K*, for the purpose set forth. 15th. The combination, with the chute *Q*, of the spring re-

tainer *X*<sup>4</sup>, having a projecting ear *X*<sup>5</sup>, and being located at the mouth of the channel *Q*<sup>3</sup>, the adjusting screw *X*<sup>5</sup>, threaded in such spring, the opener *X*<sup>7</sup>, and means for carrying and operating same for the purpose set forth. 16th. The knocker *Y*, located above the mouth of the channel *Q*<sup>3</sup>, in chute *Q*, and means for carrying and operating same for the purpose set forth.

**No. 36,554. Means of Stopping and Regulating the Flow of Oil from Lamps, etc.** (*Moyen d'empêcher et régler l'écoulement de l'huile des lampes, etc.*)

Samuel Noton, Oldham, Lancaster, England, 8th May, 1891; 5 years.

*Claim.*—1st. The application to the outlet end *a*, or pipe *e*, of the supply vessel *b*, of a disk or other suitable valve *f*, employed internally thereof, substantially as and for the purpose specified. 2nd. The valve *f*, specified in the preceding claim, formed or furnished with a rod or chain *g*, and opened from the exterior of the supply vessel *b*, by means of a nut or plug *h*, or lever *l*, substantially as and for the purpose specified.

**No. 36,555. Liquid Hydro-Carbon Burner.** (*Foyer à hydro-carbures.*)

John Eugene Hersey, Montreal, Quebec, Canada, 8th May, 1891; 5 years.

*Claim.*—1st. The combination, in a liquid hydro-carbon burner, of a sleeve provided with a blast of air passing through it, also provided with a flow of liquid hydro-carbon fuel presented in proper form to be atomized by the said blast passing through the sleeve, with openings formed outside the sleeve, the said sleeve projecting beyond the said outer openings, the whole substantially as described. 2nd. The combination, in a liquid hydro-carbon burner, of the sleeve *O*, provided with a means of presenting liquid fuel to be atomized by means of a blast of air passing through the said sleeve, openings *g*, situated outside the sleeve *O*, said sleeve extending beyond the openings *g*, the whole substantially as described for the purposes set forth.

**No. 36,556. Box for Cigars.** (*Boite à cigares.*)

Pierre Dunan and Jean Baptiste Peloquin, both of Montreal, Quebec, Canada, 8th May, 1891; 5 years.

*Claim.*—1st. In a mechanical cigar box, the handle *H*, pieces *h*, *f* and *g*, projection *G*, and *g*<sup>2</sup>, guides *e* and *g*<sup>1</sup>, bell crank *K*, support *k*<sup>2</sup>, pieces *k*<sup>5</sup>, guides *k*<sup>1</sup>, springs *O*, *o*, and *M*, drawer *L*, and piece *J*, substantially as described and for the purpose set forth. 2nd. In a mechanical cigar box, the handle *H*, pieces *h*, *f*, and *g*, projection *G*, guides *e*, and *g*<sup>1</sup>, springs *O*, and *o*, piece *p*, and cigar conveyor *P*, substantially as described and for the purpose set forth. 3rd. In a mechanical cigar box, the handle *H*, pieces *h* and *f*, guide *e*, spring *O*, pieces *g*, and *g*<sup>1</sup>, and magnet *Q*, substantially as and for the purposes set forth. 4th. In a mechanical cigar box, the combination of the handle *H*, pieces *h*, *f*, *g*, *k*<sup>2</sup>, *p*, *g*, and *g*<sup>1</sup>, projections *G*, *g*<sup>2</sup>, and *J*, guides *e*, *k*<sup>1</sup> and *g*<sup>1</sup>, bell crank *K*, support *k*<sup>2</sup>, springs *O*, *o*, and *M*, cigar conveyor *P*, and magnet *Q*, with the cigar boxes *A*, and *B*, substantially as described and for the purposes set forth.

**No. 36,557. Protector for Piles or other Timber.** (*Couverture de pieu, etc.*)

James Clark, George L. Palmer and Le Roy A. Palmer, all of Tacoma, Washington, U.S.A., 8th May, 1891; 5 years.

*Claim.*—1st. A protector for piles or other timbers, consisting of a ring or shell surrounding said pile or piles or other timber, and free to move up and down thereon by the motion of the water, said ring or shell being provided with a roughened or brush-like surface on its interior face, substantially as described. 2nd. The combination, with the float surrounding the pile or other timber, of a ring or rings arranged below said float and secured in a pendent manner thereto, substantially as described. 3rd. A pile-protector, consisting of a ring or shell surrounding the pile and free to move up and down thereon by the action of the water, substantially as described. 4th. A pile-protector, comprising one or more rings or shells surrounding the pile and free to move thereon by the action of the water, in combination with a float, substantially as described.

**No. 36,558. System of Harmonious Colouring.** (*Système de couleur avec harmonie.*)

Harmonious Colouring Company, Manchester, assignees of Charles Henry Wilkinson, Longwood, York, both in England, 8th May, 1891, 15 years.

*Claim.*—1st. The herein described system or method of harmonious colouring in which an octave or scale in colour corresponding to the gamut or diatonic scale in harmony is produced by setting the three primary colours, red, yellow, and blue, respectively in the order named to the notes C, E, G, of the common chord in the natural key, and then by mixing these said primaries in certain definite proportions based upon the mathematical relation which exists between the different notes of the musical scale, the remaining principal or prismatic colours, orange, green, indigo and violet, are obtained and placed in corresponding positions respectively to the remaining natural notes D, F, A, B, of the musical scale, while the intermediate colours representing the sharps and flats are produced by equal mixtures of the principal colours on each side of them respectively, the octave or prismatic scale of colours thus obtained being darkened in descending octaves by adding black, and lightened in ascending octaves by adding white, all substantially as and for the

purposes herein set forth. 2nd. The herein described diagrams of colours harmonies, consisting of notes, chords or scales in ranges or keys corresponding respectively to the notes, chords, scales and keys of music or harmony, and composed by certain definite admixtures from the so-called primaries red, yellow and blue, with black and white in pigment or other colours or coloured materials, substantially as herein specified. 3rd. The manufacture or production of colours or coloured materials by the admixture of the primary colours, red, yellow, and blue, with black and white, by the system or method of harmonious colouring hereinbefore specified.

### No. 36,559. Broom. (*Balai.*)

Byron Fullerton Richardson and John Kinleyside, both of Hamilton, Ontario, Canada, 9th May, 1891, 5 years.

*Claim.*—1st. In the device for pulling the parts of the broom together, the combination of the bottom bar P, and the compressing or top bar O, in connection with the leverage power on the bar O, with the posts M, the wedge keys E, and holes S, as described. 2nd. In a broom, the combination of the alternate corrugated strips C, B, A, B, C, for holding the ends of the broom material between them when compressed and bolted or riveted together, as described. 3rd. In a broom, the combination of the central strip A, wedge shaped in connection with the strips B, and C, to flare out the broom material at each side and give a wide sweeping surface, as described. 4th. In a broom, the combination of the reversible ferule F, split pin A, and handle G, as described, all operating substantially as and for the purposes herein set forth.

### No. 36,560. Soap. (*Savon.*)

Albert Wilhelm Rehnström, Malhammar, Rekarne, Sweden. 9th May, 1891, 5 years.

*Claim.*—1st. The method, substantially as described, of preparing hard or soft soap by saponifying milk, either natural more or less concentrated or mixed with soap substance, which milk has or has not previously been deprived of more or less of its natural fat or caseine, and in the latter event mixed with a cheaper fat, and then treating the mass in the usual manner for preparing soap. 2nd. A hard or soft soap prepared by saponifying milk either natural or more or less concentrated, or mixed with soap substance, which milk has or has not previously more or less been deprived of its natural fat or caseine, and in the latter event mixed with a cheaper fat, whereafter the mass has been treated as usual, substantially as specified.

### No. 36,561. Ink Stand. (*Encrier.*)

Arthur Joseph Ingraham, Philadelphia, Pennsylvania, U.S.A., 9th May, 1891, 5 years.

*Claim.*—1st. In an ink stand provided with a cap or cover, a spring actuating device and a flexible disc, and both interposed between the cap or cover and top of the stand, of a funnel-shaped tube extending into said stand and provided with an integral collar having a valve therein, and aperture in the lower part of said tube, substantially as and for the purposes described. 2nd. In an ink stand provided with a cap or cover and an interposed flexible disc, of a tube extending into said stand having a valve formed integral therewith, and said tube provided with lugs for maintaining a washer in position adjacent to said disc, substantially as and for the purposes described. 3rd. An ink stand provided with a cap or cover, a gasket, a flexible disc, and a delivery tube supported by a spring and extending through the cap or cover and disc into the chamber of the inkstand, and said tube having a valve formed integral therewith for regulating the quantity of fluid presented at the delivery end thereof, substantially as and for the purposes described.

### No. 36,562. Boot. (*Chaussure.*)

Milo Francis Jarden, Selkirk, Ontario, Canada, 9th May, 1891; 5 years.

*Claim.*—A boot in which the vamp and quarters are made in two pieces joined together by the seams D, and E, and braced by the toe piece F, having projecting wings f, formed on it, substantially as and for the purpose specified.

### No. 36,563. Device for Closing Doors.

(*Appareil à fermer les portes.*)

John Noah Strong, Woodbridge, Ontario, Canada, 9th May, 1891; 5 years.

*Claim.*—1st. Two bars jointed together, the end of one bar fitting into a socket fixed to a door or gate, and the end of the other bar fitted into a socket pivoted on the end of a bracket fixed to the door jamb, in combination with a weight applied to the said bar or bars, substantially as and for the purpose specified. 2nd. Two bars jointed together, the end of one bar fitting into a socket fixed to a door or gate, and the end of the other bar fitted into a socket pivoted on the end of a bracket fixed to the door jamb, the bottom of the said socket being bevelled and designed to rest upon a correspondingly bevelled surface formed around its pivot in the said bracket, in combination with a weight applied to the said bar or bars, substantially as and for the purpose specified.

### No. 36,564. Revolving Fire Box.

(*Boîte à feu tournante.*)

Joseph C. Henderson, Troy, New York, U. S. A., 9th May, 1891; 15 years.

*Claim.*—1st. A revolving fire box provided with opposite openings for admission of coal, and communication with the grate, in combination with a contiguous casing surrounding the fire box except at

said openings, and a grate at the bottom contiguous to the casing, as and for the purpose set forth. 2nd. A fire box open at top and bottom, in combination with a surrounding casing, the said casing and box separated so as to form an air space on both sides of the box for the passage of air and gases from the bottom of the box to the top thereof, substantially as described. 3rd. The combination, with a cylindrical fire box having opposite openings for the insertion of fuel, and communication with grate, of a cylindrical casing separated from said box but surrounding the box to the said openings, and a circular grate at the bottom of said box practically forming a continuation of said casing, substantially as described. 4th. The revolving fire box provided with trunnions for turning the same, and with a lug on each head of the box, in combination with an outside casing through which said trunnions pass, and provided with lugs corresponding to the lugs on the fire box and arranged to come in contact therewith, whereby the box is given a half turn and held in that position, substantially as described.

### No. 36,565. Power Transmitter.

(*Appareil de transmission de moment.*)

Andrew Tolton and David Tolton, both of Guelph, Ontario, Canada, 9th May, 1891; 5 years.

*Claim.*—1st. A pulley journaled on an arm pivoted upon a bracket made vertically adjustable upon a suitably braced vertical post, substantially as and for the purpose specified. 2nd. A pulley journaled on one end of an arm, on the other end of which an annular projection is formed, in combination with a bracket having an annular recess formed in it to receive the annular projection, the two being secured together by a bolt passing through a hole in them made larger than the diameter of the bolt, substantially as and for the purpose specified. 3rd. A pulley journaled on an arm pivoted upon a bracket made vertically adjustable upon a suitably braced vertical post, in combination with a bar adjustably connected to the said arm, substantially as and for the purpose specified. 4th. A pulley journaled on an arm pivoted upon a bracket made vertically adjustable upon a suitably braced vertical post, in combination with an idler pulley supported in proximity to the periphery of the main pulley.

### No. 36,566. Foundation for Piers, etc.

(*Foundation pour piles, etc.*)

Robert Lewis Harris, New York, State of New York, U. S. A., 9th May, 1891; 5 years.

*Claim.*—1st. The method herein specified of constructing consolidating or strengthening foundations or structures, the same consisting in forcing into the interstices of such foundation or adjacent thereto, successive charges of mixed cement commencing at the lowest level or more distant points, and adding thereto progressively until the mass is solidified, substantially as specified. 2nd. The method herein specified of progressively making artificial stone foundations or structures in loose materials remaining in position, the same consisting in making holes between such loose materials and introducing thinly mixed cement through a pipe or pipes under pressure to the distant portions of such holes to cause the cement to spread in between the loose materials, allowing the cement to accrete or set, and then repeating the operation at nearer points in such holes until a solid cement structure is built up in the loose materials, substantially as set forth. 3rd. The method herein specified of cementing together loose materials, such as rubble riprap gravel, and imperfect masonry, consisting in directing streams of water through such materials to remove mud or sediment, and introducing cement in successive charges through holes commencing at the desired level, and filling in upwardly and allowing the successive charges of cement to set or to accrete between one charge and the next in order to fill the interstices progressively, substantially as set forth. 4th. The method herein specified of building a caisson or a coffer dam, or supporting structure in sand earth or loose materials, consisting in making holes from above in such materials and forcing cement into the same under pressure at the lowest desired places, and building by successive operations from the lowest desired level upwardly, the holes being sufficiently close together for the cement spread laterally by the pressure at one hole to extend to and bond with the cement from the adjoining holes, substantially as set forth. 5th. The method herein specified of introducing a floor or supporting layer into rubble sand or other loose material without removing the same, consisting in introducing into such material at numerous places or holes, cement in a semi-liquid condition forced through pipes passing down to the same or nearly the same level, and the places of supply being sufficiently close together for the cement introduced at one hole to spread to and unite with the cement introduced at adjacent holes, substantially as specified. 6th. The method herein specified of making a caisson under water with bottom and walls of cement, consisting in forcing such cement through pipes and into the loose materials existing under the water and in their normal condition, such cement being first introduced at the lowest desired places and sufficiently close for the cement to spread and unite and form the floor, and then building up the walls progressively from the floor to the higher places, substantially as specified.

### No. 36,567. Dumping Car. (*Char à bascule.*)

John Smith, Howell, Michigan, U.S.A., 9th May, 1891; 5 years.

*Claim.*—1st. The combination, with a supporting frame, of a dumping car consisting of two separate dumping boxes, said boxes having an oscillatory engagement upon the edges of said frame respectively, substantially as described. 2nd. The combination of the supporting frame, uprights located thereupon at the edges of the frame, and a dumping car consisting of two separate dumping boxes having an oscillatory engagement upon said uprights, substantially

as described. 3rd. The combination, with the supporting frame, of a dumping car consisting of two separate dumping boxes having an oscillatory engagement upon said frame at the edges thereof, and a locking device for holding the boxes in a horizontal plane, substantially as described. 4th. The combination, with the supporting frame, of a dumping car consisting of two separate dumping boxes having an oscillatory engagement upon the edges of the frame, and extending over said edges, and a locking device for holding said boxes in a horizontal plane and permitting them to be dumped in either direction, substantially as described. 5th. The combination, with the supporting frame provided with uprights at its edges, of two dumping boxes having a central oscillatory engagement on said uprights, arc-shaped braces secured to said boxes, and locking devices adapted to engage with said braces for the purpose of holding the boxes in a horizontal plane and to permit the boxes being dumped in either direction, substantially as described. 6th. The combination, with a supporting frame, of a dumping car, consisting of two separate dumping boxes having a central oscillatory engagement upon the frame, the construction being such that both boxes can be dumped inward and outward at the will of the operator, substantially as described.

### No. 36,568. Hay Carrier. (*Monte-foin*.)

James White Provan and John White Provan, 9th May, 1891: 5 years.

*Claim.*—1st. Two beams independently pivoted to the main body of the carrier, each beam being supported by a pair of wheels located one on each side of its pivot, substantially as and for the purpose specified. 2nd. A pair of dogs pivoted at right angles to the bail-holding dogs and designed to drop in between the said bail-holding dogs when the latter are pushed apart by the button of the bail-pulley, substantially as and for the purpose specified. 3rd. A pair of dogs pivoted at right angles to the bail-holding dogs, in combination with a diamond-shaped block located in the centre of an open ended flanged plate, substantially as and for the purpose specified. 4th. A plate having a downwardly projecting flange formed on each side, and having an opening at each end, in combination with a diamond-shaped block connected to and projecting below the bottom surface of the said plate, substantially as and for the purpose specified.

### No. 36,569. Band Cutter for Threshing Machines. (*Tranche-hart pour machines à battre.*)

George N. Brintnell, Canifton, Ontario, Canada, 9th May, 1891: 5 years.

*Claim.*—1st. The combination, with the main frame 1, of the parallel cranked shafts 2, 3, the knives 4, sleeved on said cranks and connecting both shafts, and geared to drive simultaneously, whereby a combined chop and draw motion will be imparted to the knives, as described. 2nd. The combination, with the main frame 1, cranked parallel shafts 2, 3, of a series of pendant fingers 14, pivotally hung to swing combinedly by a bar 13, and connecting with a reciprocating bar 15, and pitman 16, crank shaft 17, and gears 18, reciprocating said bar 15, from one of the knife shafts, whereby said fingers are oscillated to distribute the stalks of grain prior to entering the threshing cylinder. 3rd. The combination, with the main frame 1, carrying parallel cranked shafts 2, 3, connected by knives 4, and a trundle wheel 9, in advance of the knives and having posts 24, connected by a bar 25, provided with a rock bar 26, of a supplementary frame consisting of the sills 20, hinged to one end of frame 1, and posts 22, supporting a rock bar 23, said rock bars connected by studs 27, and springs 28, whereby said springs assist the main frame 1, to rise and relieve the pressure of the sheaves passing between the trundle and the apron to prevent the feed choking, as set forth.

### No. 36,570. Type Writer. (*Claviographe*.)

Miers Fisher, Denver, Colorado, U.S.A., 9th May, 1891: 5 years.

*Claim.*—1st. A typewriter, consisting of a plate or card 1, having a row of characters formed thereon and provided with a slot cut through the plate or card at one extremity of the row of characters, in combination with a pen or stylus consisting of a handle and a disk pivoted thereon, the disk being provided with raised characters on its periphery, said characters corresponding with those on plate 1, but arranged on the disk in the reverse order or position, the disk being adapted to rotate on the handle as the pen or stylus is moved across the plate with the periphery of the disk in contact therewith, substantially as and for the purpose set forth. 2nd. In a typewriter a plate having a row of characters formed thereon, a cogged, recessed or toothed rack alongside said row of characters, and an opening in the plate at one extremity of said rack, in combination with a pen or stylus provided with a rotating disk having raised characters on its periphery, said characters corresponding with those on plate 1, but arranged on the disk in the reverse order or position, substantially as and for the purpose set forth. 3rd. In a typewriter, a plate having a row of characters formed thereon, a cogged, recessed or toothed rack alongside said row of characters, a recess being opposite each character, and an opening cut through the plate at one extremity of the rack, in combination with a stylus or pen consisting of a hollow handle terminating at one extremity in a fork, a disk supported in said forked extremity and adapted to rotate thereon, said disk being provided with raised characters on its periphery, said characters corresponding with those of the plate 1, but arranged on the disk in the reverse order or position, each raised character forming a projection adapted to enter a recess of the rack, a coiled spring located in the hollow handle, one extremity of said spring being connected with an eccentric or drum secured upon the disk while the other extremity is connected with a button or its equivalent outside the free extremity of the handle, substantially as described. 4th. In a typewriter, a plate having a row of characters formed thereon, a recess opposite each character forming in effect a rack, a slot or opening formed in the plate at one extremity of the

rack and suitable means of moving the plate forward in a direct line, in combination with a pen or stylus consisting of a disk with a pointer marked thereon indicating on the periphery the initial point of rotation, the periphery being provided with raised characters forming projections adapted to engage the recessed rack, said characters corresponding with those on plate 1, but arranged in the reverse order or position, a handle one extremity of which is fashioned for the reception of the disk and within which it rotates, and suitable means of maintaining the disk normally in a uniform position, substantially as and for the purpose set forth. 5th. In a type writer, a plate having characters formed thereon, a rack alongside the characters with a recess opposite each, a slot or opening at one end of the rack, and a roller journaled upon the plate and provided with a toothed spacing cylinder secured to each extremity thereof, said cylinders protruding through suitable openings formed in the plate, in combination with a pen or stylus provided with a rotating disk having raised characters formed on its periphery corresponding with the characters of the plate, but arranged in reverse order or position, and suitable spring mechanism whereby the disk is normally maintained in a uniform position, substantially as and for the purpose set forth. 6th. A type writer, consisting of a plate having a row of characters thereof, an opening or slot at one extremity of said row, a roller journaled upon the plate and provided with a fluted spacing cylinder secured to each extremity thereof, said cylinders protruding through suitable openings formed in the plate, a cap covering said roller and provided with a finger opening as shown, in combination with a pen or stylus provided with a rotating disk having raised characters on its periphery, said characters corresponding with those on the plate but arranged in the reverse order or position, and a pointer indicating on the periphery of the disk the initial point of rotation and suitable means of normally maintaining the disk in a uniform position, substantially as and for the purpose set forth. 7th. A type writer, consisting of a plate 1, having a row of characters thereon, an opening or slot at one extremity of said row, the plate being provided with a padded groove for inking the stylus, said groove extending preferably parallel with the row of characters, in combination with a pen or stylus provided with a rotating disk having raised characters on its periphery, said characters corresponding with those on plate 1, but arranged on the disk in the reverse order or position, substantially as and for the purpose set forth. 8th. A type writer consisting of a plate having a row of characters thereon, an opening or slot at one extremity of said row, in combination with a stylus consisting of a handle and a disk pivoted thereon, the disk being provided with raised characters, said characters corresponding with those on the plate but arranged in the reverse order or position, the disk being adapted to rotate on the handle as the pen is moved across the plate with its periphery in contact therewith, and suitable means of inking the stylus, substantially as and for the purpose set forth. 9th. A type writer, consisting of a plate having a row of characters formed thereon, a slot or opening cut through the plate at one extremity of said row and a recess across the under side of the plate in line with said opening, in combination with a stylus consisting of a rotating disk and a handle, the disk being pivoted on the handle and provided with raised characters on its periphery, said characters corresponding with those on the plate but arranged in reverse order or position, the disk being operated by placing its periphery in contact with the plate and moving the stylus forward, substantially as and for the purpose set forth. 10th. A type writer consisting of a plate having a row of characters formed thereon, a printing slot or opening 9, cut through the plate at one extremity of said row, one or more line spacing slots cut through the plate above slot 9, in combination with a stylus consisting of a handle and a disk or its equivalent having printing characters formed on its periphery, said characters corresponding with those on the plate but arranged in reverse order or position, the stylus being operated by placing the periphery of the disk in contact with the plate and moving the same forward thereon, substantially as and for the purpose set forth. 11th. A type writer consisting of a plate having a row of characters formed thereon, a slot or opening 9, cut through the plate at one extremity of said row, a guide flange 40, extending backward from slot 9, in combination with a stylus or pen provided with a disk or its equivalent having printing characters formed on the periphery, said characters corresponding with those on the plate but arranged in the reverse order or position, substantially as and for the purpose set forth. 12th. A pen or stylus consisting of a handle, a disk pivoted thereon and having its periphery provided with raised characters adapted to print as the disk is rolled over a suitable surface, and means of returning the disk to the same relative position upon the handle after each printing act, substantially as described.

### No. 36,571. Curry Comb. (*Etrille*.)

Heinrich Schulz, Berlin, Prussia, 9th May, 1891: 5 years.

*Claim.*—1st. In a curry comb, the combination of a sector-shaped brush S, the bent flat bar c, provided with a handle H, the spiral comb A, the stud d, being centrally to the spiral comb fastened to one end of the flat bar c, and projecting through the other end of the same, and being provided with a nut e, so as to adjust the projection of the brush from the comb, as for the purpose set forth. 2nd. In a curry comb, the combination of the sector-shaped brush S, the bent flat bar c, the spiral comb A, the stud d, being centrally to the spiral comb fastened to one end of the flat bar c, and projecting through the other end of the same and being provided with a nut e, so as to adjust the projection of the brush from the comb, the disc z, and the brush cleaner z, as for the purpose set forth.

### No. 36,572. Combined Memorandum and Order Rest and Tablets. (*Livret, appui pour livres de commandes et tablettes à notes.*)

John Ross Pruyn, Montreal, Quebec, Canada, 9th May, 1891: 5 years.

*Claim.*—1st. In a memorandum and order rest and tablet, the combination of a frame carrying in it a roll of paper and on it a tablet,

and bearing against side of support, and a flap hinged to frame, lying on top of support and having its free end secured thereto and serving as a pad for paper, all as herein set forth. 2nd. The combination of the roll D, carried in frame A, passing up between A, and E, over E, and down through opening E', as and for the purposes described.

**No. 36,573. Oil Feeding Device for Vapor Stoves.** (*Alimentateur d'huile pour poêles à vapeur.*)

Charles Mahlon Hollingsworth, Cleveland, Ohio, U. S. A., 9th May, 1891; 5 years.

*Claim.*—In an oil feeding device for vapor stoves, a tank having a partition which divides said tank into a main reservoir, and a supplemental reservoir located below the main reservoir, a casting secured to said partition and having a duct through which the liquid flows by gravity from the main to the supplemental reservoir, a wire gauze secured to said partition above the entrance to said duct, and adapted to prevent the entry of foreign particles thereto, and a casting secured to the lower wall of the supplemental reservoir having an orifice through which the liquid flows combined with a float valve in said supplemental reservoir, having a tube passing centrally through it and projecting below it, a valve rod passing through said tube and pivotally connected with the part thereof which extends below said float, said valve rod being extended at its lower end into the orifice in the lower casting, and at its upper end into the duct in the upper casting, and having a conical upper end adapted to engage with a conical valve-seat formed in the upper casting, substantially as and for the purpose specified.

**No. 36,574. Shaft Coupling.** (*Armon de limonière.*)

Aquila W. Hollingsworth, West Liberty, Iowa, U. S. A., 9th May, 1891; 5 years.

*Claim.*—1st. A thill coupling comprising the box adapted to be clipped to an axle and provided at its front end with curved bearings and a vertical opening, the hinged top having a sliding bolt arranged to engage the box and provided with a depending inwardly inclined plate arranged at the front of the top, and a rubber cushion having its front face curved and completing the bearings, and its rear face inclined and adapted to be engaged by the inclined plate of the hinged top, substantially as and for the purpose described. 2nd. A thill coupling comprising the box composed of the back 5, the sides 4, having their upper edges recessed and their front edges curved, the bottom having its rear end extending beyond the back 5, and adapted to be clipped to an axle, and having its front end curved and providing curved bearings at the front of the box, and having an opening 7, the top hinged to the back and having depending side plates and an inclined plate 14, arranged at the front thereof, the rubber cushion having its front face curved and its rear face inclined and arranged to be engaged by the plate 14, and a bolt adapted to lock the hinged top in its closed position, substantially as described. 3rd. A thill coupling comprising the box composed of the back 5, the sides 4, having their upper edges recessed and their front edges curved, the bottom adapted to be clipped to an axle and having its front edge curved and providing curved bearings, and having an opening arranged between the bearings to receive the shaft iron, the top hinged to the back and having depending side plates, and an inclined plate arranged at the front of the top and provided with shoulders 15, and adapted to rest upon the recessed portions of the sides and having a transverse slot 16, a bolt arranged in the slot and provided with a headed bar, a spiral spring coiled around the bar, and a rubber cushion having its front face curved and its rear face inclined and arranged to be engaged by the inclined plate, substantially as described.

**No. 36,575. Jack for Lifting.** (*Cric.*)

Andrew Warren, (assignee of Louis Jacob Crecolius), both of St. Louis, Missouri, U.S.A., 9th May, 1891; 5 years.

*Claim.*—1st. In a lifting jack, a standard, a lifting bar, a holding grip in the standard, a clutch box, a cam shaft within the clutch box, an operative lever and a positive connection between said lever and the cam shaft for operating the same to grip and raise the lifting bar, substantially as described. 2nd. In a lifting jack, a standard, a lifting bar, a clutch box, a cam shaft within said clutch box, an operating lever pivoted on the standard arms *l, l*, secured to the cam shaft and links connecting said arms with the lower end of the lever, substantially as described. 3rd. In a lifting jack, a standard, a lifting bar, a clutch box, a cam shaft, an interposed clutch block between said shaft and the face of the lifting bar, an operating lever and connections between said lever and the cam shaft, substantially as described. 4th. In a lifting jack, a standard, a lifting bar, a grip within the standard, a clutch box carrying a grip, a lever, and connections for operating said grip, a lowering lug carried by the clutch box, the standard having an opening in line with the normal position of the lowering lug, and means for releasing the grip in the standard and throwing aside the lowering lug, substantially as described. 5th. In combination, a standard, a lifting bar, a grip within the standard, a lowering lug, a lever, and connections for operating said grip, a lowering lug carried by said clutch box and pivoted at one corner, the standard having an opening in line with the normal position of the lowering lug, a rod for releasing the grip in the standard and for throwing aside the lowering lug, substantially as described.

**No. 36,576. Die for Heading Bolts.**

(*Coussinet pour faire les têtes de boulon.*)

Charles Stewart Seaton and Edwin Lajette Thurston, both of Cleveland, Ohio, U.S.A., 9th May, 1891; 5 years.

*Claim.*—The herein described dies for bolt heading and other similar machines, which consist of a female die provided with a socket, the outer edges of which are beveled outward, said socket inside said beveled part being of the same shape and size as the bolt head to be formed therein except that it is slightly deeper than the thickness of said head, and a male die adapted to enter said socket and fit snugly therein, provided with an orifice which occupies a position relative thereto similar to the position which the bolt body occupies relative to its head in a finished bolt.

**No. 36,577. Paint.** (*Peinture.*)

Richard Judson Doyle, Township of Sarawak, Ontario, Canada, 11th May, 1891; 5 years.

*Claim.*—The herein described composition of matter forming a non-inflammable paint, and consisting of vinegar, lime water, salt, white vitriol, linseed or other drying oil, and with or without petroleum, compounded, substantially in the proportions and in the manner hereinbefore set forth.

**No. 36,578. Wheel for Vehicles.**

(*Roue de voiture.*)

Richard Edgar Jeffery, Grass Valley, California, U.S.A., 11th May, 1891; 5 years.

*Claim.*—1st. In a vehicle wheel, the combination with the spokes of a sectional hub formed of two hollow sections, a core extending entirely through said sections and provided with a retaining cap adapted to bind the parts together and secure the spokes, said core being exteriorly screw threaded and an interiorly threaded conical sleeve working upon the core within the hub and adapted to engage the ends of the spokes, substantially as and for the purpose set forth. 2nd. In a vehicle wheel, the combination with a hollow hub, and the spokes projecting therein, the hub being provided at each end with an interior annular shoulder, of a single exteriorly threaded core projecting entirely through said hub and provided at one end with an integral circular plate having a rearwardly extending unshouldered peripheral flange fitting within the adjacent end of the hub and abutting against the shoulder therein, a retaining cap fitting within the opposite end of the hub and binding against the shoulder therein, and an exteriorly threaded conical sleeve working upon the core within the hub and adapted to adjust the spokes, substantially as and for the purpose set forth. 3rd. In a vehicle wheel, the combination, with the spokes of a hub formed of two sections comprising two circular plates provided with inwardly projecting lugs, the lugs of one plate having each an extension projecting over the opposite lug of the other plate, said lugs forming conjunctively ribs fitting between the spokes, and a retaining core and cap therefor for securing the sections of the hub together, substantially as set forth. 4th. In a vehicle wheel, the combination, with the tire provided with a concave inner face, of the felly provided with a rounded or convex periphery adapted to fit within the latter and formed of two or more sections having their abutting ends beveled, the spokes, and the hub provided with the means for tightening the wheel, substantially as set forth.

**No. 36,579. Gas Governor.**

(*Gouverneur pour gaz.*)

Alfred Hall, Toronto, Ontario, Canada, 11th May, 1891; 5 years.

*Claim.*—1st. A disc A, loosely fitted into the gas passage way of the burner B, and fixed to a spindle C, in combination with plugs D and E, located one on each side of the said disc and having holes F, G, and H, made in them, substantially as and for the purpose specified. 2nd. A disc loosely fitted in the gas passage way of the burner B, fixed to a spindle C, having a head A, formed on its lower end, and in combination with plugs D and E, located one on each side of the said disc and having holes F, G, and H, made in them, substantially as and for the purpose specified.

**No. 36,580. Fasteners for Casters, Door Knobs, etc.** (*Queue de roulette de meuble, bouton de porte, etc.*)

Jacob Thimes, Brooklyn, New York, U. S. A., 11th May, 1891; 5 years.

*Claim.*—The improved fastening for casters, door knobs, and the like herein shown and described, combining in its structure the rod *a*, having at one end the enlarged angular head and at its other end a screw thread, the nut *z*, and the tubular slitted sleeve C, having a plane exterior surface, each angle of the head of the rod having a seat in the recess between the sections of the slitted sleeve to prevent turning of the rod when drawn within the sleeve for expanding its sections, all substantially as herein set forth.

**No. 36,581. Sleigh Runner.** (*Patin de traineau.*)

John Badley, Jersey City, New Jersey, U.S.A., 11th May, 1891; 5 years.

*Claim.*—In a device of the character described, the combination, with the runners, the legs or supports secured to the runners by the thumb screws, the side plates, the cross-bar having the loop and pivotally connected to said legs, the strap engaging said loop, and the stay-chains, all substantially as and for the purpose set forth.



**No. 36,582. Shingle Jointing Machine.***(Machine à dresser le bardeau.)*

George Cassady, Vancouver, British Columbia, Canada, 11th May, 1891; 5 years.

*Claim.*—1st. In a shingle jointing machine, the combination of a saw bench A, having arbor A<sup>1</sup>, and saw A<sup>11</sup>, the table B, having slots b, and guide rods B<sup>1</sup>, the block C, having long hubs c, engaged by said guide rods and the table D, substantially as set forth. 2nd. A saw bench A, having arbor A<sup>1</sup>, and saw A<sup>11</sup>, table B, with slots b, and guide rods B<sup>1</sup>, slide C, with hubs c, engaged by said rods, a table D, combined with any bench of the same construction, substantially as set forth. 3rd. A saw bench A, having arbor A<sup>1</sup>, and saw A<sup>11</sup>, table B, with slots b, and guide rods B<sup>1</sup>, slide C, with hubs c, engaging said rods and table D, in combination with a table E, having arbor E<sup>1</sup>, saw E<sup>11</sup>, and slide E<sup>2</sup>, E<sup>3</sup>, or common knot saw bench, substantially as set forth.

**No. 36,583. Roller Mill.** *(Moulin à rouleaux.)*

Frank H. Brewster, Escanaba, Michigan, U.S.A., 11th May, 1891; 5 years.

*Claim.*—1st. In a roller mill and in combination with the lever bearing supporting the movable roll, the pivot pin passing through said lever and having its periphery curved in the direction of its length, substantially as described. 2nd. In a roller mill and in combination with the independent lever bearings at the ends of the movable rolls, and independent adjusting and tension devices applied to said levers, the curved faced fulera upon which the levers are mounted, substantially as described. 3rd. In a roller mill, the combination of the two lever bearings for the movable roll, the screws pivotally connected to said lever bearings and protruded through a fixed portion of the frame, the limiting collars applied to said screws, the wedges supported to reciprocate in guides laterally of the screws and between the collars, and the fixed portion of the frame an actuating lever and links connecting said lever to the wedges at opposite ends of the roll, substantially as described. 4th. In a roller mill and in combination with the bearings of the movable roll and the adjusting and tension devices applied thereto, a double wedge interposed between a collar or abutment on each adjusting device and a fixed support, a lever and links connecting the members of the double wedge on opposite sides of the pivot of said lever, substantially as described. 5th. In a roller mill and in combination with the adjusting screws and the limiting collars applied thereto, wedges guided to reciprocate transversely of the screws and resting upon a fixed portion of the frame, and non-rotating supports interposed between the wedges and the limiting collars on the screws to receive the thrust of the wedges, and transmit motion to the screws, substantially as described. 6th. In a roller mill, the combination, with the independent lever bearings for the movable rolls, the screws flexibly connected to said lever bearings, and the adjustable collars applied to said screws of the sliding wedges connected to be moved in unison and mounted in guides on the frame between the lever bearings and the adjustable collars, and a support or block guided to reciprocate with the screw and held from rotation, said block or support being interposed between the wedge and adjustable collar on the screw, substantially as described.

**No. 36,584. Spile for Bung-Holes of Beer Casks, etc.** *(Foret pour trou de bindon de baril à bière, etc.)*

David Sharp, Monkwearmouth, Durham, England, 11th May, 1891; 5 years.

*Claim.*—In a spile, the combination of the ball valve, lids, branch, and tube, substantially as described and for the purpose specified.

**No. 36,585. Wooden Dish Machine.***(Machine pour faire les plats de bois.)*

Charles W. Calkins, Grand Rapids, Michigan, U.S.A., 11th May, 1891; 5 years.

*Claim.*—1st. A machine for cutting dishes from wood, consisting of a stationary frame for supporting the knife drum, a rotary table concave-convex knives secured to and projecting upward from the centre of the top of the frame, an opening in the centre of the top of the frame between the base of the knives for the escape of the dishes when cut, a table made to rotate upon a stationary frame around the knives, guides upon the table for supporting the blocks and conducting them towards the knives, mechanism for feeding the blocks toward the knives, and mechanism for rotating the table, substantially as and for the purpose set forth. 2nd. The combination, in a machine for cutting dishes from wood, of a circular base for the support of the machine provided with pinions for driving and rollers for supporting the table, a hollow drum for supporting the knives provided with apertures at the edges of the knives for the passage of dishes, a large opening below for the escape of the dishes, and a solid cap, a table having a rack or gear upon its under surface to mesh with the pinion M, for propelling the table, a yoke secured to the table and passing over the drum, a pin at the top of the drum for the yoke to work upon, a series of guards for conducting the blocks toward the drum, a carriage and mechanism for forcing the carriage and blocks toward the drum, concave-convex knives secured to the drum and having their edges so curved as to effect a perfect shearing cut, substantially as specified. 3rd. The combination in a machine for cutting dishes from wood, of a base having an aperture at the centre for the reception of a knife, drum pinions for driving the tables, rollers for supporting and carrying the table, a knife drum attached firmly to its base, its upper end enclosed with a solid cap, the lower end open downward, and openings through its surface back of the edges of the knives, knives attached to the

drum, their form corresponding to the form of the dish to be cut, a table having a rack or gear on its lower surface, the surface of the table inclining downward toward the drum and provided with an aperture around the drum, a yoke to support the centre of the table and arranged to work upon a pin at the top of the drum guides, carriages having threaded boxes, solid standards, latches, feed screws provided at one end with ball bearings and at the opposite end with friction rollers, trips attached to the base to operate the feed screws, guards attached to the inner ends of the guides and provided with ball sockets for the reception of the ends of the feed screws, substantially as specified. 4th. The combination, in a machine for cutting dishes from wood, of a base, pinions, shafts, an idler, a knife, drum, curved knives attached to the drum, a table provided with guides, a yoke for supporting the centre of the table, a rack on the lower surface of the table carriages, feed screws, slotted supports for the feed screws, friction rollers and stationary strips, substantially as specified.

**No. 36,586. Table for Invalids.***(Table pour invalides.)*

Azarie Brodeur, Montreal, Quebec, Canada, 11th May, 1891; 5 years.

*Résumé.*—Un nouvel article de manufacture, une table mécanique pour malades et invalides composée d'un tableau B, disposé en porte a faux au moyen des jambes de force k, l, de l'anneau G, et de la vis de serrage H, au tour d'un pivot central A, a vis b, c, roue a main D, étui c, d, e, h, i, le tout monté sur un trepied F, F, F, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées.

**No. 36,587. Handle for Hand Phones.***(Manche de récepteur téléphonique.)*

Joseph Hector Le Maitre and John Francis Le Maitre, both of Toronto, Ontario, Canada, 12th May, 1891; 5 years.

*Claim.*—1st. The combination, with a hand phone F, of a detachable handle A, substantially as described. 2nd. A handle A, provided with an eye B, in combination with a plate or band C, secured to the said eye and designed to grasp the hand phone F, substantially as described.

**No. 36,588. Furnace.** *(Fournaise.)*

Jacques Hartenstein, Montreal, Quebec, Canada, 12th May, 1891; 5 years.

*Résumé.*—1o. Dans une fournaise, la combinaison des pièces A, B, E, D, F, G, s'émboîtant les unes dans les autres et enveloppées par le cylindre C, tel que décrits et pour les fins mentionnées. 2o. Dans une fournaise la combinaison des pièces A, B, E, D, F, G, s'émboîtant les unes dans les autres et enveloppées par le cylindre C, avec le cendrier H, composé des pièces a, c, et du grill composé des parties I et J, tel que décrits et pour les fins mentionnées.

**No. 36,589. Heat Controlling Device.***(Appareil pour contrôler la chaleur.)*

William Penn Powers, Chicago, Illinois, U.S.A., 12th May, 1891; 5 years.

*Claim.*—1st. In a heat controlling device, the combination, with a thermostat having a vaporizing chamber to contain a volatile liquid, said chamber having one or more flexible walls adapted to be flexed by the volatilization of the liquid, a second chamber and a pipe leading therefrom, whereby to confine a body of air or other fluid in contact with said flexible wall, and a pressure chamber with which said pipe communicates and having a diaphragm or other piston, and suitable operating devices actuated by said diaphragm, whereby the movement of the wall of the vaporizing chamber is transmitted through the interposed air or other fluid column to the diaphragm of the pressure chamber, substantially as described. 2nd. In a heat regulating apparatus, a double diaphragm composed of two elastic sheets, one of which forms, one wall of a pressure chamber to operate by pressure of steam, the other designed to operate by a fluid pressure transmitted through a pipe and caused by the volatilization of a liquid vaporizing at about the temperature sought to be maintained, the diaphragms being so arranged that the effect desired is produced by the action of either cause independently, substantially as described. 3rd. In a heat regulating device, a vaporizing chamber to contain a volatile liquid, a movable side or wall normally under tension, such tension tending to enlarge the vaporizing chamber and thereby produce a lowering of the pressure upon the contents thereof, and consequently a lower point of vaporization for the purpose of securing action at a lesser degree of heat, as and for the purpose specified. 4th. In a heat controlling device, the combination, with a thermostat, of a damper or ventilator actuating device comprising two diaphragms secured within a pressure chamber, and having a space between their opposing surfaces, a tube communicating with said space and with the thermostat, and a steam generating boiler communicating with the chamber below the diaphragms, substantially as described.

**No. 36,590. Strap and Buckle Shields.***(Couverture de courroie et boucle.)*

George H. Nicholls, Galveston, Texas, U. S. A., 12th May, 1891; 5 years.

*Claim.*—A strap shield composed of a flat elongated plate having parallel side edges and having a slot longitudinally formed in said plate near its transverse centre, and two pairs of limbs projected in the same direction from the side edges of the plate, and bent toward each other in pairs to loosely clasp a strap, substantially as set forth.



**No. 36,591. Furnace.** (*Fournaise.*)

George Washington Ensinger, Elu Station, Pennsylvania, U.S.A., 12th May, 1891; 5 years.

*Claim*.—1st. A grate formed of a number of independent parts or sections, comprising a fire pot, an inner grate, and an exterior grate substantially as set forth. 2nd. In combination, a fire pot and a grate surrounding said fire pot, which grate and fire pot consist of a number of independent parts or sections adapted to be fitted and held together, substantially as set forth. 3rd. In combination, with an enclosing furnace wall, a fire pot of less diameter than said wall, a grate surrounding said fire pot, which fire pot and grate consist of a number of independent parts or sections, and means for holding said parts or sections in proper position with reference to said wall, substantially as set forth. 4th. In combination, with an enclosing furnace wall, a fire pot of less diameter than said enclosing furnace, and supported within the same, a lower grate within the fire pot, and an upper grate surrounding the fire pot and detachable therefrom, substantially as set forth. 5th. In combination, with an enclosing furnace wall, a sectional fire pot, a grate within the fire pot, means for supporting the fire pot within the furnace and above the floor thereof, and a grate surrounding the fire pot, substantially as set forth. 6th. In combination, with an enclosing furnace wall, a sectional fire pot, means for supporting said fire pot above the bottom of the furnace, a lower grate within the fire pot, and an upper grate formed in sections and surrounding the fire pot, substantially as set forth. 7th. In combination, with an enclosing furnace wall a fire pot divided into sections, means for uniting said sections, supporting arms extending from said sections, a grate within said fire pot, and a sectional grate extending from said fire pot to the enclosing furnace wall, substantially as set forth. 8th. In combination, with an enclosing furnace wall employing internal ledges or supports, an open-topped fire pot formed in sections, means for uniting said sections, supporting arms extending from said sections to a ledge, and a sectional grate extending from the fire pot to a ledge, substantially as set forth. 9th. In combination, with an enclosing furnace wall embodying internal ledges or supports, an open-topped fire pot formed of sections, each of which embodies an external lug and an external arm which reaches to the ledge of the wall, the lug and arm of each section being respectively in registry with adjoining arm and lug of the adjacent sections, means for securing said meeting lugs and arms together, a shoulder formed upon the exterior of the fire pot, a grate supported within said fire pot, and a grate formed of sections, which sections rest upon the exterior shoulder of the pot and a ledge of the furnace wall, substantially as set forth. 10th. In combination, with an enclosing furnace wall embodying supports, such as ledges, an open-topped fire pot formed of sections dovetailed into each other, and each of which embodies an external lug and an external arm which reaches to the support or ledge of the wall, the lug and arm of each section being respectively in registry with the adjoining arm and lug of the adjacent sections, means for securing said meeting lugs and arms together, a shoulder formed upon the exterior of the fire pot, a grate supported within said fire pot, and a grate formed of sections, which sections rest upon the exterior shoulder of the pot and a ledge of the furnace wall, substantially as set forth.

**No. 36,592. Separator for Potatoes.**(*Trieur à patates.*)

Janvier Michel Arsène Charest, St. Louis, Mile End, assignee of Janvier Joubert, Cote St. Michel, all in Quebec, Canada, 12th May, 1891; 5 years.

*Claim*.—1st. In a potato-separator, the crank  $g^2$ , gear wheel  $g^1$ , pinion G, shaft  $f$ , connecting rod H, bell crank I, piece  $r^2$ , hopper J, with its sleeve  $j$ , and flexible supports K, substantially as described and for the purposes set forth. 2nd. In a potato separator, the crank  $g^2$ , gear wheel  $g^1$ , pinion G, shaft  $f$ , flexible connecting rod E, sieve holder B, with its wire sieves  $b^6$ ,  $b^7$ ,  $b^{10}$ , and wooden one  $b^1$ , and flexible supports C, substantially as described and for the purposes set forth. 3rd. In a potato separator, the incline board  $l$ , having the handle T, and door  $b^5$ , ketch  $l^2$ , and piece  $l^3$ , substantially as described and for the purposes set forth. 4th. In a potato separator, the scale beam S, hanger  $s^1$ , and platform M, substantially as described and for the purposes set forth. 5th. In a potato separator, the combination of the crank  $g^2$ , gear wheel  $g^1$ , pinion G, shaft  $f$ , connecting rods H, and E, bell crank I, piece  $r^2$ , hopper J, sieve holder B, and flexible supports C, and K, with the chutes O, and P, receptacle L, inclined board  $l$  having the door  $b^5$ , and handle T, scale beam S, hanger  $s^1$ , platform M, and frame A, substantially as described and for the purposes set forth.

**No. 36,593. Composition for Artificial Granite.** (*Composition pour granit artificiel.*)

Archibald Graham, Hugh M. Douglass and Thomas N. Dunn, all of London, Ontario, 12th May, 1891; 5 years.

*Claim*.—The herein described composition of matter, for making artificial stone, consisting of ground granite, sand, barytes, cement, and water, substantially in the proportions specified and for the purposes set forth.

**No. 36,594. Joint for Rain Water Conductors.** (*Joint pour conduits d'eau de pluie.*)

John Davis, assignee of John William Abrahams, both of Allegheny, Pennsylvania, U. S. A., 12th May, 1891, 5 years.

*Claim*. Metallic tubing having an expansible projection and a joint or seam formed in the base of one side of the projection, and the fold of one of the members of joint or seam bent down to or near the body of the tubing, and the other member of the fold within the apex of the projection, substantially as described.

**No. 36,595. Road Cart.** (*Désobligeante.*)

Josephine Cristsinger, Flint, and Howard Clarence Turner, Mayville, both in Michigan, U.S.A., 12th May, 1891, 5 years.

*Claim*.—1st. In a two wheeled vehicle, the combination of the thill, the seat frame rigidly connected therewith, the axle hinged to the thills and capable of vertical motion independent of the seat frame, and the spring to maintain the axle in proper position relative to the seat frame, substantially as described. 2nd. In a two wheeled vehicle, the combination of the thills, the seat frame having its side bars rigidly secured to the thills, the bolts projecting laterally from the side bars, the bars 7, and 8, hinged by the bolts, the bars 7, being secured to the thills, the axle secured to the end of the bars 8, and the springs 13, coiled around the bolts and having one end engaging the adjacent side bar of the seat frame and the other end engaging the axle, substantially as described. 3rd. In a two wheeled vehicle, the combination of the thills the axle, the seat frame having its side bars rigidly secured to the thills, the bars 7, secured to the thills, the long bars 8, clipped to the axle, the bolts 6, projecting laterally from the side bars and hinging the bars 7, and 8, together, the sleeves 12, interposed between the side bars of the frame and the hinged bars 7, and 8, and the springs coiled upon the sleeves and having one end engaging an adjacent side bar and the other end engaging the axle, substantially as described.

**No. 36,596. Holder for Twine.** (*Porte-cordonnet.*)

Ethelbert Wareham, Winnipeg, Manitoba, Canada, 12th May, 1891, 5 years.

*Claim*.—In an automatic gravitating twine holder, the pinions, pivots, grooves, and ratchet, as are set forth in my specifications as adapted to a twine holder for the purpose heretofore described.

**No. 36,597. Electro-Chemical Generator.**(*Générateur électro chimique.*)

Jean Baptiste Perroux Lloyd and Athanasie Francois Xavier Marcel Perroux Lloyd, Paris, France, 13th May, 1891, 5 years.

*Claim*.—1st. In electro-chemical generators, a reservoir below the soluble electrodes thereof and communicating with the space which they occupy, as and for the purposes set forth. 2nd. In electro-chemical generators and batteries, carbon electrodes of tapering form as shown and described. 3rd. Electro-chemical generators having inclined covers and interior gutters beneath the lowest point of such covers and provided with suitable outlets, for the purpose set forth. 4th. In electro-chemical generators and batteries, &c., having a trough constructed of material inattaackable by acids, and a number of elements each comprising a soluble electrode and a porous cell containing a carbon electrode, condensing columns and means for causing water to trickle through same, a depolarizing solution (nitric acid) and an exciting solution contained in separate vats, means for conducting such solutions respectively into contact with said porous cells and trough, and means for conducting vapours (nitrous) disengaged from such depolarizing solution to said condensing columns, for the purpose set forth. 5th. Electro-chemical generators, the elements of which allow and the operation of which comprises:—the action of the sulphuric, hydrochloric or other acid upon a soluble electrode, the oxidation of hydrogen disengaged by nitric acid with which a porous vessel containing a carbon, or other inattaackable electrode, is filled, the oxidation in presence of air of nitrous products disengaged, and regeneration of the nitric acid by contact with trickling water moving oppositely to the passage of the gas, crystallization of the deposited salts by concentration of the solution to the desired degree by heat disengaged in the generator, and due to internal resistance, and the recharging of the generator with acidulated water on the one hand and regenerated nitric acid on the other, said acid being concentrated by means of a variable proportion of sulphuric acid, the whole effected as and for the purposes set forth. 6th. In combination, with a primary battery, a steam pipe passing through same for the purpose of heating its solutions, as described. 7th. The interposition of electrolytic refining vats between the electric generators and the point at which the current is utilized for the purposes of producing light, power, or heat, as described.

**No. 36,598. Coin-Controlled Testing Machine.** (*Appareil actionné par une pièce de monnaie pour faire l'épreuve de la force.*)

Legrand Ingersoll, Denver, Colorado, assignee of Leon Donne, Chicago, Illinois, U.S.A., 13th May, 1891; 5 years.

*Claim*.—1st. In a coin-controlled power testing machine, the combination, with a graduated dial, an index and a device to which the power is applied, of a part C<sup>1</sup>, actuated by said device, a part C<sup>2</sup>, for actuating said index said parts C<sup>1</sup>, and C<sup>2</sup>, being separable from each other and a trip depending for its operation upon the deposit of a coin for establishing said parts in operative relations to each other, substantially as described. 2nd. In a coin-controlled power testing machine, the combination, with a graduated dial, an index and a device to which the power is applied, of connections between said device and index for transmitting motion from the former to the latter, said connections comprising parts separable from each other means for separating said parts after each operation and holding them normally separated, and mechanism depending for its operation upon the deposit of a coin for re-establishing said parts in operative position, substantially as described. 3rd. In a coin-controlled power testing machine, the combination, with a graduated dial an index and a device to which the power is applied, of connections between said device and index for transmitting motion from the former to the latter, said connections comprising parts separable from each other, and a locking device for preventing the return movement of the index and of the parts connected therewith after each operation and until a coin is deposited, whereupon said lock-

ing device releases said parts and permits them to return to their initial positions, re-establishing connection between the index and the device for receiving the power, substantially as described. 4th. In a coin-controlled testing machine, the combination, with a graduated dial and index moving in front thereof and a handle, of connections between the latter and the index, said connections being constructed in parts separable the one from the other, means for separating the parts after they have been moved to the limit of movement in one direction, and a coin-operated locking device constructed to hold the index and connected parts in the position to which they have been advanced while the other parts are free to move with the handle, substantially as described. 5th. In an automatic testing machine, the combination of a rod moving synchronously with the lifting handles of the machine, a graduated dial, an index moving in front thereof, a rod actuating the index, a projection on this index actuating rod arranged so that when the said rod is moved from its initial position the projection thereon will be automatically moved out of the path which the first-named rod traverses when said first-named rod returns to its initial position, a brake wheel rigidly secured to the pivot of the index, and a brake in engagement with the brake wheel, but permitting rotation thereof to an indicating position, said brake being adapted to release the brake wheel, thereby permitting it to return to its initial position, substantially as described. 6th. In an automatic testing machine, the combination of a rod moving synchronously with the lifting handles of the machine, a graduated dial, an index moving in front thereof, a rod actuating the index, a projection on said rod arranged so that when the rod is moved from its initial position said projection will be automatically moved out of the path which the first-named rod traverses, a brake wheel rigidly secured to the pivot of the index, a brake in engagement with the brake wheel permitting rotation thereof to an indicating position and being adapted to release the brake wheel to permit it to return to its initial position when a coin is brought in engagement with the part actuating the brake, and a detent adapted to engage with the brake lever and hold the brake off the brake wheel while the latter is returning to its initial position, and until such detent is released from engagement with the brake lever by a projection on said brake wheel, which engages therewith as the brake wheel resumes its initial position, substantially as described. 7th. The combination, with the rod C<sup>1</sup>, and means for transmitting thereto the movement produced by the strain and an index of the rod C<sup>2</sup>, means for transmitting its movement to the index, and means for normally holding the rods C<sup>1</sup> and C<sup>2</sup> out of engagement and for establishing them in operative position upon the deposit of a coin, substantially as described. 8th. The combination, with the rod C<sup>1</sup>, and the index of the rod C<sup>2</sup>, means for transmitting its movement to the index, the spring M, the guide G, the cam C<sup>3</sup>, on rod C<sup>2</sup>, locking mechanism for holding the rod C<sup>2</sup> normally elevated, and a trip for releasing said locking mechanism when tripped by a coin, substantially as described.

### No. 36,599. Mill Dog. (*Clameau de scierie.*)

Peter Payette, Penetanguishene, Ontario, Canada, 14th May, 1891; 5 years.

*Claim.*—1st. In a mill dog, the combination of a base piece A, and a standard B, having guide pieces C, formed thereon adapted to receive and hold in position a sliding piece D, with or without a spring bearing H, for the bottom of said sliding piece, an arm F, pivoted to the upper end of the sliding piece D, as well as to a lever G, which has a pivoted fulcrum r, near the base of the standard B, an upright I, having holes c, formed therein to receive the end of a spring pin K, located in the upper part of a sliding block J, vertically adjustable on said upright I, a curved spring N, attached at one end to the sliding block J, designed to press on a pin m, on the inner face of one of the arms of the log dog L, when it is not in use, a log dog L, pivoted to said sliding block J, the log dog L, having arms forming an obtuse angle and provided with a bent spike end v, a lug or catch o, formed on the lower portion of said sliding block, a recess p, formed in said sliding block in which is pivoted a board dog O, behind the log dog L, and having a bearing t, against the bottom of the recess, substantially as described and specified. 2nd. In a mill dog, the combination of a vertically adjustable sliding block J, adapted to move along with a reciprocating sliding piece D, a curved spring N, attached to the sliding block J, a log dog L, pivoted on said sliding block and having a pin m, designed to engage with said curved spring N, and a catch or lug o, formed on said sliding block, substantially as described and specified. 3rd. In a mill dog, the combination of a curved spring N, attached to a sliding block J, and a log dog L, pivoted on the sliding block J, and having a pin or projection m, formed thereon adapted to engage with said curved spring N, substantially as described and for the purpose specified. 4th. In a mill dog, the combination, with a recessed and vertically adjustable sliding block J, adapted to move along with a reciprocating sliding piece D, of a log dog L, and board dog O, pivoted on said sliding block J, the board dog O, being within a recess p, on the sliding block J, and behind the log dog L, and the bearings o, and t, for said dogs, substantially as described and specified.

### No. 36,600. Toy. (*Jouet.*)

Frederic Parkinson, Leicester, England, 14th May, 1891; 5 years.

*Claim.*—In a toy, the combination with a whip of a teat, teething pad, ring or other teething device, ball rattle-bell, or other sounding or rattling device, or any one or more of the same, substantially as herein described and illustrated in the accompanying drawing.

### No. 36,601. Method and Apparatus for the Treatment of Smoke. (*Methode et appareil pour le traitement de la fumée.*)

Samuel Elliott, Newbury, Berks, England, 14th May, 1891; 5 years.

*Claim.*—1st. The construction of apparatus for the treatment of smoke in order to remove the solid matter and noxious gases

therefrom, by taking them from the chimney by a fan or other artificial exhaust, and washing and absorbing them with water or a mixture of water and steam in a violently agitated state, substantially as hereinbefore described. 2nd. In apparatus for the treatment of smoke in order to remove the solid matter and noxious gases therefrom, the combination of the rapidly revolving pipe C, into which the smoke is conducted by an artificial exhaust, with the tank A, containing arrangements for beating and agitating the smoke with the water or a mixture of water and steam, substantially as hereinbefore described. 3rd. In apparatus for the treatment of smoke in order to remove the solid matter and noxious gases therefrom, the combination of the exhaust fan D, with the washing tank A, and the rapidly revolving pipe C, with the wings or beaters and covers for catching the sooty foam, all constructed and arranged, substantially in the manner and for the purposes set forth.

### No. 36,602. Spring Vehicle. (*Ressort de voiture.*)

Frank August Gunkelmann, Medina, Ohio, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. In a spring vehicle, the combination, with vehicle body and longitudinally centrally-located spring of equalizing or balancing springs secured to the opposite ends of the body, and to the axles, one of said springs constructed of a flat bar or leaf of metal bent, substantially as shown, the central member being fastened crosswise to the under side of the vehicle body, and the ends to the axle, and the other spring formed, substantially as shown, with its ends secured to the vehicle body and the central member constituting a cross-bar having a hole adapted to receive the king-bolt, substantially as set forth. 2nd. The combination, with the body of a vehicle and longitudinal centrally located spring, of balancing or equalizing springs secured to the body and to the axles or cross-bar, said springs composed of a flat bar or leaf of metal bent into three members, the central member of which is in a different plane from the other two members and formed by bending the end members across the central member, substantially as set forth.

### No. 36,603. Sash Balance.

(*Contre-poids de croisée*)

Richard Morgan Gardner, Chicago, Illinois, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. In a sash balance, the combination of a block or base piece having an opening therethrough, and a fastening device for securing the tape therein, with a bail carrying the weight and secured in the opening in the block or base piece, substantially as described. 2nd. In a sash balance, the block or base piece having an opening therethrough, a tape or similar suspension device secured thereto, a bail having a weight supported in its loop and its ends passed through the opening in the base piece and secured to the latter, substantially as described. 3rd. In a sash balance, the combination of the block or base piece having an opening therethrough, an elastic wire bail carrying a weight in its loop and having its ends passed through the opening of the base piece, and bent into hooks for supporting it thereon, and a tape which is suitably secured by a wedge block in the opening in said base piece, substantially as described. 4th. In a sash balance, the combination of the base piece having an opening therethrough, and grooves upon the inner faces of the same, a bail supporting a weight and having its ends passed through the opening of the base piece and resting within the grooves of the same, a tape and a wedge block securing the same in the base piece, substantially as described.

### No. 36,604. Automatic Lubricator for Saws. (*Graisneur automatique pour les scies.*)

Richard J. Edwards, Galena, Illinois, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. The combination, with a saw, a reciprocating bar or rod carried by the saw and provided with lubricating pads, these pads being adapted to bear upon the sides of the saw-blade while the same is in operation and automatically lubricate it, as and for the purposes described. 2nd. The combination, with a saw, a reciprocating rod or bar carried by the saw and provided with lubricating pads adapted to bear upon the sides of the saw-blade, and automatically lubricate it while in operation and a spring for actuating the said bar, substantially as described. 3rd. The combination, with a saw-blade, of the main oiling pads and means for actuating the same, supplemental pads connected to the said main pads so as to operate in unison therewith, both pads bearing upon the saw-blade some distance from each other, substantially as described. 4th. The combination, with a saw-blade, of the main oiling pads and means for guiding and actuating the same, the supplemental oiling pads located some distance from the main pads, and a thin flat bar connecting the two sets of pads and adapted to work in the cut formed by the saw in the material being sawed, substantially as shown and described. 5th. The combination, with a saw-blade, of two sets of automatic reciprocating lubricating pads separated from and connected to each other so as to operate in unison and bear upon the saw blade on both sides of the material being sawed, substantially as described.

### No. 36,605. Bucket. (*Seau.*)

Richard Tyler Crawford, Winnsboro, South Carolina, U.S.A., 14th May, 1891; 5 years.

*Claim.*—In a bucket, the body, in combination with the ears B, provided with lateral curved wings b, secured to the interior of the body below the upper edge of the same, and the bail C, provided at its ends with eyes to engage the ears and having the central shank c<sup>2</sup>, and eye c<sup>1</sup>, the parts being so disposed as to bring the bail proper below the upper wall of the bucket body, as and for the purposes set forth.

**No. 36,606. Nut Lock. (Arrête-écrou.)**

Augustus Gross, Sydney, New South Wales, Australia, 14th May, 1891; 5 years.

*Claim.*—The device for locking nuts on bolts, consisting of a key formed with an enlarged or bulbous end, in combination, with a corresponding longitudinal groove or key-way formed in the bolt, the key being made of sufficient length to allow it to be turned over the nut, and thereby secure and retain the nut in position, as herein specified.

**No. 36,607. Fire Box for Heating Boilers.**

(Boîte à feu pour chaudières de calorifère.)

The Hogan Engineering Company, New York, (assignees of J. J. Hogan, Brooklyn), both in State of New York, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. In a boiler having a number of hollow sections superposed one upon another, an annular hollow ring or section around the fire pot provided with an external water inlet, an annular vertical partition opposed to such inlet and forming inner and outer water channels within the ring or section, an aperture in the partition for the passage of the water to the inner channel, and one or more apertures conducting the water upward from such inner channel to the water sections above, as and for the purpose set forth. 2nd. The combination, in a boiler, of a fire box section consisting in a hollow water ring with external inlet, a dome section consisting in a hollow water ring and central chamber U, connected by radial water tubes T, and nozzles l, and m, upon the respective sections, connecting the same together, as and for the purpose set forth. 3rd. The combination, in a boiler, of a fire box section consisting in a hollow water ring provided with the internal partition d', with notch d'', therein, and with the water inlet d', the dome section consisting in the hollow water ring with the internal partition e', and having the central chamber U, connected with the ring by sloping water tubes l, and nozzles l, and m, for connecting the two sections together, substantially as herein set forth. 4th. A fire pot having a sectional lining consisting in the series of fire bricks and provided with apertures extending outward through the wall of the fire pot behind the several bricks of the series, to permit their removal and insertion, substantially as herein set forth. 5th. A fire pot consisting in upper and lower plates connected by vertical bars with intermediate spaces extending to the outside of the fire pot and covers applied to the spaces to retain the firebricks, within the pot, substantially as herein set forth. 6th. A fire pot having apertures extended outward through the same for the removal of the fire brick, and covers formed with outer plates f, and divided inner plates h, connected with the outer plates by ribs i, as and for the purpose set forth.

**No. 36,608. Compound Boiler.**

(Chaudière composée.)

The Hogan Engineering Company, New York, assignees of John J. Hogan, Brooklyn, both in State of New York, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. A compound boiler, consisting in a fire box section and a reservoir section, a water connection between the upper parts of such sections, a water connection between the lower parts of the sections, a water outlet from the reservoir section, and a water inlet to the fire box section, the whole arranged and operated substantially as herein set forth. 2nd. A compound boiler, consisting in a fire box section and a reservoir section, a pipe connecting the centres of the two sections, a water connection between the lower parts of the two sections, a water outlet from the reservoir, and a water inlet to the fire box section, the whole arranged and operated substantially as herein set forth. 3rd. In a boiler, the combination, with a perforated crown plate a, of the water ring c, and reservoir d, connected therewith by central pipe b, water connections between the lower parts of the ring and of the crown plate, the casing f, having smoke outlet i, and the ring having the smoke passage c', extending from the inner pocket e, to the smoke space g, between the ring and the casing, substantially as set forth. 4th. In a boiler, the combination, with the perforated crown plate a, of the tapered water ring c, having smoke passage c', and reservoir d, united with the centre of the crown plate by pipe b, water connections between the lower parts of the ring and the crown plate, and the casing f, having the smoke outlet i, and forming the smoke space g, about the ring, and the combustion chamber h between the ring and the crown plate, the whole arranged and operated, substantially as set forth. 5th. In a boiler, the combination, with the perforated crown plate a, of the tapered water ring c, and reservoir d, connected with the crown plate by central pipe b, the water ring being provided with the pocket e, and passage c', the casing f, having smoke outlet i, and forming the smoke space g, and the combustion chamber h, pipes connecting the lower parts of the ring with the crown plate, and the annular plate o closing the bottom of the space g, the whole arranged and operated, substantially as herein set forth. 6th. In a boiler, the combination, with the perforated crown plate a, having water leg a', of the tapered water ring c, and reservoir d, connected with the crown plate by central pipe b, projected upward into the reservoir, as described, the casing f, having smoke outlet i, and forming the smoke space g, and combustion chamber h, and the pipes k, extended outside the casing and connecting the lower parts of the water ring and the water leg, and the ring having the pocket e and the smoke passage c', extending from the pocket e to the smoke space g within the casing, opposite to the smoke outlet i, the whole arranged and operated, substantially as herein set forth.

**No. 36,609. Apparatus for Promoting Circulation in Boilers. (Appareil pour aider la circulation dans les chaudières.)**

The Hogan Engineering Company, New York, assignees of John J. Hogan, Brooklyn, N.Y., U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. In a boiler, the combination, with a central water passage extended vertically within the boiler for the upward movement of the fluid, of one or more water conductors exterior to the water space of the boiler and connected therewith at its upper and lower parts and exposed to a lower temperature than the contents of such water space, substantially as herein set forth. 2nd. In a boiler comprising a series of water sections separated by intermediate smoke chambers, the combination, with a water passage extending vertically within the boiler through the centres of the water sections, of one or more water conductors exterior to the water space of the boiler, and connected therewith at its upper and lower parts, and also to the intermediate water sections, substantially as herein set forth. 3rd. In a boiler, the combination, with one or more water passages extending vertically within the boiler, of one or more water conductors exterior to the water space of the boiler, connections at intervals between the external conductors and the water space of the boiler, and deflectors projected downward in such connections to prevent the upward movement of fluid from the water space to the conductors, substantially as herein set forth. 4th. In a cast iron sectional boiler having two or more horizontal sections connected with intermediate combustion chambers and having vertical gas or smoke passages extending through the sections, the combination, with the several sections, of water circulating passages connected together at the margin of the sections, and central nozzles formed upon the sections and adapted when pressed together to form a tight joint and an uninterrupted vertical channel for the water in the centre of the boiler, substantially as herein set forth. 5th. In a boiler comprising a series of water sections separated by intermediate smoke chambers, the combination, with a water passage extending vertically within the boiler through the centres of the water sections, of one or more water conductors exterior to the water space of the boiler, connections or water passages between the external conductors and the water sections, and deflectors projected downward in such connections to prevent the upward movement of the fluid from the water space to the conductors, substantially as herein set forth. 6th. In a cast iron boiler, the combination of a series of horizontal water sections having one or more vertical passages connecting the same for the internal upward movement of the fluid, and each section being provided with exterior lugs connected by thimbles, and the water connection between the section and the interior of such lug leading downwardly, as and for the purpose set forth. 7th. In a cast iron boiler, the combination, with a series of horizontal water sections having apertures through them for the passage of smoke, and one or more vertical water passages connecting the said sections for the upward movement of the fluid, of a hollow ring projected downward from the margin of each section, and water connections between such depending rings for the downward movement of the fluid, as and for the purpose set forth. 8th. In a cast iron boiler, the combination of a series of water sections perforated with vertical smoke apertures, and provided at the centre with nozzles to form a vertical water passage, the sections having external hollow lugs connected in a series by means of thimbles, and being provided with guards w within the margins of the sections adjacent to such lugs, to prevent the direct passage of the fluid to the thimbles, substantially as herein set forth. 9th. The combination, in a boiler, of a series of water sections having domed or sloping tops, with water connections forming a continuous passage through the centres of the sections, and vertical water conductors exterior to the sections with passages leading downwardly from each section into such exterior conductors, substantially as herein set forth. 10th. A vertical boiler having transverse water channels with intermediate smoke spaces, a water jacket exterior to and connected with such transverse channels, and two or more vertical water connections independent of the water jacket to provide for an upward and downward circulation within the boiler and outside of such water jacket, substantially as herein set forth. 11th. A vertical boiler having hollow horizontal water sections separated by smoke spaces and perforated for the passage of the smoke, a water jacket connected with the edge of each section and inclosing the same and the smoke space, a vertical water connection between the sections inside the water jacket, and one or more vertical water connections between the sections external to the same, as and for the purpose set forth.

**No. 36,610. Mud-Guard for Vehicle Wheels.**

(Garde-crotte pour roues de voiture.)

Alfred Bouillou, Rimouski, Quebec, Canada, 14th May, 1891; 5 years.

*Resumé.*—1o. Dans un garde boue pour voiture de toute sorte, une garde semicirculaire en forme de u renversé recouvrant complètement la gente de la partie supérieure d'une roue et retenue en position au moyen de tiges fixées à l'essieu tel que décrit et pour les fins mentionnées. 2o. Un garde boue composé du demi cercle A, en forme de u renversé et fixé à l'essieu au moyen des tiges B, B, bifurquées et de la plaque E, et des écrous F, tel qu'indiqués.

**No. 36,611. Tubular Lantern.**

(Lanterne tubulaire.)

William Henry Rodden, Toronto, Ontario, Canada, 14th May, 1891; 5 years.

*Claim.*—1st. In a tubular lantern, the circular sweep or outwardly rounded elbow bend formed on the tube, as described, substantially in the manner and for the purpose specified. 2nd. In a tubular lantern, the seamless bottom oil bowl, with offset or shoulder formed

near the bottom part thereof in combination with the rounded or circular sweep elbow bend formed on a tube with one flat side attached to the bowl, substantially in the manner and for the purpose set forth. 3rd. In a tubular lantern, a burner with a hinged cone, a sieve plate, an inner collar screwed into a collar formed on the oil bowl and its wick spindle located above bottom of the outer skirt, in combination with the solid bottom bowl and the rounded or circular sweep elbow on the tube of one flat side attached to the bowl, substantially in the manner and for the purpose specified. 4th. In a tubular lantern, the rods B, which connect the canopy to the guard, formed to project above the canopy and having a kink *k*, substantially level with the top of the globe, in combination with a storm-collar K, adjustably fitted on the rod B, above the kink. 5th. In a tubular lantern, the rods B, bent to extend above the canopy D, to which they are connected and extending down below the body of the lower guard F, where they are connected to the downward projections *f*, made opposite to the air-tubes of the lantern, in combination with the guiding clips I, connected to and projecting from the said air-tubes. 6th. In a tubular lantern, the upper guard J, wrapped around each air-tube A, and shaped to form loops J, through which the connecting rods B are carried. 7th. In a tubular lantern, a lift and lock for the canopy D, consisting of two handles N, having coiled feet *p*, connected to the said canopy, in combination with the yoke O, surrounding and attached to the top of the said tube, the connecting rods with upward bends thereon, and the guard with downward bends to attach to the rods, and thereby to the lift which operates them. 8th. In a tubular lantern, a globe having near its upper end a rim or deflecting plate projecting to about the diameter of the cap or canopy.

### No. 36,612. Hame. (*Attelle*.)

Martin V. Nichols and Wesley Manning, both of Port Arthur, Ontario, Canada, 15th May, 1891; 55 years.

*Claim.*—1st. A hame having a slot or passage for the hame-strap and provided with a plurality of filling pieces or blocks, which together fill such slot or passage, except so much thereof as is necessary for the passage of the strap, such filling pieces being adjustable or movable independently, whereby the strap may be held above or below the same or between any two thereof, substantially as set forth. 2nd. A hame, substantially as described, having a slot for the passage of the hame-strap and filling pieces E, which together fill such slot, except so much thereof as is necessary for the passage of the strap, said pieces E being fitted movably in the slot and provided at their ends with lugs *e*, whereby they are held in the slot, substantially as set forth. 3rd. A hame having a slot or passage for the hame-strap and filling pieces or blocks by which to hold the said strap in any suitable adjustment, and a jacket fitting over the outer edge of the hame and having its arms provided with slots registering with that in the hame proper, substantially as set forth.

### No. 36,613. Brace for Bedsteads.

(*Lien de couchette*.)

Nicholas Hammer Slaughter, High Point, North Carolina, U.S.A., 14th May, 1891; 5 years.

*Claim.*—1st. The combination, with the frame of a bedstead, having notched cleats attached to the side bars for the reception of the slats, said cleats having supplementary notches for the ends of an adjustable brace, of L-shaped notched plates H, secured to the side bars and to the cleats and having open ended notches the sides of which overlap the sides of said supplementary notches, and a transverse adjustable tie or brace consisting of right and left handed threaded bars *e, e*, with squared and headed outer ends adapted to fit in the supplementary notches of the cleats and adapted to be lowered into and lifted from said notches, and a connecting correspondingly threaded nut, whereby the sides of the bed may be drawn together or forced apart by turning said nut, substantially as described. 2nd. In a bedstead, the combination with the side bars, the notched cleats attached thereto, having supplementary notches for the reception of a transverse brace or tie, of an adjustable transverse brace having squared ends, and the L-shaped notched plates secured to the cleats and to the under sides of the side bars, substantially as described.

### No. 36,614. Fastener for Girths.

(*Attache de sangle*.)

William Thomas McFarlane, Stockton, Utah, U.S.A., 15th May, 1891; 15 years.

*Claim.*—1st. A girth fastener, comprising an arm provided with a hook adapted to be hooked upon a saddle tree, a strap secured by one end on said arm, and a frame separate and independent of and below said arm, and having cross bars under which the said strap passes, which strap also passes over cross bars in said arm, substantially as shown and described. 2nd. A girth fastener, comprising a handled arm having a hook adapted to be hooked on the saddle-tree, and also provided with cross bars, a strap secured by one end to one of the said cross bars and adapted to pass over the other cross bar, and a frame connected with the belly-band and provided with cross bars under which the said strap passes, substantially as shown and described. 3rd. In a girth fastener, for general application, the combination, with a handled arm having cross bars and a hook secured by one end to the saddle-tree or any other object, of a strap secured by one end to one of the said cross bars of the said arm, a frame having cross bars under which the said strap passes, which strap also passes over the second cross bar on the said arm, and links for connecting the said frame with the belly-band, or any other desired object, substantially as shown and described.

### No. 36,615. Pavement. (*Paveé*.)

John Stewart Schaeffer, Newark, New Jersey, U.S.A., 16th May, 1891; 5 years.

*Claim.*—The improved pavement, herein described, combining therein blocks of burned clay or analogous earth having vertically hollow centres and vertical spacing projections on the outside adapted to engage with the adjacent blocks to secure uniform spaces between the said blocks, and a filling of composition firmly packed in said centres and spaces, as described, for the purposes set forth.

### No. 36,616. Boiler. (*Chaudière*.)

Dennis Vincent O'Brien, East Boston, Massachusetts, U.S.A., 16th May, 1891; 5 years.

*Claim.*—The improved down draft tubular boiler having the inclined grate, the tube sheet located at a distance from the rear end of the grate and supporting the forward ends of the ordinary tubes, and the short tubular boiler section interposed between the grate and the fire sheet at the rear end of the grate and composed of the tube sheets extending entirely across the inner shell of the boiler, vertically as well as horizontally, and the short tubes in said sheets located below the grate, said short tubular section being separated from the tube sheet by a chamber into the lower portion of which the products of combustion pass through the tubes of the tubular section, the tubes and the tube sheets composing said section presenting large areas of heating surface to the highly heated products of combustion close to and below the grate, as set forth.

### No. 36,617. Fixture for Curtains.

(*Gouset porte-rideau*.)

Charles Gungel and Valentine C. Trabold, both of Newark, New Jersey, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In combination, with the bar B, and means secured directly to the upper edge of the said bar and extending up therefrom for hanging the same to a window casing, metallic plates arranged on the under side of said bar, shade brackets adjustably arranged on said bar by means of a set-screw which engages with said plates beneath the bar, means formed integrally on said brackets for supporting a lace curtain pole, and rings *e*<sup>2</sup>, on said pole provided with outwardly-projecting tongues or stops thereon to prevent the rotation of said curtain pole in its supports, and a set-screw in each of said rings, arranged, as and for the purposes set forth. 2nd. In combination, with a bar B, provided with eyes and for hanging the same to a window casing, shade brackets adjustably arranged on said bar and secured thereon by means of set-screws, said brackets having means thereon for supporting a shade-roll, arms on said brackets and extending up therefrom above said shade-roll supports, and provided with a curtain pole support, and rings on said pole provided with tongues thereon, and with set-screw, arranged, substantially as and for the purposes set forth. 3rd. In a shade hanger, the combination of a guide plate adapted to be attached permanently to the top of a window casing so as to form an open space between the inner edge of said plate and the upper side of the window frame, said guide plate being provided with a longitudinal slot, a bracket consisting of a body portion *g*, having arms extending up therefrom forming a support for a curtain roller, a perforated bearing plate extending back from said body portion at a right angle thereto and adapted to fit and slide on the upper side of said window frame beneath the slot in said guide plate, and a set-screw on the upper side of said guide plate extending down through the slot therein and secured in said perforated bearing plate, whereby said shade hanger is adjustably secured to the window cornice, as and for the purposes set forth. 4th. The combination, with the upper side of the window cornice, of a curtain roll support consisting of a body portion *g*, provided with a bearing plate extending back therefrom at a right angle, said parts thereby forming an L-shaped support, said bearing plate being provided with a perforation, and said part *g*, being provided with oppositely projecting ears, to firmly cause said L-shaped support to be held in position on the cornice, and roller supporting arms extending out from said part *g*, between the ears, all of said parts being arranged directly on said L-shaped support, substantially as and for the purposes set forth. 5th. In a device for hanging window shades or other articles, in combination, with a bar B, brackets each consisting of a roller bearing arm formed integrally with angular four-sided sockets, through which said bar passes, having flanged bearing plates and having on one side a screw-eye passed through an opening in the socket in the bar, whereby said brackets are adjustably secured thereon and the bar may be suspended from hooks or pins in the window casing or other fixture, as set forth.

### No. 36,618. Drawing Knife. (*Plane*.)

Emanuel Snyder, Cadillac, Michigan, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In a drawing knife, the combination of the frame A, double-edged knife journalled therein and having a ratchet, and a pawl for engaging the ratchet for preventing it from revolving while in use, substantially as described. 2nd. In a drawing knife, the combination of a frame, a double edged knife journalled therein, and having its end projecting through the frame for revolving it, and a holding device for preventing it from revolving, substantially as specified.

### No. 36,619. Digger for Post Holes.

(*Trepan pour clôture*.)

Henry Hall and Joseph William Cook, both of Port Perry, Ontario, Canada, 19th May, 1891; 5 years.

*Claim.*—Two curved spades A, and B, rigidly secured respectively to a crank E, formed on the end of each of the handles C, and D, in combination with the lugs F, and G, projecting from the handles C, and D, and pivoted on the bolt H, and an adjusting set-screw J, substantially as and for the purpose specified.

### No. 36,620. Core Saw. (*Scie à noyau.*)

Edwin Banks Roberts, Emporia, Kansas, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. A core saw, comprising a cylindrical body having teeth at one end, and means for conveying chips from the teeth, substantially as described. 2nd. A core saw, comprising a cylindrical body having a thickened head at one end, and teeth secured to the head, substantially as described. 3rd. A core saw, comprising a cylindrical body having a thickened beveled head, and removable teeth secured in the head, the head and teeth being recessed, substantially as and for the purpose specified. 4th. A core saw, comprising a cylindrical body having a thickened, recessed head at one end, teeth secured to the head and having recesses to correspond with the head recesses, and means for conveying chips from the recesses to the lower end of the saw, substantially as described. 5th. A core saw, comprising a cylindrical body having at one end a beveled, recessed head, removable teeth secured in the head and having recesses to correspond with the head recesses, the spiral bands secured to the saw body and extending throughout its length, substantially as described. 6th. In a core saw, the saw teeth having recesses in their outer sides, and having a forwardly extending lip on their inner sides, substantially as described. 7th. In a core saw, the combination, with the thickened head having dovetail recesses therein, of the removable saw teeth having lugs on one side to fit the recesses, substantially as described.

### No. 36,621. Centre Board for Vessels.

(*Semelle de vaisseau.*)

Joel Couch, Clayton, New York, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In a centre board for vessels, the combination, with a box adapted to receive the centre board, of a front hanger secured to the box by a pin which turns therein, so as to provide means for elevating and depressing said front hanger, and supplemental hangers or braces D, and D', connecting the rear portions of the blades to each other and to the box, substantially as set forth. 2nd. In a centre board for vessels, the combination of a forward hanger having a series of depressions or side recesses, horizontal blades pivoted at their forward ends within said recesses so that they will lie side by side when folded, and hangers pivoted to the rear portion of the blades so as to connect the blades to each other, and a supplemental hanger or brace D, movably secured to the box or well, substantially as set forth. 3rd. The combination, in a centre board for vessels, of a box or housing, blades E, E, adapted to lie within the same when raised and be projected horizontally therefrom when lowered, and hangers B, and D, connecting said blades with the box, the forward hanger being secured to the box, upon a turning pin, the upper portion of the rear hanger being slotted for engagement with a stationary pin carried by the box, substantially as set forth. 4th. In a centre board for vessels, the combination, with a box or housing A, of a main hanger B, having depressions within which the blades are pivoted, presenting shoulders e, against which shoulders f, formed on said blades, abut, substantially as set forth. 5th. The combination, in a centre board for vessels, of a box A, supporting a hanger to which the blades are pivotally attached, together with a supplemental hanger or brace D, pivoted to the blades and to the housing, and presenting on one edge an enlarged portion or web which fits snugly between the side walls of the box to present a rigid support, substantially as set forth.

### No. 36,622. Tuyere. (*Tuyère.*)

David Selway, Toronto, Ontario, Canada, 19th May, 1891; 5 years.

*Claim.*—1st. A chamber located in the bed of a forge and having one or more slots or openings made in its top, in combination with a pipe connecting the said chamber to the blast, substantially as and for the purpose specified. 2nd. A chamber located in the bed of a forge and having one or more slots or openings made in its top, in combination with a pipe connecting the said chamber to the blast, and a pipe or passageway extending from the chamber to the outside of the forge, substantially as and for the purpose specified.

### No. 36,623. Method of and Apparatus for Making Tunnels. (*Méthode de et appareil pour la construction des tunnels.*)

Mathew James Jennings, Mortlake, Surrey, England, 19th May, 1891; 5 years.

*Claim.*—1st. In constructing tunnels, subways, sewers and the like, the use of needles in the manner and for the purpose described. 2nd. In constructing tunnels, subways, sewers and the like beneath water, the use of an apron spread at the bottom of the water so as to check or lessen the flow of water into the workings, substantially as described and set forth. 3rd. Needles for use in the formation of tunnels, formed of metal bars centrally grooved and perforated, and having overlapping gutter-shaped edges, substantially as and for the purpose described and set forth.

### No. 36,624. Set Work for Saw Mills.

(*Charriot de scierie.*)

Hector Gawley, Le Roy, Michigan, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In a saw mill set works, an oscillating lever carrying two feed pawls engaging on opposite sides of a friction wheel on the

setting shaft of the carriage whereby the movement in either direction of the lever turns the same, substantially as described. 2nd. In a set works for saw mills, the combination, with an oscillating feed lever, of a friction disk, two pawls applied on opposite sides thereof and carrying friction blocks, and of springs applied to said pawls in opposite directions, substantially as described. 3rd. In a set works for saw mills, the combination, of a friction wheel having an inner and outer friction face, two feed pawls applied on opposite sides thereof and carrying inner and outer friction blocks, of an oscillating feed lever and actuating connection between said feed lever and the friction pawls, and the springs O, O', arranged to draw the feed pawls in opposite directions, substantially as described. 4th. In a set works for saw mills, the combination, with the friction disk and actuating feed pawls having the friction blocks H, and H', of the releasing lever R, and the tripping arms Q, Q', substantially as described. 5th. The combination, with the actuating shaft C, the friction disks D, and D', having the annular flange E, the feed pawls I, I', engaging between the disks on opposite sides and carrying the pivoted friction blocks H, H', the connecting rods J, J', to which the feed pawls are connected, the tension springs O, and O', the oscillating feed lever K, and the quadrant with its adjustable stop N, substantially as described. 6th. The combination, with the actuating shaft C, of the disks D, and D', with the hub F, integrally formed with one of the disks, the annular flanges E, on said disk forming the inner and outer friction faces, the pawls I, I', engaging between the disks, the friction blocks H, H', and the actuating connection with the oscillating feed lever, substantially as described. 7th. The combination, with the actuating shaft C, of the friction disks D, and D', provided with the hub F, the ring P, provided with the tripping arms Q, Q', the feed pawls I, I', carrying the friction blocks H, H', and projecting into the path of the tripping arms Q, Q', the actuating lever R, on the ring P, and the supporting standard S, substantially as described.

### No. 36,625. Ink Stand. (*Encrier.*)

George Klinoh, Elmira, Ontario, Canada, 19th May, 1891; 5 years.

*Claim.*—1st. In an inkstand, the combination of a reservoir A, a downward and outward extending tube B, having its upper end and orifice in the bottom of said reservoir, a plug B', in the lower end of said tube, a well C, secured to and communicating with said tube, a valve D, closing the orifice of said tube in the bottom of the reservoir, said valve secured to a stem D', projecting above the top of the reservoir and a spring E, in a casing E', holding down said valve, substantially as set forth. 2nd. In an inkstand, the combination of a reservoir A, a downward and outward extending tube B, having its upper end and orifice in the bottom of said reservoir, a well C, secured to and communicating with the lower end of said tube, and a valve D, closing the upper orifice of said tube, said valve secured to a stem extending above the top of the reservoir, substantially as set forth.

### No. 36,626. Safety Switch Frog.

(*Aiguille de croisement.*)

Duncan MacPherson, Montreal, Quebec, Canada, 19th May, 1891; 5 years.

*Claim.*—1st. The combination, of a railway switch and frog and means for connecting same, so that the action of the switch lever will operate both simultaneously. 2nd. In a railway track an unbroken main line rail, at, and in combination with switch and frog. 3rd. The combination, with a switch and a frog, of a crank connected with each, a wheel mounted on each of said cranks and rotated by same, said wheels being connected together by wire ropes and chains, and the whole operated by the switch lever, all as herein set forth. 4th. The combination, with the main line rail A, of switch rail a, a, switch rods C, and plate M, connected with rod O, provided with adjustable spring P, all as herein set forth. 5th. The combination, with the main line rail B, of frog E, with inclined planes e, and f, as and for the purposes set forth.

### No. 36,627. Trap for Gathering Float Gold and Preserving Quicksilver.

(*Trappe pour recueillir l'or flottant et préserver le vif-argent.*)

Frederic Augustus Lukenbach, Denver, Colorado, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. The combination of the lower pan 8, having a porous diaphragm 9, hydrogen chamber 10, and a hydrogen generator connected by pipes therewith, for the purpose substantially as set forth. 2nd. The combination of the upper pan 13, having a series of perforated sheet metal plates attached to the under surface thereof, and the pan 8, holding a body of quicksilver into which the pan 13, and the series of perforated sheet metal plates are immersed, substantially as and for the purpose set forth. 3rd. The combination of the two pans 8, and 13, the pan 8, holding a body of quicksilver kept pure by applying hydrogen in volume and under pressure, the pan 13, held immersed in the quicksilver, and a central conducting pipe 15, with a receiving funnel 5, attached and supported by braces 16, 16, and legs 1, 1, substantially as and for the purpose set forth.

### No. 36,628. Equalizer for Furniture Drawers.

(*Regulateur de tiroir de meuble.*)

Austin Berry, Warden, Quebec, Canada, 19th May, 1891; 5 years.

*Claim.*—1st. An equalizer for furniture drawers, constructed substantially as hereinbefore shown and described, and as and for the purposes set forth. 2nd. The combination, with a drawer and its casing, of the parts or members f, f, attached to the casing through the links g, g, pivoted to the casing and the shears, and to the drawer through the links e, e, substantially as and for the purposes



set forth. 3rd. In an equalizer for furniture and other drawers, the combination, with the links *e, e*, and pivots *d, d'*, or their equivalents, of the thumb piece or keeper *E*, substantially as and for the purposes herein set forth.

### No. 36,629. Cutter for Mowing Machines.

(*Lames de faucheuses.*)

George A. Hall, Deering, Maine, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In a mowing machine, fingers *A*, having a rear extension *B*, provided with a bearing *a*, and a recess *b* between the bearing *a*, and rear portion of the fingers, in combination with the bar *C*, cam shaft *D*, cover *J*, and cutters *F*, substantially as shown and described. 2nd. The cam shaft *D*, upon which is mounted adjustable cams *E*, in combination with cutters *F*, pivoted at or about their centre to the finger bar *C*, and having their rear ends extending beyond the centre of the cam shaft *D*, and provided with rollers *H*, that work in the cam slots, substantially as shown and described. 3rd. The fingers *A*, each having a rear extension *B*, provided with a bearing *a*, for the cam shaft *D*, and a recess *b*, between the bearing *a*, and rear portion of the fingers to receive the finger bar *C*, in combination with the cutters *F*, pivoted at or about their centre to the finger bar *C*, and having at their rear ends antifriction rollers *H*, the cam shaft *D*, adjustable cams *E*, and cover *J*, having bearings *d'*, to correspond to the bearings *a*, and spaces *d*, in which the cams rotate, substantially as shown and described. 4th. In a mowing machine, a series of adjustable cams mounted upon the cam shaft, and held in place by set screws or other equivalent means, whereby the cams can be adjusted upon the shaft to any desired position so as to cause the cutting-blades to stand in any desired angle relatively to each other, substantially as shown and described.

### No. 36,630. Knotting Mechanism for Grain Binders.

(*Appareil à nouer de lieuse à grain.*)

Charles C. Parker, Eardley, Quebec, Canada, 19th May, 1891; 5 years.

*Claim.*—1st. The combination of the wheel 1, having a cam *F*, the knife arm 12, having a spring pawl 19, the cord holder disk 16, provided with a rim having notches 17, and having on the underside a ratchet 18, engaged by said pawl, and the spring cord holder and guide 20, bearing on said disk, as and for the purpose set forth. 2nd. The combination of the wheel 1, having a cam *B*, and the knife arm 12, provided with a hook *G*, to strip the knotted hook 7, of the knot after the cord has been cut by the knife, as set forth. 3rd. The combination of the rotating knotted hook 7, having a pivoted tongue or latch 22, projecting beyond the point of the hook and opened and closed by a cam 23, and a spring 24, respectively, the cord-holding disk 16, having a ratchet 18, on the underside the knife arm 12, provided with a knife 5, and having a spring pawl 19, to engage said ratchet and rotate said disk step by step, and whereby the latch opens sufficiently to take cord enough to make the knot, and the latch when open passes above said disk and cord holder, and the point of the knotted hook below said disk to allow the knotted hook to rotate close to said disk, and the knife cut close to the knot, as set forth. 4th. The combination of the cam wheel 1, having a cam *F*, the knife arm 12, having a knife 5, and pawl 19, and the cord-holder disk 16, having a ratchet 18, engaged by said pawl to rotate said disk and to move the knife clear of the knotting hook to allow the hook to rotate, as set forth.

### No. 36,631. Stopper for Bottles.

(*Bouchon pour bouteilles.*)

Clinton Lee Crawford, Baltimore, Maryland, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. A bottle stopper, consisting of the split stopper proper formed of material capable of swelling or expanding, and the discharge tube extending through the bore thereof and inserted therein through said split, substantially as described. 2nd. A bottle stopper, consisting of the cylindrical cork having a longitudinal bore, and a radial split from the periphery to said bore, and the discharge tube extending through said bore and having the collars integral therewith and bearing against the ends of said cork. 3rd. A bottle having a contracted discharge opening and a chamber beneath and larger than said opening, in combination with a permanent stopper in said chamber expanded therein, and having a discharge tube, substantially as described. 4th. A bottle having a contracted discharge opening and a chamber beneath and larger than said opening, in combination with a permanent stopper expanded in said chamber, and consisting of a stopper proper formed of material capable of expanding and filling said chamber, and the metal discharge tube extending through said stopper, substantially as described. 5th. A bottle having a cylindrical chamber in its neck, contracted at both ends, in combination with the permanent stopper consisting of the cylindrical stopper proper larger than said chamber, and composed of prepared cork forced into said chamber and permanently expanded therein, and the open tube expanding longitudinally through said cork and provided with collars bearing on the same, substantially as described. 6th. A bottle having a chamber beneath its contracted discharge opening, in combination with a stopper permanently expanded in said chamber, and consisting of the stopper proper filling said chamber and provided with the longitudinal bore and radial split thereto, and the tube extending through said bore and provided with collars bearing on opposite ends of said stopper proper.

### No. 36,632. Car Coupling.

(*Attelage de chars.*)

Elmore Stewart, San Diego, California, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. In a car coupling, the combination, with a forwardly

recessed drawhead having an inner inclined lower surface, and an upright guide box that is adapted to receive and loosely support a heavy sliding coupling pin, or a ball in the drawhead, a heavy pin in the guide box having a lateral limb which projects through a slot in the guide box, and a pin lifter device which can be operated from the side of the car, substantially as set forth. 2nd. In a car coupling, the combination, with a forwardly recessed drawhead having an inclined surface on the upper face of its lower wall, a channel therein and a cupped cavity at the front of the channel, a ball in the drawhead adapted to roll in the channel, a cross bar on the top wall of the drawhead recess which will retain the ball in the drawhead, and a vertical guide box on the drawhead, the passage in which intersects the drawhead cavity and is laterally intersected by a slot in the side wall of the guide box, of a coupling pin having a heavy head that loosely fits the passage in the box and has a depending pin on it and a lateral limb which will slide in the slot of the guide box, and a lifter which will raise the pin when actuated from the side of a car, substantially as set forth. 3rd. In a car coupling, the combination, with a recessed drawhead, a guide box thereon, a heavy pin in the box and a ball in the drawhead on which the pin may rest, of a link lifter arm having a rectangular loop shaped free end, which is loosely engaged with a lateral limb on the coupling pin, a rock shaft on the car which the lifter arm projects from, and a lever on the rock shaft which may be manipulated at the side of the car, substantially as set forth. 4th. In a car coupling, the combination, with a forwardly recessed drawhead, the inner lower surface of which is forwardly and downwardly inclined and has a longitudinal channel and cupped cavity therein, a cross bar above the cavity, a spherical ball within the drawhead, a heavy coupling pin which slides in a vertical guide box on the drawhead, and a guide box on the drawhead near its front end which is apertured longitudinally and slotted through one side vertically, of a coupling pin having its head portion formed to slide in the guide box and provided with a lateral limb on the head portion and a depending cylindrical bolt on the lower part of the head aligning with its front edge, a lifting arm that is adapted to raise the coupling pin, and a latch piece pivoted on the side of the guide box which latch piece may be made to hold the pin elevated or depressed, substantially as set forth. 5th. A coupling pin for a car coupling, having a heavy head which has flat parallel sides, a lateral limb near the upper end, and a depending cylindrical pin or bolt projected from the head in alignment with one edge leaving a portion of the head projecting from the pin to rest upon a coupling link and hold it extended in a plane at a right angle to the pin, substantially as set forth. 6th. In a car coupling, the combination, with a drawhead, having a recess in the forward portion of its body, a spherical ball within which is prevented from escape, an upright guide box slotted on one side, a heavy coupling pin having a lateral limb that slides in the slot of the guide box, and a keeper plate pivoted on the guide box to cover its top, of a latch piece having a hook which will engage the pin limb, a pin lifter arm having a looped head which will raise the limb of the coupling pin, and a rocking device connected with the lifter arm and adapted to be manipulated at the side of a car on which the coupling is secured, substantially as set forth.

### No. 36,633. Beam for Scales.

(*Arbre de balance.*)

Seth Kethledge, Norfolk, Nebraska, U.S.A., 19th May, 1891; 5 years.

*Claim.*—The combination, with a scale-beam having a pair of graduated bars forming a continuous longitudinal opening 4, and the two sliding weights arranged on the bars, of the rollers journaled in the opening at the ends thereof and the endless band or measure arranged upon the rollers and within said opening and provided with a double set of graduations, substantially as described.

### No. 36,634. Apparatus for Dressing and Joining Saws.

(*Appareil à dresser et affûter les scies.*)

Joseph H. Leith, Sand Patch, Pennsylvania, U.S.A., 19th May, 1891; 5 years.

*Claim.*—In a device of the class described, the U-shaped clamp mounted upon a suitable extension rod extending from a ring or collar and having the socket provided with oppositely beveled sides the files 12, and 13, mounted in said socket, and the set screw 14, adapted to force the said files against the points of the saw-teeth, substantially as set forth.

### No. 36,635. Ore Amalgamator.

(*Amalgamateur de minerais.*)

John Woodruff Culmer, New Brighton, Pennsylvania, U.S.A., 19th May, 1891; 5 years.

*Claim.*—1st. The combination in a gold amalgamating apparatus, a conical pan having a series of separate concentric troughs for containing mercury, a cover having concentric rings and removable perforated plates fitted within said troughs flatwise upon the surface of the mercury, and having their upper surfaces divided by the said cover rings, for the purpose stated. 2nd. The combination in a gold amalgamating apparatus, a conical pan having a series of separate concentric troughs for containing mercury, a central supply-pipe rising from the inner lowest trough, a cover having concentric rings and having a sleeve upon said pipe and cords, and counter-balance weights connected to said sleeve and to said supply-pipe, whereby the said cover may be raised and held up upon said pipe clear of the mercury troughs, for the purpose stated. 3rd. The combination in a gold amalgamating apparatus, a conical pan having a series of concentric troughs for containing mercury arranged at relative different levels, the inner trough being the lowest and the outer trough being the highest, a central supply-pipe, a cover having concentric rings depending into said troughs, and loose perforated annular plates fitting within said troughs and supplementing the mercury



therein, as set forth. 4th. The combination in a gold amalgamating apparatus of a conical pan, having a series of concentric troughs for containing mercury arranged at relative different heights, the inner trough being the lowest and the outer trough being the highest, a clay ring *d*, arranged to form the inner wall of the lowest trough, and covered by a metallic cap *e*, forming a central chamber *f*, a central supply-pipe mounted upon said metallic cap, a cover having concentric rings depending into said troughs, the pipe *n*, entering the bottom of said chamber, and suitable means for supplying steam through said pipe into the central chamber, as set forth.

**No. 36,636. Apparatus for Making Ices. Ice-Cream, Etc.** (*Appareil pour faire les glaces, crème à la glace, etc.*)

Lafayette D. Railsback, Indianapolis, Indiana, U. S. A., 19th May, 1891; 5 years.

*Claim*.—1st. The combination in a machine for making ice, ice-cream, etc., of the cylinder containing the refrigerant, a receptacle for the liquid to be frozen, and a scraper or chute for removing the product, said cylinder having internal partitions, which partitions extend in curved lines from near the center to near the periphery, the convex sides being toward the advancing side of the cylinder in operation, whereby the refrigerant is forced toward the outside of the cylinder and held against its peripheral casing, while at the same time it is permitted to drop or slide through from one division to another, substantially as shown and described. 2nd. The combination, in a machine for making ice, ice-cream, etc., with the cylinder thereof, of an adjustable spring mounted disintegrating device, substantially as set forth. 3rd. The combination, of the frame, the revolving cylinder containing a refrigerant, a receptacle for the liquid to be frozen, a scraper for removing it therefrom, and an adjustably mounted spring-operated disintegrating device, substantially as set forth. 4th. In a machine for making ice, ice-cream, etc., the combination of a revolving cylinder containing a refrigerant, a receptacle for the liquid to be frozen, a scraper for removing the ice from said cylinder when frozen, and spring arms having inwardly turned ends forming pivots upon which said scraper is mounted, substantially as shown and described. 5th. In a machine for making ice, ice-cream, etc., the combination of a revolving cylinder containing a refrigerant, a receptacle for the liquid to be frozen, a scraper for removing the ice from said cylinder when frozen, and spring arms, the upper ends of which are formed crook-shaped with the points inwardly turned and forming pivots upon which said scraper is mounted, substantially as set forth. 6th. The combination in a machine for making ice, ice-cream, etc., of the cylinder, a receptacle for the liquid to be frozen, a spring-mounted scraper for removing it therefrom, and a spring-mounted disintegrating device, substantially as set forth. 7th. The combination in a machine for making ice, ice-cream, etc., of the cylinder, a receptacle for the liquid to be frozen, a scraper for removing it therefrom, and a disintegrating device resting in slides in the frame-work arranged directly above the scraper and mounted on spring arms, substantially as shown and described. 8th. The combination, in a machine for making ice, ice-cream, etc., of a revolving cylinder, a receptacle for the liquid to be frozen, a scraper for removing the ice therefrom, when frozen, and a disintegrating device arranged in advance of the scraper and mounted on spring arms and small pins *a*, whereby when desired, said scraper can be held out of contact with said cylinder, substantially as shown and described.

**No. 36,637. Furnace.** (*Calorifère.*)

John Randolph Hersey, Montreal, Quebec, Canada, 19th May, 1891; 5 years.

*Claim*.—1st. The combination in a furnace, of the fire-chamber *a*, with side walls having passages *b*, and openings *i*, and blast pipes *k*, the whole substantially as shown and described. 2nd. The combination in a furnace, of the fire-chamber *a*, with side walls having passages *b*, openings *i*, and pipes *k*, having steam jets *l*, the whole substantially as shown and described.

**No. 36,638. Hinge for Seats.**

(*Penture de siège.*)

Alexander John Gilmour and Walter Henry Morden, both of Toronto, Ontario, Canada, 19th May, 1891; 5 years.

*Claim*.—A trunnion formed upon the seat bracket and journalled in the side frame, a projecting rib being formed on the trunnion, and a recess in the journal, substantially as and for the purpose specified.

**No. 36,639. Plow-Share.** (*Soc de charrue.*)

William Reid Russell, Adelaide, William Heithersay, Petersburg, and Ernest Eyston Harrold, Adelaide, all in South Australia, 19th May, 1891; 5 years.

*Claim*.—1st. The construction of a socket piece, of shape to fit any approximately straight plough foot, having at its outer part an approximately central recess to receive the corresponding projection or plug of a share blade, the two parts, with a pin, forming a complete plough share, and the share blade being capable of being detached and reversed. 2nd. The construction, of a share blade of equal shape at both points and sides, and having a central projecting part or plug fitting into a corresponding recess in the socket piece, the plug and recess being constructed and varied to fit the toe of any approximately straight plough foot, substantially as described thus enabling the blade when worn at one point to be detached and reversed, and the other point which has become sharpened by the action of the plough to be used as the point.

**No. 36,640. Carrier for Crushed Stone, Ore. Etc.** (*Transport à pierre, minéral, etc.*)

Frank St. Clair and John Barnes Varick, both of Manchester, New Hampshire, U. S. A., 20th May, 1891; 5 years.

*Claim*.—1st. In a conveyor and endless flexible carrying belt supported on rollers or drums, and provided on its outer or carrying surface with metallic protecting plates or lags secured thereto, and extending transversely across the same, in combination with stationary side plates or shields arranged at the edges of said belts and extending down nearly to the level of the same, whereby the material being carried is prevented from dropping off at the edges of the belt, substantially as set forth. 2nd. In a conveyor, an endless flexible carrying belt provided on its outer or carrying surface with metallic protecting plates or lags secured thereto, and extending transversely across the same, and having their opposite ends turned up, substantially as described, and the joints between said plates being protected by narrow metallic covering strips, each secured to one plate at its edge, and lapping over the edge of the plate contiguous thereto, in combination, with stationary side plates or shields arranged at the edges of said belt, and extending down of the inner sides of the turned-up portion of the protecting plates, substantially as described. 3rd. In a conveyor, the combination with an endless flexible carrying belt *D*, supported on rollers or drums, of a series of transverse metallic covering plates or lags *e*, secured thereto on its outer or carrying surface, and having their opposite end *12* turned up at an angle, the joint covering plates *g*, each bolted to the upper side of one of the plates *e*, and lapping over the edge of the adjoining plate, and the stationary plates or shields *H*, secured to the sides of the frame-work and projecting down nearly to the level of the belt and overlapping the inner sides of the turned-up end *12*, of the plates *e*, said ends travelling in the spaces *i*, between the plates or shields *H*, and the sides of the frame-work, substantially as described.

**No. 36,641. Freezer for Ice Cream.**

(*Congélateur pour crème à la glace.*)

Frederic B. Cochran, New York, U. S. A., 20th May, 1891; 5 years.

*Claim*.—1st. In an ice-cream freezer, the combination with the case and a revolving cylinder, of a cream pan mounted beneath the cylinder, slotted plates secured in opposite ends of the case and provided with a series of shelves of different heights, and a supporting rod extending beneath the pan and through the slotted plates, substantially as described. 2nd. In an ice-cream freezer, the combination, with the case, and a vertically-adjustable rod extending through the case, of a pan mounted on the rod and provided with projecting lugs to enter recesses of the case, substantially as described. 3rd. In an ice-cream freezer, the combination with the revolving cylinder, and a sliding receptacle arranged at one side of the cylinder, of a handle having depending strips to engage one side of the receptacle, and a bent end to press against the opposite side thereof, substantially as described. 4th. In an ice-cream freezer, the combination, with the case, a revolvable cylinder mounted therein, and a sliding receptacle at one side of the cylinder, of a handle extending through a slot in the case and shaped to clasp one side and press against the opposite side of the receptacle, substantially as described.

**No. 36,642. Timber Seat and Tie for Buildings.** (*Charpente et lien de bâtisse.*)

Henry August Goetz, New Albany, Indiana, U. S. A., 20th May, 1891; 5 years.

*Claim*.—1st. In combined seats and ties for posts and beams for buildings, a combined seat and tie cap constructed to provide for its connection by bolts to the base portion of an upper post, and provided with a base plate arranged to extend, also the sides of the cap, laterally beyond the post, and provided with anchoring lugs or projections on its upper surface for the beams of the structure designed to be sustained by the cap, substantially as specified. 2nd. In combined seats and ties for posts and beams of buildings, a combined seat and tie cap having an intermediate diaphragm or base plate, and upwardly and downwardly projecting sides, constructed to provide for construction of said cap by bolts to the sides of the top of a lower and sides of the base portion of an upper post, to form a continuous column of said posts, and having lateral base plate extensions provided on their upper surfaces with upwardly-projecting anchoring lugs for the beams of the structure, essentially as described. 3rd. A combined seat and tie cap for posts and beams of buildings, constructed to interlock an upper and lower post together by upwardly and downwardly-extending side plates fastened on to the sides of the posts, and to engage or lock with the beams of the structure by outwardly-extending side plates provided with lugs, whereby any part may fall away without disturbing the remainder, substantially as shown and described. 4th. A post or column cap for buildings, bolted to the base of an upper post, and provided with outwardly-projecting base plate portions adapted to form a rest for the beams, substantially as shown and described. 5th. The combination with an upper and a lower post, of a combined seat and tie cap having upwardly-extending sides, fastenings securing said seat and tie to the base of the upper post, and lateral base plate extensions provided with upwardly-projecting anchoring lugs, essentially as set forth.

**No. 36,643. Mill Dog.** (*Clameau.*)

Peter Payette, Penetanguishene, Ontario, Canada, 20th May, 1891; 5 years.

*Claim*.—1st. In a mill-dog, the combination, with the base *A*, with or without spring-bearing *B*, and standard *B*, having a groove formed therein, of the sliding-frame *C*, having ratchet teeth *f*, and groove *a*,

the bearing-piece G, pivoted log-dogs H, bar K, and sliding-bar J, and rundles x, pins b, and b', bar Q, and rungs t, pivoted pawl P, with means for holding its toothed projection q, away from the ratchet teeth f, pivoted arm N, and pivoted lever L, substantially as described and specified. 2nd. In a mill-dog, the combination, with the base A, with or without spring-bearing O, and standard B, having grooves formed thereon, of the sliding-frame D, board-dogs U, and bearing-pieces u, pivoted arm E, lever F, and log-dogs H, vertically adjustable on the standard B, substantially as described and specified. 3rd. In a mill-dog, the log-dogs H shaped as shown, and pivoted alternately on the opposite sides of a bearing-piece G, in combination with a grooved sliding-frame C, vertically adjustable in the standard B, the bar K, sliding-bar J, and rundles x, pins b, and b', and rungs t, substantially as described and specified.

### No. 36,644. Car Coupler. (*Attelage de chars.*)

James Hatfield, Cincinnati, Ohio, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. A draw-head A, having a recess a, across one of its vertical contact faces, said recess extending along the inner top face of the lower horizontal contact face and terminating in the inner edge of the opposite vertical face, the contact portion of said latter face being smooth and unbroken, said draw-head having a swinging arm B, connected thereto, the angular portion of which rests normally within said recess a, and suitable means for elevating said arm, for the purposes set forth. 2nd. In combination, with draw-head A, having in its contact face a grooved recess a, and a vibrating arm B, rotatably connected to said draw-head, the lower angular portion of said arm resting normally in said recess, the gravity hook D, pivotally connected to said draw-head and extending up into the hollow portion thereof, coupling pin E, and suitable means for elevating said arm and pin, for the purposes specified. 3rd. In combination, with a draw-head A, having in its contact face a grooved recess a, and a vibrating arm B, rotatably connected to said draw-head, the lower angular portion of said arm resting in said recess, the rod g, and swinging bar G, said rod g being loosely connected to said arm and bar, for the purposes specified. 4th. In combination, with draw-head A, having a grooved recess a, in its contact face and a vibrating arm B, resting normally in said recess substantially as set forth, the rod g, swinging bar G, said rod g being loosely connected to said arm and bar, bar K, loosely connected at one end to said arm the other end of bar K, having an enlarged portion k, the free end of said bar resting in a bracket L, and lever N, pivoted in said bracket and adapted to impinge against the enlarged portion k, as set forth. 5th. In combination, with a draw-head A, constructed substantially as set forth, and having a gravity hook D, pivotally connected thereto and extending up into the hollow portion thereof, the coupling pin E, rod e', lever e, e', e'', and crank lever F, the hooked portion f, of lever F, being located adjacent to and back of the lever portion e, the latter being loosely connected with said coupling pin by means of rod e', as set forth. 6th. A draw-head A, having a recess a, across one only of its vertical contact faces and along the upper edge of its lower horizontal face as set forth, in combination with a vibrating arm B, suitably connected to said draw-head, the lower horizontal portion of said arm resting normally in said recess, and means, substantially as set forth, for elevating said arm, for the purposes specified. 7th. The means, herein set forth, for elevating and adjusting the link of a coupler, the same consisting of vibrating bars g', pivotally connected to the bottom of the car, and bar G, rigidly connected to the free ends of said bars, said bar G, extending across the bottom of the car, in combination with suitable connecting mechanism between said bar and link J, for the purposes specified.

### No. 36,645. Folding Bath Tub.

(*Baignoire pliante.*)

Edgar Herbert Grant, Marshall, Michigan, U.S.A., 20th May, 1891, 5 years.

*Claim.*—1st. In combination, with a folding bath tub hinged to a fixed support, of an outlet pipe secured to the bottom of said tub, and having an outwardly extending arm of an apertured fixture connected to the permanent waste pipe, a flexible packing therein, and a flaring mouth therefor, said arm on the tub adapted to enter the aperture in said fixture, substantially as described. 2nd. In combination, with a folding bath tub having rollers a, a, and rods b, b, said rods being hinged to the tub and a fixed support, an outlet pipe secured to the bottom of the tub and provided with a portion which extends parallel with the bottom thereof, a two-part fixture D, one of the sides of which has a conical projecting flange, the other portion being internally cross threaded, a gasket clamped between the two parts of the fixture to present an internal projecting portion within the fixture, the latter being adapted to be secured to the floor, so that the waste pipe attached to the tub will enter the same and bear within the internal projecting portion of the gasket to secure a tight joint, substantially as described.

### No. 36,646. Steam Trap. (*Trappe de vapeur.*)

Edward Ethel Gold, New York, State of New York, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. In a steam trap, a trap casing having a steam admission opening, whereby it is connected with a steam pipe, in combination with cover for said trap, reciprocal lugs and hooks on said cover and casing having inter-engaging inclined faces and said cover being weighted on one side of its axis, whereby said weight holds said cover against axial movement on said casing, and so prevents the displacement of the cover by the vibrations and jar to which the trap is subjected, substantially as set forth. 2nd. In a steam trap, a casing having a steam inlet and an annular inwardly projecting metallic nipple O, projecting within said casing surrounding said steam inlet and constituting an auxiliary valve seat, in combina-

tion with a main valve seat of elastic material surrounding said nipple and projecting within said casing to a greater distance than said auxiliary valve seat, an annular retaining ring M, surrounding said main valve seat, the outer surface of which does not project so far within said casing as does the nipple O, and a thermo-expandible valve within said casing, which seats normally against said main valve seat, but when said valve seat is worn seats only against said auxiliary valve seat, substantially as set forth.

### No. 36,647. Method of Producing Alternating Electric Currents. (*Mode de production des courants électriques et alternatifs.*)

Mahlon S. Conly, Chicago, Illinois, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. The herein described method of producing high tension impulses in a line circuit, the same consisting in first closing a local battery circuit including a helix, thereby causing the helix to become electrostatically saturated, then simultaneously opening the electric circuit and introducing the line circuit therein, thereby permitting the electro-static discharge from the helix to traverse the line circuit, substantially as described. 2nd. The herein described method of producing alternating electric currents in a line circuit, the same consisting in first closing a local battery circuit in which is included a helix, thereby causing the helix to become electro-statically saturated, and then simultaneously opening the local circuit and introducing the line circuit therein, alternately reversing the terminals of the local circuit with the terminals of the line circuit after each closing of the local circuit, whereby the electro-static discharge from the helix will traverse the line circuit in alternately opposite directions, substantially as described.

### No. 36,648. Cover for Umbrellas, etc.

(*Couverture de parapluie.*)

Andrew Jackson Robinson, Boston, Massachusetts, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. A detachable cover for umbrellas and parasols, having sockets or other means by which the outer edge may be attached to or connected with the bows, combined with a flexible or yielding collar or connection consisting of a tubular portion having an inwardly extended thin lip adapted to encircle and contact with the stick, substantially as described. 2nd. A detachable cover for umbrellas and parasols, having sockets or other means by which the outer edge may be attached to or connected with the bows, combined with a flexible or yielding connection comprising a tubular or body portion having a lip encircling the stick, and having a flange, as 3, and a metallic supporting collar, substantially as described. 3rd. A detachable cover for umbrellas and parasols, having sockets or other means by which the outer edge may be attached to or connected with the bows, combined with a flexible or yielding connection consisting of a tubular portion having a thin lip adapted to encircle the stick, and the metallic collar, the cover being held or supported by said metallic collar, substantially as described. 4th. A detachable umbrella cover having sockets or other suitable means at the edge to hold it on the bows or ribs, combined with a yielding connection for the stick, and two independent collars between which the cover is held, substantially as described. 5th. A detachable umbrella cover having means at the edge for holding it on the bows or ribs, combined with a yielding connection for the stick, and two metallic collars, the upper edge of one of which is turned over the other and formed to bind the cover firmly between them, substantially as described. 6th. A detachable umbrella cover having means at the edge to hold it on the bows or ribs, combined with a yielding connection encircling the stick, two metallic binding collars for the cover, and an interposed washer of yielding material, substantially as described. 7th. A detachable umbrella cover having means at the edge to hold it on the bows or ribs, combined with a yielding connection encircling the stick, a metallic shield or collar for binding or holding the cover frictionally, and an interposed washer d, attached to the cover, substantially as described. 8th. The connection for umbrella covers consisting of a tapering collar e, and an outer collar f, made shorter than the collar e, and having a bent end f', the material to be clamped being placed between the said bent end f', and the larger end of the collar e, and the flange e', on the collar e, which is pressed down over the upper edge of the outer collar f, after the material is placed in position, to thereby hold the parts assembled, substantially as described. 9th. The rib receiving tip, and an extended tongue, as o', on it, combined with an independent compressible hollow cylindrical shell, as u, said shell and tongue co-operating, as shown and described, to bind the material in place, as and for the purposes set forth. 10th. The rib receiving tip, and an extended tongue o', on it, combined with two connected side walls adapted to enclose the tongue and bind the material between the tongue and one of the said side walls, substantially as described. 11th. The hollow rib receiving tip o, and tongue on it having a depression, as u', combined with two connected side walls embracing both the tongue and the material placed between said tongue and one of the said walls, and a depression, as o'', formed in one of the said walls, substantially as described. 12th. The hollow rib receiving tip o, and tongue o', on it, combined with two connected side walls embracing both the tongue and the material placed between said tongue and one of the side walls, substantially as and for the purposes specified.

### No. 36,649. Woven Wire Mattress.

(*Sommier en fil de fer tissé.*)

Albert H. Thompson, Longueuil, Quebec, Canada, 20th May, 1891; 5 years.

*Claim.*—1st. A woven wire mattress having the woven wire fabric E, secured to the longitudinal side rails A, A, of the frame and unconnected to the head and foot rails B, C, respectively, as set forth.

2nd. A woven wire mattress, consisting of the longitudinal side rails A, A, connected transversely to the top side of the head rail B, and foot rail C, the intermediate parallel rails H, connected to the side rails, the coiled springs J, seated on said rails H, and the woven wire fabric E, secured to said side rails A, A, and unconnected to the head and foot rails and bearing on said springs J, as set forth.

### No. 36,650. Switch Stand.

(*Bâti d'aiguille de chemin de fer.*)

Aaron A. Ackerly, Chicago, Illinois, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. In a switch stand, the combination of a standard spindle journaled therein, a switch crank loosely mounted on such spindle, the lower part of such clutch being attached to the switch crank, and the upper part splined on the spindle, and a coiled spring holding the two parts of the clutch normally in engagement but yielding to the flange pressure of a passing train, whereby the switch may be operated by hand or automatically, substantially as described. 2d. In an automatic switch stand, the combination of the standard A, the spindle C, journaled therein, the operating lever D, the switch crank E, loosely mounted on such spindle and carrying into the lower part F, of a two part clutch the upper part G, of such clutch splined on the spindle so as to slide upon and rotate with but not independently of such spindle, coiled spring H, for holding the two parts of the clutch in engagement when the switch is operated by hand, but yielding to flange pressure to allow the switch to operate automatically nuts I, I, for regulating the tension of such spring, and means for preventing the spindle from rising, substantially as described.

### No. 36,651. Aerator for Milk. (*Aérateur à lait.*)

Carnie David Jewell, East Farnham, and Clarence Arthur Warden, Cowansville, both in Quebec, Canada, 20th May, 1891; 5 years.

*Claim.*—The combination of the receiving tank A, having a bottom provided with holes B, and the coned or domed plate E, having a ventilating hole F, and the inverted coned or domed plate G, with its strainer H, and disk I, substantially as and for the purpose hereinbefore set forth.

### No. 36,652. Nut Lock. (*Arrête écrou.*)

Harry Gorgas Fittler and William Henry Armstrong, both of Philadelphia, Pennsylvania, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. In combination, with a fish plate, a bolt and a many sided nut, a fish bolt nut lock mounted upon said bolt between the nut and plate, said nut lock embodying a free portion or end capable of radial movement with respect to the bolt and nut upon which end or portion is mounted, a flange which normally sets against a side face of the nut but which flange in the manipulation of the nut is transiently lifted by the contact of a corner thereof in passing beneath it, said nut lock being formed as a spring so as to bear respectively against and tend to force apart the fish plate and nut, and so as to present said flange against the side of the nut in the different positions of the latter upon the bolt, substantially as set forth. 2nd. In combination, with a fish plate, a bolt and a many sided nut, a fish bolt nut lock consisting of a bar of metal formed intermediately of its length into an open eye through which the bolt extends, one end portion of said bar extending away from the eye and then returning so that its extremity lies within the opening of said eye, and beneath the nut, said returning extremity being set out from the fish plate to press said nut away from the fish plate, and a flange extending along the side of the portion of the bar extremity which is beneath the nut which flange normally sets against, and along the side of the nut, substantially as set forth. 3rd. As an article of manufacture, a nut lock embodying an eye and a wing in the form of a return bend, the extremity portion of the metal of which wing is equipped with a side flange, substantially as set forth. 4th. As an article of manufacture, a nut lock provided with a portion adapted to bear against the under side of a nut which it is employed to lock, and a flange adapted to bear against a side face of said nut, said nut lock being formed of spring metal and bent in such manner as to cause it to bear against said under face, and said side face with a yielding pressure, substantially as set forth. 5th. As an article of manufacture, a nut lock formed of a bar of steel bent, substantially as described, to form an eye in its intermediate portion, and one end of said bar being extended away from said eye and then returned to it the extremity of which end portion is set out from the plane of the eye and is equipped with a side flange, as specified. 6th. As an article of manufacture, a nut lock consisting of a bar of metal bent to form an eye, and a wing or return bend, the extremity of which wing lies within said eye and is angular in cross section so that a portion of it bears against the under face, and a portion against the side face of a nut, substantially as set forth. 7th. As an article of manufacture, a nut lock consisting of a bar of metal bent to form an eye, and a wing or return bend, the extremity of which lies within said eye and is angular in cross section, so that a portion of it bears against the under face, and a portion against the side face of a nut, which nut lock is oppositely bent, substantially as set forth. 8th. As an article of manufacture, a nut lock formed of a bar of steel embodying an eye and two wings, one of said wings being in the form of a return bend, the extremity of which is equipped with a flange and which extremity is adapted to bear against the under face and against a side face of a nut, and the other wing of which extends away from said eye in a direction opposite to that of the wing first mentioned, the whole being oppositely bent to constitute it a spring, substantially as set forth.

### No. 36,653. Baking Powder. (*Poudre de cuisson.*)

Hervy Dexter Thatcher, Potsdam, New York, U.S.A., 20th May, 1891; 5 years.

*Claim.*—The improved baking powder herein described, the same consisting of cream of tartar, about sixty-seven parts, bicarbonate of sodium, twenty-nine to thirty-one parts, and sugar, of milk about four parts, substantially as set forth.

### No. 36,654. Air Pump. (*Pompe à air.*)

The New York Air Brake Company, New York city, assignees of Albert Parsons Massey, Watertown, New York, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. A duplex air-pump, consisting of two air-cylinders in which the stroke of one piston is practically completed before the other piston starts, combined with valves arranged to admit air at atmospheric pressure to both cylinders, and on the return stroke to compress the air from larger cylinder into the smaller cylinder before the smaller piston starts, and then expel the air from the smaller cylinder into the reservoir, substantially as set forth. 2nd. A duplex air-pump, consisting of two steam-cylinders containing pistons connected with pistons in two air-cylinders, two steam valves arranged in line with said pistons and actuated by them, a series of ports connecting each steam valve with both ends of the opposite cylinder so that the action of each piston controls the movements of the other, two air-cylinders with inlet-valves from the atmosphere to the larger cylinder valves between the larger cylinder, and the smaller cylinder which will admit air to the smaller cylinder first from the atmosphere through the main inlet-valve chambers, and secondly from the larger cylinder to the smaller cylinder and valves between the smaller cylinder, and a passage leading to a reservoir, substantially as set forth.

### No. 36,655. Valve for Regulating Fluid Pressure. (*Souape pour regler la pression des fluides.*)

The New York Air Brake Company, New York city, assignees of Albert Parsons Massey, Watertown, New York, U.S.A., 20th May, 1891; 5 years.

*Claim.*—1st. In a fluid pressure valve mechanism, two pistons or diaphragms connected by a bell crank lever so that the effective leverage of one increases when the effective leverage of the other decreases, a cylinder connected with a source of supply of fluid pressure inclosing said pistons or diaphragms so that they are exposed to the fluid pressure on the inner sides, but one is exposed to atmospheric pressure on the outside, and the other is exposed to the train pipe pressure in a chamber connected with a train pipe, a valve opening from the train pipe chamber to the atmosphere, a lever connected at one end with said valve and at the other end with the piston mechanism, and a movable fulcrum for said lever combined in such a manner that when the valve is opened by means of the lever and movable fulcrum, the reduction of pressure in the train pipe will allow the piston to raise the other end of the lever and close the valve, substantially as set forth. 2d. In a fluid pressure valve mechanism, a cylinder connected with a source of supply of fluid pressure, a chamber connected with a train pipe, a valve controlling an opening between these two chambers, a lever which actuates said valve, a valve opening between the train pipe chamber and the atmosphere, and a lever which actuates said valve and also actuates the lever which actuates the valve between the cylinder and the train pipe chamber combined with a piston situated in the cylinder between the cylinder reservoir, and the train pipe chamber to actuate said levers and valves, substantially as set forth. 3rd. In a valve mechanism for regulating the flow of fluid pressure, the combination of a cylinder connected with a source of supply of fluid pressure, a chamber connected with a train pipe, a diaphragm between the cylinder reservoir and the atmosphere, a piston between the cylinder reservoir and the train pipe chamber, a bell crank lever connected to said diaphragm and piston by links, a lever with a movable fulcrum, a valve between the train pipe and the atmosphere, a lever moving on a fixed fulcrum actuated by the lever on the movable fulcrum, and a valve between the train pipe chamber and the cylinder reservoir, substantially as set forth.

### No. 36,656. Steam Air Compressor.

(*Machine de compression à vapeur.*)

The New York Air Brake Company, New York city, assignees of Albert Thomas Massey, Watertown, New York, U.S.A., 20th May, 1891, 5 years.

*Claim.*—1st. In a compound steam air-compressor, a high pressure steam cylinder and piston, and a low pressure steam cylinder and piston in which the steam from the high pressure cylinder is used expansively combined with a valve admitting steam from the boiler to the high pressure cylinder, and a valve admitting steam from the high pressure cylinder to the low pressure cylinder, and valve stems arranged with tappets so that each piston will control the action of the valve of the opposite cylinder and cause one piston to practically complete a stroke before the other piston starts, substantially as set forth. 2nd. In a compound steam air-compressor, a double-ported valve between the high pressure cylinder and the low pressure cylinder, combined with a valve controlling the admission of steam from the boiler to the high pressure cylinder, and a spring to return said valve to a position that will cut off steam from the boiler to the passage leading to the cylinders during the stroke of the low pressure piston, substantially as set forth.

### No. 36,657. Metallic Railroad Ties.

(*Traverse métallique de chemin de fer.*)

Ellison Saunders and Joseph Graves Booth, both of Austin, Texas, U.S.A., 20th May, 1891, 5 years.

*Claim.*—1st. In a metallic railroad tie, the combination, with the base plate A, having the blocks D, D', cast solid with a depressed middle portion and forming raised seats for the rails, of one or more tension rods extending through said blocks and bearing against the solid outer ends of the same, substantially as shown and described. 2nd. A metallic railroad tie, comprising a base plate provided with up-turned ends, one or more stay rods or braces connecting the said ends with each other, blocks formed at or near the said up-turned ends, and forming rests for the rails, and spikes adapted to pass

through inclined apertures in the said blocks, and lock the rails to the said blocks, substantially as shown and described. 3rd. In a metallic railroad tie, the combination, with the base plate, of sets of blocks secured or formed on the said base plate, and each provided with a series of inclined apertures, and spikes adapted to be driven through the said apertures to engage with their heads the base of the rails, to have their pointed ends clinched at the sides of the blocks, substantially as shown and described.

### No. 36,658. Combination Divan-Bedsteads.

(*Lit-divan combinés.*)

Napoleon Joseph Cote and the Firm of Rolland & Brothers, Montreal, Quebec, Canada, 20th May, 1891, 5 years.

*Claim.*—1st. In combination, with a divan or sofa a spring bed bottom movably connected with same, located beneath the body of same and adapted to be drawn out to form an extension thereof, for the purpose set forth. 2nd. The combination, with the sofa body and its extensible head, of the guide beams E, F, the sliding spring bed bottom or extension, the loose upholstered cushion or mattress B, and means for governing the extent of movement of such extension and for supporting the whole, as set forth.

### No. 36,659. Two-Wheeled Vehicle.

(*Voiture à deux roues.*)

Jay J. Ludwick, Charlotte, and Albert F. Peake, Jackson, both in Michigan, U.S.A., 20th May, 1891, 5 years.

*Claim.*—1st. The combination of the thills, the body, the axle, the levers fulcrumed to the axle, the springs attached at one end to the thills and at the other end to the rear end of the levers, and hangers suspending the body from the front end of the levers, substantially as set forth. 2nd. The combination of the body, the transverse bar, the braces attaching said bar to the body, the axle, the levers fulcrumed to the axle, the hangers attached to the end of the transverse bar and to the front end of the levers, and the springs attached to the thills and to the rear end of the levers, substantially as set forth.

### No. 36,660. Gate for Railways.

(*Barrrière de chemin de fer.*)

George A. Sanders and Samuel J. Willett, assignees of Nelson Newman, all of Springfield, Illinois, U.S.A., 20th May, 1891, 5 years.

*Claim.*—1st. The gate consisting of the pivoted slats, in combination with the box in which one end of the gate is pivoted, a pulley S, and guide pulley X, arranged in opposite sides of the box said pulley S, having the crank and the cords A', B', connecting the pulley S, and the slats of the gate, one of said cords being guided on the pulley X, substantially as and for the purpose described. 2nd. In combination, with the pair of lazy tongues gates and independent mechanism for operating them, the pulleys and endless cord connecting said mechanism, substantially as and for the purpose set forth.

### No. 36,661. Process of Securing Metal Trimmings.

(*Procédé d'application des garnitures métalliques.*)

The Gendron Manufacturing Company, Toronto, Ontario, Canada, assignees of Peter Gendron, Toledo, Ohio, U.S.A., 20th May, 1891; 5 years.

*Claim.*—The herein described process of applying malleable trimmings to bodies, which consists in first adjusting the trimming to the desired point upon the body, and then in applying the pressure thereon, firmly seating the trimming upon the body, substantially as described.

### No. 36,662. Mechanism for Propelling Vehicles.

(*Mécanisme de propulsion des voitures.*)

Mark A. Libbey, South Berwick, Maine, U.S.A., 21st May, 1891; 5 years.

*Claim.*—1st. A vehicle-propelling mechanism, comprising annular flanges fixed to the vehicle wheels, frictional rollers bearing against the outer and inner surfaces of the flanges, suitable supports for said rollers, and means for imparting motion to the same, substantially as described. 2nd. A vehicle-propelling mechanism, consisting essentially of annular flanges fixed to the vehicle wheels, frictional rollers to clasp said flanges, a shaft extending across the vehicle and connected with said rollers, suitable supports for said shaft, and means for rotating the shaft, substantially as and for the purpose specified. 3rd. A vehicle-propelling mechanism, consisting essentially of annular flanges fixed to the vehicle wheels, frictional rollers clasp said flanges and having suitable springs to force them against the same, a transverse shaft connecting the rollers of one side with those of the other, a frictional disk fixed to said shaft, and two parallel shafts having one end provided with frictional rollers to clasp the disk, and the other end provided with a suitable driving pulley, substantially as described. 4th. A vehicle-propelling mechanism, consisting essentially of annular flanges fixed to the vehicle wheels, frictional rollers clasp said flanges, a transverse shaft connecting the rollers on one side with those on the other, a frictional disk fixed to said shaft and two parallel flexible shafts suitably supporting said shafts, having one end provided with frictional rollers to clasp the disk and having their other ends connected by frictional rollers and provided with a driving pulley, sub-

stantially as described. 5th. The combination, with a vehicle having a body mounted on its front and rear axles, of propelling mechanism having means for turning the rear wheels, and a horizontally-separable frame below the body of the vehicle for connecting the front and rear axles, said frame consisting of two parallel members spread at their rear ends and clamped to the rear axle, and united near their forward ends by a plate and attached to the forward axle by a king bolt projecting through the plate, substantially as described. 6th. A vehicle-propelling mechanism, consisting essentially of the annular flanges L, fixed to the vehicle wheels, as shown, the frame D, connecting the forward and rear axles, the shaft E, suspended from said frame, the frames F', supported on the shaft E, and carrying the rollers J, and J', the shaft H, connecting the rollers J, and having the disk N, fixed thereto the frame O attached to the shaft E, and shaped and adapted to support the shaft H, and shafts P, the rollers k, to clasp the disk N, the parallel flexible shafts P', attached to said rollers, means, as rollers m, and box n, for connecting said shafts, means, as bracket n', for supporting the shafts, and a pulley Q, for driving the shafts, all substantially as described. 7th. The combination, with the spokes M, of the vehicle wheels, of the flanges L, having flat portion L', and rib L<sup>2</sup>, the clamps g, having bolts g', and hooks g<sup>2</sup>, for attaching said flanges, substantially as described. 8th. The combination, with the flanges L, fixed to the vehicle wheels, as shown, of the rollers J, J', having means, as shown, for rotating the same, the frame and block F<sup>3</sup> for supporting said rollers, said frame being suitably supported as shown, and the spring K, for holding the rollers together, substantially as described. 9th. The combination, with the shafts P, of the collars P', link P<sup>2</sup>, and shaft P<sup>3</sup>, for strengthening mechanism having means for turning the rear wheels, the combination, with said vehicle, of a frame extending across the forward axle, a pair of rollers suspended from said frame, a belt attached to the forward axle near the ends and extending between said rollers, and means for rotating said rollers so as to move the belt and steer the vehicle, substantially as described. 11th. The combination, with the axle C, and frame D, of the rollers s, and v, suspended from said frame, the belt W, and coiled springs w, at either end of the said belt attached to the end portions of the axle, the said belt extending between the rollers and means as shaft u, gear wheel u', flexible shaft S, with gear wheel S<sup>2</sup>, and pinion S', vertical shaft v, having gear wheel v<sup>2</sup>, and hand wheel R, for actuating said rollers, substantially as described. 12th. The combination, with the roller u<sup>2</sup>, and belt W, of the roller v, having flange v', to hold the belt in position, substantially as described.

### No. 36,663. Mechanism for Propelling Vehicles.

(*Mécanisme de propulsion des voitures.*)

Mark A. Libbey, South Berwick, Maine, U.S.A., 21st May, 1891; 5 years.

*Claim.*—1st. A propelling mechanism for vehicles, comprising a revoluble spiral shaft mounted vertically of a vehicle, a vertical shaft slidably connected with the spiral shaft, but adapted to turn therewith, an adjustable connecting-shaft geared to the vertical shaft and extending to the rear portion of the vehicle, adjustable transverse shafts geared to the connecting-shaft and having their outer ends provided with pinions, flanges attached to the rear wheels of the vehicle and projecting inwardly therefrom, and gears fixed to the flanges so as to mesh with the pinions, substantially as shown and described. 2nd. The combination, with the vehicle having its front and rear axles adjustably connected, of a vertical revoluble spiral shaft mounted on the front end of the vehicle, a vertical shaft slidably connected with the spiral shaft, a connecting-shaft geared to the vertical shaft and extending to the rear portion of the vehicle, adjustable transverse shafts geared to the connecting-shaft and extending to a point adjacent to the rear wheels, said shafts having pinions upon their outer ends and flanges fastened to the rear wheels and provided with gears to engage the pinions, substantially as shown and described. 3rd. The combination, with the flanges secured to the rear wheels, as shown, of a dust-band covering the outer sides of the flanges and clamped to the wheels, and a dust-band secured to the rear axle so as to cover the inner sides of the flanges, substantially as shown and specified. 4th. In a propelling mechanism for vehicles, the combination, with the vehicle and with the connecting-shaft extending horizontally beneath the vehicle-body and geared to driving mechanism on the rear wheels of the vehicle, of a revoluble spiral shaft mounted vertically on the front end of the vehicle, a vertical shaft slidably connected with the spiral shaft and geared at its lower end to the connecting-shaft, and a ball-bearing for the vertical shaft, substantially as shown and described. 5th. In a propelling mechanism for vehicles, the combination, with the horizontal connecting-shaft having its rear end connected by a gear shaft mechanism with the rear wheels of the vehicle, of a spiral revoluble shaft mounted on the front portion of the vehicle, a central tube fastened to the spiral shaft, and a vertical shaft having its upper end adapted to slide in the tube and turn therewith, and having its lower end geared to the connecting-shaft, substantially as shown and described. 6th. In a propelling mechanism for vehicles, the combination, with a horizontal connecting-shaft suspended beneath a vehicle body and connected by a gear mechanism with rear wheels, of the spiral revoluble shaft mounted on the front portion of the vehicle, a central tube having a flanged lower end fixed to the shaft, a vertical shaft adapted to slide in the tube and turn therewith, said shaft having its lower end geared to the connecting-shaft, and a ball-bearing for the vertical shaft, substantially as shown and described. 7th. In a vehicle-propelling mechanism, the combination, with the reach-rods clamped to the rear axle, as shown, and the forward axle, of a clip or frame connecting the forward ends of the reach-rods, a U-shaped frame pivoted in the clip so as to extend over and embrace the axle, and a similar frame having its lower portion clamped to the axle, substantially as shown and described. 8th. The combination, with the forward axle and the reach-rods having their rear ends connected with the rear axle, of a clip connecting the

reach-rods, a U-shaped frame pivoted in the clip and with its arms embracing the forward axle, a similar frame having its arms embracing the forward axle, a similar frame having its arms pivoted to the upper ends of the arms of the U-shaped frame, and a clip for fastening the smaller frame to the axle, said clip having at its upper end a king-bolt, substantially as shown and described. 9th. The combination, with a horizontal connecting-shaft having suitable driving mechanism and having its rear end provided with a gear, of the casing adapted to support the rear end of the shaft, the adjustable transverse shafts having their inner ends mounted in the casing and geared to the connecting shaft, and their outer end provided with pinions and flanges secured to the vehicle-wheels and provided with gears to mesh with the pinions, substantially as shown and described. 10th. The combination, with the connecting-shaft having suitable driving mechanism, as shown, of the casing adapted to support the rear end of the connecting-shaft and having laterally extending concave arms, the hollow shaft adjustably secured to the concave arms and extending to points adjacent to the rear wheels, the shafts mounted within the hollow shaft having their outer ends provided with pinions, and their inner ends connected by a gear mechanism with the horizontal connecting-shaft, the flanges secured to the rear wheels and gears secured to the flanges and adapted to mesh with the pinions, substantially as shown and described. 11th. The combination, with the horizontal connecting-shaft, the transverse hollow shafts and the central casing adapted to support the rear end of the connecting-shaft, and having laterally extending concave arms adjustably secured to the hollow shafts of the shafts extending longitudinally through the hollow shaft, and provided at their outer ends with gears connected with gears attached to the rear wheels, and having their inner ends provided with square-sided hollow portions and shafts shaped to fit the hollow portions of the pinion-shafts, and having their inner ends projecting through the casing and geared to the horizontal connecting-shaft, substantially as shown and described. 12th. In a vehicle-propelling mechanism, the combination, with the flanges having means for attachment to the rear wheels and having indentations therein, of the gears secured to the flanges and provided with cut-away portions to fit the indentations, substantially as shown and described. 13th. The combination, with the laterally extending flanges having means for attachment to the rear wheels, said flanges having on their inner sides an annular rib and indentations, as described, of the gears adapted to abut with the flanged ribs and having cut-away portions to fit the indentations of the flanges, substantially as shown and described. 14th. The combination, with the reach-rods the forward axle, and the sprocket-wheel, mechanism for turning the axle of the spring-pressed rods mounted in the reach-rods, and a strap connection between the spring-pressed rods and the sprocket-wheel shaft, substantially as shown and described. 15th. The combination with the reach-rods, the forward axle, and the sprocket-wheel, mechanism for turning the axle of the spring-pressed rods mounted in the forward ends of the reach-rods and connected by a cross-strip, a pulley mounted in front of the reach-rods, and straps connected with the cross-strip and extending over the pulley to connect with the sprocket-wheel shaft, substantially as shown and described. 16th. The combination, with the spring-pressed tension-strap, of the sprocket-wheel shaft having a vertical slot to receive the strap, a pin in its rear portion to which the strap is attached, and having the front sides of the slot rounded outwardly, substantially as shown and described. 17th. The combination, with the vertical sprocket-wheel shaft connected with the forward axle, as shown, of the horizontal shaft geared to the vertical shaft and having means for longitudinal adjustment, and gear mechanism for turning the horizontal shaft from the vehicle-body, substantially as shown and described. 18th. The combination, with the sprocket-wheel shaft connected with the forward axle, as described, of a horizontal shaft geared to the sprocket-wheel shaft, said horizontal shaft having means for longitudinal adjustment, and having universal joints therein, and a gear mechanism for turning the horizontal shaft from the vehicle-body, substantially as shown and described. 19th. The combination, with the vertical sprocket-wheel shaft and the horizontal shaft geared thereto, and provided at its rear end with a gear-wheel, of a depending tube fixed to the wagon-body and terminating in a bracket, a hollow gear mounted in a bracket so as to mesh with the gear-wheel on the horizontal shaft, a sleeve keyed to the gear-wheel so as to slide through the same, and provided with a series of diametrically-opposite slots, a hollow shaft extending vertically through the sleeve and through the floor of the vehicle-body, said shaft having its upper end provided with a wheel, a pair of springs fixed in the lower portion of the hollow shaft and provided with oppositely-extending shoulders to project through slots in the shaft and into the slots in the sleeve, and a spring-pressed rod mounted in the shaft and provided at its lower end with a slotted head to engage the shoulders of the springs, substantially as shown and described. 20th. The combination, with the hollow gear-wheel connecting by a suitable gear mechanism with the sprocket-shaft which turns the forward axle, of a sleeve keyed to the gear-wheel so as to slide therein, and provided with a series of opposite slots, a hollow shaft extending vertically through the sleeve and provided with slots adapted to align with the slots of the sleeve springs fixed in the lower end of the hollow shaft, and provided at their upper ends with shoulders having inclined upper surfaces, said shoulders being adapted to enter the slots of the shaft and sleeve, and a spring-pressed rod mounted in the hollow shaft above the springs, said rod having at its lower end a head with a slot therein to fit the inclined shoulders, substantially as shown and described. 21st. The combination, with a hollow shaft and the springs mounted therein, of the plug adapted to enter the end of the shaft between the springs, and the thimble adapted to screw upon the shaft and hold the plug, substantially as shown and described.

### No. 36,664. Disc Harrow. (*Herse à disque.*)

Jay Spencer Corbin, Prescott, Ontario, Canada, 22nd May, 1891;  
5 years.

*Claim.*—1st. A metal beam having each end bent downwardly to engage directly with an axle-box journaled on the spindle of each gang of a disc plow, substantially as and for the purpose specified.

2nd. A metal beam having each end bent downwardly and rearwardly and flexibly connected directly to an axle-box journaled on the spindle of each gang of a disc plow, substantially as and for the purpose specified. 3rd. A metal beam A, fixed to the tongue I, and having its end bent downwardly and rearwardly, in combination with an axle-box D, of the spindle of the disc gang, a loop C, to engage with the hook B, formed on the end of the beam A, and a link F, fitted onto the trunnion E, formed in the axle-box D, and connected to the beam A, by an eye-bolt G, substantially as and for the purpose specified. 4th. An axle-box D, journaled on the spindle of the disc gang, a trunnion E, on the top, and a loop C, on the bottom of the axle-box, in combination with a hook B, formed on the end of the beam A, and a link F, arranged to flexibly connect the axle-box D, to the beam A, and diagonal brace H, substantially as and for the purpose specified. 5th. A metal beam having each end bent downwardly and hinged to an axle-box journaled on the disc axle at a point below the said axle, substantially as and for the purpose specified. 6th. A metal beam having each end bent downwardly and hinged to an axle-box journaled on the disc axle at a point below the said axle, in combination with a link flexibly connected to the top of the axle-box and to the beam at a point above the axle-box, substantially as and for the purpose specified.

### No. 36,665. Apparatus for Saving Vessels. (*Appareil de sauvetage des vaisseaux.*)

Henry Gordon Cady, Pine Bluff, Arkansas, U.S.A., 22nd May, 1891;  
5 years.

*Claim.*—1st. In an apparatus for preventing the sinking and for raising sunken vessels, the combination, with the air containing receptacles or closures, of the central air delivery pipes, the lateral pipes connecting said air delivery pipes with the air receptacles, and the automatic air valves seated in each of said lateral pipes, substantially as shown and described. 2nd. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the combination, of the air receptacles or closures with the buoy, having the ball and socket or universal joint, in connection with the hose pipe connected to the central air delivery pipes, substantially as shown and described. 3rd. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the combination, of the air receptacles or closures, the central air delivery pipes connected to said receptacles by the lateral branch pipes, the automatic valves in said lateral pipes, and the buoy having the detachable ball and socket or universal joint connection with one end of the hose pipe, substantially as shown and described. 4th. In an apparatus for raising sunken vessels, the combination, with the air receptacles or closures and the central air pipe connecting with said air receptacles, of the hose pipe and the buoy having a ball and socket or universal joint connection with said hose pipe, substantially as and for the purpose described. 5th. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the combination of the air receptacles or closures with the central air delivery pipes, the lateral or branch pipes connecting said air receptacles with the delivery pipe, and the automatic valve seated in each of said lateral pipes, consisting of the adjustable valve seat, the valve disk and its stem operated by the spring and the guide, substantially as shown and described. 6th. In an apparatus for raising sunken vessels, the combination, with air receptacles or closures and the central air delivery pipe, of the hose pipe connected to said central pipe, the float or buoy having a passage through it, and the ball and socket joint between said buoy and the hose pipe having a hollow stem or pipe formed with a cap screwed upon a sleeve or collar fast to one end of said hose pipe, said ball also having a passage through it communicating with said stem or pipe, substantially as and for the purpose specified. 7th. In an apparatus for preventing the sinking of and for raising sunken vessels, the combination of the series of connected air receptacles or closures, and a central air delivery pipe having lateral pipe connections with the said air receptacles, said pipe connections having automatic air valves, the hose pipe coiled in a receptacle on shipboard, and the buoy or float having a passage through it and the storage chamber, and the ball and socket joint between said hose pipe and float or buoy, said ball having a passage through it and a pipe communicating therewith, substantially as and for the purpose specified. 8th. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the buoy carrying in the screw-threaded sleeve or collar, the detachable flag staff, and having connected to its lower end a hose pipe by means of the ball and socket or universal joint having a passage through its stem, in combination with the inflatable air receptacles, substantially as shown and described. 9th. In a device for preventing the sinking of vessels and for raising sunken vessels, the buoy carrying the flag staff in a screw-threaded sleeve, the compartment or receptacle in its upper end accessible from without by means of the door having ball and socket or universal joint connection at its lower end with the hose pipe, said hose pipe having connection at its lower end with the central air delivery pipe connected by means of the lateral pipes containing the automatic valves, with the air containing receptacles, substantially as shown and described. 10th. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the ball and socket or universal joint, consisting of the socket and ball having connected to its lower end the stem projecting downward through an opening in the bottom of the socket, said stem having on its lower end a screw-threaded sleeve, the stem and ball having a central passage passing therethrough, substantially as shown and described. 11th. In an apparatus for preventing the sinking of vessels and for raising sunken vessels, the series of air supply pipes, in combination with the air receptacles, the hose connecting said pipes with the buoy and the compartment or receptacle in the upper end of the buoy accessible through a door in the outside thereof, substantially as shown and described. 12th. In an apparatus for raising vessels, the buoy carrying the signal or flag in its upper end and having connected to its lower end a hose pipe, in combination with a ball joint having a passage therethrough, a tubular stem or pipe connecting with the buoy, substantially as shown and described. 13th. In an apparatus for preventing the sinking of vessels and for raising



sunken vessels, the inflatable air receptacles and their supply-pipes, in combination with the automatic valve seat operated by the screw-threaded sleeve integral therewith, the valve disk and its stem operated by the spring, and the stem guide having the openings on either side thereof, substantially as shown and described. 14th. In an apparatus for raising sunken vessels and for preventing the sinking of vessels, the series of air supply pipes, the air containing receptacles or compartments, the lateral pipes forming a connection between said air supply pipes, and the air receptacles and the automatic valves seated in said lateral pipes, consisting of the adjustable spring acted upon valve disk and its stem and the guide, substantially as shown and described. 15th. In an apparatus for raising sunken vessels and for preventing the sinking of vessels, the buoy having connection with the inflatable air receptacles by means of the lateral branch pipes, the central air delivery pipe, and the hose pipe connected thereto and carrying the watertight compartment, its upper end for securing the ships' papers accessible from without through a door, substantially as shown and described.

### No. 36,666. Hot Water Heater.

(*Calorifère à eau.*)

The Consolidated Car Heating Company, Wheeling, West Virginia, assignees of James Finney McElroy, Albany, New York, U.S.A., 22nd May, 1891; 5 years.

*Claim.*—In a hot-water circulating apparatus, a vessel included in the circulation and having a porous medium confined therein, of a steam-pipe connecting with a steam-nozzle or injector adapted to discharge into the porous medium, substantially as described.

### No. 36,667. Electrical Heat Generator.

(*Générateur électrique de la chaleur.*)

Ernest Abshagen, George M. Clark and Henry M. Hubbard, all of Chicago, Illinois, U. S. A., 22nd May, 1891; 5 years.

*Claim.*—1st. In an electric heat generator, a resistance piece covered with a non-conductive fluid, such as oil, lard, or its equivalent, substantially as shown. 2nd. In an electric heat generator, a resistance piece covered with oil and combined with heat reservoirs, substantially as described. 3rd. In an electric heater, a closed vessel within which a resistance piece is sustained covered with an oily fluid, said resistance piece being in circuit with a generator of electricity, substantially as set forth. 4th. In an electric heater, a resistance piece being in continuous contact with an oily fluid, substantially as described. 5th. The combination, in an electric heater, of a metallic box or case with a heat retaining material in the form of an oily fluid in said box or case, and an electrical resistance piece covered by said oily fluid, the resistance piece being placed in circuit with a generator of electricity and an expansion governor arranged to operate in such a manner so as to remove automatically all internal pressure from the heater caused by the expansion of the heated oil within said heater, as herein set forth and described. 6th. In an electrical heater, a casing containing an oily fluid and surrounding an electrical resistance piece, which latter is in circuit with an electrical generator, an automatic expansion governor operated by the expansion and contraction of the hot and cold oil within said heater and an electrical shunt operated by the expansion governor, and so arranged as to withdraw at any certain point the electrical current from the resistance piece within the heater by short circuiting the current automatically at certain stages of the temperature of the oil within the heater, as herein set forth and described. 7th. In an electrical heater, the casing A, containing the oily fluid X, the resistance piece R, placed within the current of a generator of electricity, which resistance piece is surrounded by the said oily fluid X, the expansion governor E, actuated upon by the force, exerted by the expansion of the heated oily fluid X, and pressing the same outwardly, and thereby preventing an internal pressure against the inner sides of the heater, in combination with an adjustable shunt p, q, so arranged that as soon as the limit of the desired expansion of the oil and the corresponding temperature of the same has been reached, the energizing shunted off and any further supply of heat to the radiator withdrawn, and reinstated again in the resistance piece automatically as soon as the oil commences to contract by breaking the shunt circuit and closing the resistance circuit, as herein set forth and described. 8th. In an electrical heater, a case A, containing the oily fluid X, one or a series of resistances R, which latter are in circuit with an electrical generator, in combination with an expansion governor operated by the action of the expanded oily fluid when heated, and an overflow pipe or reservoir d, connected with the main oil reservoir by means of an overflow passage b, which is automatically opened by said expansion governor for the purpose of relieving the main reservoir of a part of its bulk to prevent any internal pressure caused by the expansion of the heated oil within the heater, as and for the purpose herein described. 9th. In an electrical heater arranged in the form of a cooking range, a closed metal casing, containing an oily fluid which is brought to a high state of temperature by means of an electrical resistance piece placed within the oil, said resistance piece being energized by a generator of electricity, and said metal casing arranged in such a manner that the same is subdivided in partly closed, partly open receptacles, which may readily be reached from the outside and used for the reception of various articles such as food, in order to subject them to the influence of the heat radiating from such metal casing, in combination with an expansion governor which controls the internal pressure exerted by the heated oil, as and for the purpose set forth and described. 10th. In an electrical heater arranged in the form of a steam boiler for the generation of hot water and steam, a metal casing composed of a series of tubes traversing the boiler and surrounded by the water which is to be raised to and beyond its boiling point, the interior of said tubes being in communication with each other by connecting heads placed on either end of the tubes which form in connection with the latter one closed vessel, such vessel being filled with an oily fluid and

brought to a high state of temperature by means of one or a series of resistance pieces traversing this closed vessel, and energized by an electric current which heats the surrounding oil in combination with an expansion governor for the purpose of removing any internal pressure caused by the expanding of the oil when heated, as herein described.

### No. 36,668. Measure for Grain.

(*Mesure pour les grains.*)

Michael Cashin, New York, State of New York, U.S.A., 23rd May, 1891; 5 years.

*Claim.*—1st. In a grain-measuring device, the combination of the turn-table 11, upon the shaft 5, and having the pendent cylinders 13, the turn-tables 3, and 15, upon the sleeve 16, which rotate with said shaft and are adjustable vertically thereupon by means of nut 17, upon threaded portions 18 of said shaft, said turn-table 15, having the cylinders 14 inclosing said cylinders 13, the stationary floor 4, and the vertically-adjustable floor 8, said floors and turn-tables having orifices that communicate, respectively, with charging and delivery spouts 2, and 10, as set forth. 2nd. In a grain-measuring device, the combination, with the revolving and perforated turn-table 11, having the attached measure M, and with driving mechanism having clutch-connection with a fast and loose pulley or driver 24, of the governor consisting of disk 30, upon spring-latch 27, and spring-actuated lever 25, substantially as set forth. 3rd. In a grain-measuring device, the combination, with a charging hopper 2, perforated stationary platform 4, and the non-adjustable perforated turn-table 11, carrying the series of pendent upper halves 13, of the grain-measures, the perforated turn-table 15, carrying the corresponding series of lower halves 14, of the said grain-measures, the perforated turn-table 15a, carrying the series of pendent hoppers, one to each grain measure, the perforated floor 8 interposed between the turn-tables 15, and 15a, and the turn-table 3, for supporting the receptacles, said members 3, 8, 14, 15, 15a, and 10, being adapted for vertical adjustment by means of sleeve 16 and the nut 17, upon screw-threaded portion 18, of the central shaft 5, substantially as and for the purpose set forth.

### No. 36,669. Clothes Rack for Bedsteads.

(*Sechoir à linge pour lits.*)

Joseph Ellison Lockwood, Algoma Mills, Ontario, Canada, 23rd May, 1891; 5 years.

*Claim.*—1st. The combination, with the head board of a bedstead, of a clothes rack C, provided with pivoted hooks G, and attached to the back of said head board to be drawn out for use and pushed back out of view, as set forth. 2nd. In combination, with a bedstead head board A, having a guide bar B, fixed horizontally thereto at the back, of a rack C, provided with pivoted hooks G, and adapted to slide reciprocally on said guide bar and be drawn out at either side of the bedstead, substantially as described. 3rd. The combination, with a bedstead head board A, provided with a guide bar B, fixed horizontally to the back and having a post M, provided with a stop L, of the rack C, having pivoted hooks G, provided with projecting pins H, H, and a cam projection K, and the projecting bars J, J, receiving said pins, as set forth, for the purpose described.

### No. 36,670. Combined Friction Clutch and Shaft Cut-Off. (*Embrayage à friction et détente d'arbre de couche combinés.*)

Leroy S. Pfouts, Canton, Ohio, U.S.A., 23rd May, 1891, 5 years.

*Claim.*—1st. The combination of the disk A, fixed to the shaft a, the disk-band B, located around said disk A, the clamping-ring C, located between the disk A and the disk-band B, the arms or levers D, pivotally connected to the disk-band B and having attached thereto the clamping-ring C, and means for operating the arms or levers D, substantially as and for the purpose specified. 2nd. The combination of the disk A, fixed to the shaft a, the disk-band B, located around said disk A, the clamping-ring C, located between the disk A, and the disk-band B, and severed as at X, the arms or levers D, pivotally connected to the disk-band B, and having attached thereto the clamping-ring C, and means for operating the arms or levers D, substantially as and for the purpose specified. 3rd. The combination of the disk A, mounted on the shaft a, the disk-band B, the clamping-ring C, provided with the notches h<sup>1</sup> and the pins h<sup>2</sup>, the arms or spokes b, provided with the apertures h<sup>3</sup>, the arms or levers D, pivotally connected to the disk-band B, the connecting-bar g, the levers E, fulcrumed to the arms d, the hub b<sup>1</sup>, the connecting links c, the connecting rods e, and the sliding collar f, substantially as and for the purpose specified. 4th. The combination of the disk A, fixed to the shaft a, the clamping-ring C, the disk-band B, the arms or levers D, pivotally attached to the disk-band B, the connecting bars g, the springs i, and the nuts g<sup>1</sup>, substantially as and for the purpose specified. 5th. The combination of the clamping ring C, provided with the notches h<sup>1</sup> and the pins h<sup>2</sup>, and the disk band B, having the spokes b, provided with the apertures h<sup>3</sup>, substantially as and for the purpose specified.

### No. 36,671. Combined Doubletree and Singletree. (*Volée d'arrière et palonnier combinés.*)

William Henry Sholl, Hobart, Indiana, U. S. A., 23rd May, 1891; 5 years.

*Claim.*—1st. A doubletree, consisting of two members formed from sheet metal, substantially as described. 2nd. A doubletree, consisting of two members formed from sheet metal and provided on their exterior surface with longitudinal swells or ribs, which produce corresponding depressions on the opposite sides, substantially



as described. 3rd. A doubletree, consisting of two members formed from sheet metal and having exterior swells or ribs and corresponding depressions or hollows on the opposite sides, and the tube-plates secured to the respective members, substantially as described. 4th. In a combined doubletree and singletree, each consisting of two members formed from sheet metal, the tube-plates, secured to the respective ends of the doubletree members, the flanged spool or post inserted between the members comprising the singletree, and the connecting pivot-bolt, substantially as described. 5th. The combination, with a doubletree and singletree, each consisting of two members formed from sheet metal, of the pivot-connecting bolt and the strip of packing interposed between the adjacent surfaces of the double and singletree, substantially as described. 6th. The combination, with a doubletree and singletree, each consisting of two members formed from sheet metal, of the tube-plates secured to the respective ends of the doubletree members, the flanged spool or post inserted between the members comprising the singletree, the connecting pivot-bolt passing therethrough, and the caps engaging with the tube-plates and covering the ends of the pivot-bolt, substantially as described. 7th. A tubular singletree, consisting of two members formed from sheet metal and riveted together at the ends, and the spool or post inserted between said members at their longitudinal centre, substantially as described.

### No. 36,672. Stake for Waggon Bolsters.

(*Rancher pour sellette de wagon.*)

Wallace Simpson, Chatham, Ontario, Canada, 23rd May, 1891; 5 years.

*Claim.*—1st. In combination, with the bolster A, of a waggon the stake B, provided with elongated holes C, and D, substantially as and for the purpose hereinbefore set forth. 2nd. In combination, with the bolster A, of a waggon the bolts E and F, substantially as shown for the purposes specified. 3rd. In the combination, with the bolster A, of a waggon the stake B, provided with elongated holes C, and D, secured to the bolster A, with bolts E, and F, substantially as described and for the purposes hereinbefore set forth.

### No. 36,673. Top and Stuffer for Tobacco Pipes.

(*Couvercle et loureur pour pipes de fumeur.*)

Martin Luther Sooch, New Berlin, Pennsylvania, U.S.A., 23rd May, 1891; 5 years.

*Claim.*—1st. The combination, with the top plate A, having spring arms D, and attaching feet D', of the vertically movable rod E, having the stuffer plate F, and finger plate H, attached to the ends thereof, the guide J, extending upwardly from said plate to engage the clasps f, of the finger plate and pyramidal spring K, adapted to encircle the rod E, and hold the finger plate H, and connected parts in elevated position, substantially as described. 2nd. The perforated top plate A, having the spring arms D, and attaching feet D', a stuffer plate, arms and feet being formed from a single piece, substantially as described.

### No. 36,674. Axle Tree Arm for Waggon.

(*Bras d'essieu de wagon.*)

Daniel Ross Van Allen, Chatham, Ontario, Canada, 23rd May, 1891; 5 years.

*Claim.*—1st. In combination, with the axle-tree A, of a waggon, the thimble skein B, provided with a projection on the upper side, said projection having a flat top or stool M, substantially as and for the purposes hereinbefore set forth. 2nd. In combination, with the axle-tree A, of a waggon, the thimble skein B, provided with a projection on the upper side, said projection having a flat top or stool M, having a cavity for the reception of the tie G, substantially as shown, and for the purposes specified. 3rd. In combination, with the thimble skein B, provided with a projection on the upper side, the said projection having a flat top or stool and the bolster I, and sandboards L, respectively provided with seats, substantially as shown for the purposes specified. 4th. In combination, with the thimble skein B, having projection with flat top or seats, the sandboard L, or bolster I, respectively, the clip H, and ties F, and G, used for the purpose of securing the several parts together, substantially as described. 5th. In the combination, with the axle-tree of a waggon or other vehicle, the thimble skein B, provided with a projection having a flat top or stool, the bolster I, or sandboard L, respectively, the clip H, and ties F, and G, substantially as and for the purposes hereinbefore set forth.

### No. 36,675. Switch for Railways.

(*Aiguille de chemin de fer.*)

Edwin Gordon, Massachusetts, U.S.A., 23rd May, 1891; 5 years.

*Claim.*—1st. The bar e, provided with the angle pieces d, and the fixed bar i, in combination with the two sets of links k, so pivoted to the same, and adjusted, as to permit of a definite lateral movement of the bar e, substantially as and for the purpose above described. 2nd. The bar e, formed with the angle pieces d, the fixed bar i, the two sets of links k, so pivoted to the same as to permit of a definite lateral movement of the bar e, switch rails a, and attached guard rails c, blocks f, and bolts f', in combination with the fixed point rails b, substantially as and for the purpose above described. 3rd. The bar e, formed with angle pieces d, cross projecting parts g, provided with slots h, fixed bar i, with cross projecting parts r, links k, so pivoted and attached to the said bars as to permit of a definite lateral movement of the bar e, the switch rails a, and attached guard rails c, blocks f, bolts f', bell cranks p, with attached studs p', pivots p<sup>2</sup>, rods u, u<sup>2</sup>, bars s<sup>2</sup>, s<sup>3</sup>, with attached holding block s<sup>1</sup>, bell cranks t, pivots t', studs t<sup>2</sup>, t<sup>3</sup>, frame t<sup>1</sup>, in combination with the

fixed point rails b, substantially as and for the purpose above described. 4th. The bar e, formed with angle pieces d, cross projecting parts g, provided with slots h, fixed bar i, with cross projecting parts r, links k, provided with pivots m, and n, switch rails a, with attached guard rails c, blocks f, bolts f', bell cranks p, p<sup>1</sup>, with attached studs p<sup>1</sup>, p<sup>2</sup>, and p<sup>3</sup>, pivots p<sup>3</sup>, and p<sup>6</sup>, rods u, u<sup>2</sup>, u<sup>3</sup>, and u<sup>4</sup>, bars s<sup>2</sup>, s<sup>3</sup>, w<sup>1</sup>, w<sup>2</sup>, with attached holding blocks s<sup>1</sup>, bell cranks t, t<sup>2</sup>, pivots t<sup>1</sup>, studs t<sup>2</sup>, t<sup>3</sup>, frames t<sup>1</sup>, t<sup>2</sup>, in combination with fixed point rails b, substantially as and for the purpose above described. 5th. The bar e<sup>2</sup>, provided with angle pieces d<sup>2</sup>, and with the attached plate h<sup>2</sup>, formed with the vertical side pieces c<sup>2</sup>, the fixed bar D, and D<sup>1</sup>, the latter formed with vertical side pieces, in combination with the two lugs A, provided with studs f, and so pivoted and adjusted as to permit of a definite lateral movement of the bar e, substantially as and for the purpose above described. 6th. The bar e<sup>2</sup>, provided with angle pieces d<sup>2</sup>, and with the attached plate h<sup>2</sup>, formed with the vertical side pieces c<sup>2</sup>, the fixed bar D and D<sup>1</sup>, the latter formed with vertical side pieces, in combination with the two lugs A, provided with studs f, and so pivoted and adjusted as to permit of a definite lateral movement of the bar e, switch rails a, and attached guard rails b, blocks f, and bolts f', in combination with the fixed point rails b, substantially as and for the purpose above described. 7th. The bar e<sup>2</sup>, provided with angle pieces d<sup>2</sup>, and with the attached plate h<sup>2</sup>, formed with the vertical side pieces c<sup>2</sup>, cross projecting parts g, provided with slots h, the fixed bars D, D<sup>1</sup>, with cross projecting parts r, the latter formed with vertical side pieces a, in combination with the two lugs A, provided with studs f, and so pivoted and adjusted as to permit of a definite lateral movement of the bar e, switch rails a, with attached guard rails c, blocks f, bolts f', bell cranks p, with attached studs p<sup>1</sup>, p<sup>2</sup>, pivots p<sup>3</sup>, rods u, u<sup>2</sup>, bars s<sup>2</sup>, s<sup>3</sup>, with attached holding block s<sup>1</sup>, bell cranks t, pivots t', studs t<sup>2</sup>, t<sup>3</sup>, frame t<sup>1</sup>, in combination with the fixed point rails b, substantially as and for the purpose above described. 8th. The bar e<sup>2</sup>, provided with angle pieces d<sup>2</sup>, and with the attached plate h<sup>2</sup>, formed with the vertical side pieces c<sup>2</sup>, cross projecting parts g, provided with slots h, the fixed bars D, and D<sup>1</sup>, with cross projecting parts r, and the latter formed with vertical side pieces a, in combination with the two lugs A, provided with studs f, and so pivoted and adjusted as to permit of a definite lateral movement of the bar e, switch rails a, with attached guard rails c, blocks f, bolts f', bell cranks p, p<sup>1</sup>, with attached studs p<sup>1</sup>, p<sup>2</sup>, and p<sup>3</sup>, pivots p<sup>3</sup>, and p<sup>6</sup>, rods u, u<sup>2</sup>, u<sup>3</sup>, and u<sup>4</sup>, bars s<sup>2</sup>, s<sup>3</sup>, w<sup>1</sup>, w<sup>2</sup>, with attached holding blocks s<sup>1</sup>, bell cranks t, t<sup>2</sup>, pivots t<sup>1</sup>, studs t<sup>2</sup>, t<sup>3</sup>, frames t<sup>1</sup>, t<sup>2</sup>, in combination with fixed point rails b, substantially as and for the purpose above described.

### No. 36,676. Seat for Closets.

(*Siège de latrines.*)

Lambert John Dopping Hepenstal, Halifax, Nova Scotia, Canada, 23rd May, 1891; 5 years.

*Claim.*—1st. A knock down water closet blank, to be sawn and screwed together when required for use, as shown and described. 2nd. A new article of manufacture, a water closet seat having curves and shapes to fit together when required, for the purpose set forth. 3rd. A water closet blank, having lines c, d, curves a, b, and divisions A, B, C, as shown and described.

### No. 36,677. Pneumatic Telephone.

(*Telephone pneumatique.*)

Georges Noreau, Quebec, Canada, 23rd May, 1891; 5 years.

*Resume.*—1o. La combinaison du mécanisme placé dans une boîte avec sonneries formées de timbres C, et marteau B, mis en mouvement au moyen de l'air comprimé passant dans le tuyau I, et levant la soupape E, et aussi la combinaison de la valve K, avec la toile perforée T, entre l'embouchure et le tuyau d'air H, la combinaison du marteau B, avec la petite broche S, qui sert à faire tomber le numéro D, et le petit bras levier E, a ressort U, servant à garder la soupape E, fermer au besoin et tel que décrit. 2o. La combinaison de l'embranchement du receveur tube P, au porte-voix O, et munie d'une toile perforée dans son intérieur le tuyau conique I, en dessous de la boîte A, l'usage de l'attachement d'une boule pneumatic en caoutchouc L, au tuyau d'air H, combinée d'une valve N, le tout servant à souffler l'appelle de son propre porte-voix au téléphone, et tel que décrit pour les fins indiquées.

### No. 36,678. Furnace.

(*Fournaise.*)

Joseph Henderson Behee, Leavenworth, Kansas, U.S.A., 29th May, 1891; 5 years.

*Claim.*—1st. A furnace, consisting in a fire pot, an ash pit, an outlet pipe 16, provided with a damper, a vertical stack 18, into which said pipe discharges, upper and lower horizontal flues 21, 22, at opposite sides of the ash pit communicating at their rear ends, and a central horizontal flue 24, under the ash pit, and with the forward end of which the lower flues 22, communicate, said central flue opening at its rear end into the lower end of the stack, substantially as set forth. 2nd. The combination, in a furnace with the fire pot having flues leading downward from the upper portion thereof, opposite horizontal flues into which the first named flues discharge, and a central flue communicating with the side flues of a stack 18, communicating at its lower end with the rear ends of said central and side flues, dampers 5, 5, controlling the openings between the side flues and the stack, and a direct draft flue leading from the upper end of the furnace into the stack and provided with a damper, substantially as set forth.

### No. 36,679. Method of and Apparatus for Making Flat Coiled Springs.

(*Mode et appareil de fabrication des ressorts spiraux plats.*)

George Kelly, Chicago, Illinois, U.S.A., 29th May, 1891; 5 years.

*Claim.*—1st. The herein described improvement in the art of making flattened spiral springs, the same consisting in winding the

spring upon a flattened mandrel, and "setting" by an intermittent pressure or impact each individual coil or wrap as fast as the same has been wound upon the flattened coiling mandrel, substantially as set forth. 2nd. In a machine for making flattened spiral springs, the combination of the flattened mandrel 1, and driving arbor 2, with the peripherally recess "feeding in" disk 3, adapted to coil or wrap the wire rod or band upon the mandrel and impart the proper "set" to the same essentially, as set forth. 3rd. In a machine for making flattened spiral springs, the combination of the flattened mandrel 1, and driving arbor 2, with the pair of peripherally recessed cam disks 3, and 4, adapted to coil or wrap the wire rod or band upon the mandrel and impart the proper "set" to the same, essentially as set forth. 4th. In a machine for making flattened spiral springs, the combination of the flattened mandrel 1, and driving arbor 2, with a pair of peripherally recessed cam disks 3, and 4, carried upon shafts geared to the arbor 2, one of said disks being provided with a forward extension 10, peripherally recessed and adapted to bear against the mandrel between the coils, essentially as set forth.

### No. 36,680. Addressing Machine.

(Machine à adresser.)

William P. Bonsall, Toronto, Ontario, Canada, 29th May, 1891; 5 years.

*Claim.*—1st. A series of type blocks or plates C, having incisions or loops made in their ends, in combination with the endless belts or cords D, fitted into the said incisions or loops and carried around rollers located at either end of the frame A, substantially as and for the purpose specified. 2nd. In an addressing machine, a rectangular roller B, journaled on the end of the reciprocating frame A, and having a string of type blocks C, carried around it, the block M, fixed to the spindle of the roller B, in combination with the plate O, substantially as and for the purpose specified. 3rd. In an addressing machine, a rectangular roller B, journaled on the end of the reciprocating moving frame A, and having a string of type blocks C, carried around it, the block M, fixed to the spindle of the roller B, and having a notch d, made near each of its corners, in combination with the guide plate L, and plate O, substantially as and for the purpose specified. 4th. In an addressing machine, a roller B, journaled on the end of the reciprocating moving frame A, and having a string of type blocks C, carried around it, the block M, fixed to the spindle of the roller B, in combination with the guide plates L, and Z, substantially as and for the purpose specified. 5th. A series of type blocks or plates C, carried on endless cords or belts D, supported by rollers journaled in the reciprocating pressure against the surface of the type blocks, substantially as and for the purpose specified. 6th. A series of type blocks or plates C, carried on endless cords or belts D, supported by rollers journaled in the moving frame A, the quadrant plate E, fixed to the frame A, journaled on the rods F, and G, in combination with the handle J, and spring K, substantially as and for the purpose specified. 7th. A series of type blocks or plates C, carried on endless cords or belts D, supported by rollers journaled in the reciprocating moving frame A, in combination with the pivoted forked support Q, carrying the inking roller P, and connected to the frame A, by the curved arm T, as specified. 8th. A series of type blocks or plates C, carried on endless cords or belts D, supported by rollers journaled in the reciprocating moving frame A, the block M, fixed to the spindle of the roller B, in combination with the plate O, the inking roller P, carried by the pivoted support Q, which is connected to the frame A, by the curved arm T, substantially as and for the purpose specified.

### No. 36,681. Cover for Bobbin Heads.

(Couvercle pour têtes de bobine.)

John Hegeman, Amsterdam, New York, U.S.A., 29th May, 1891; 5 years.

*Claim.*—1st. A seamless bobbin cover constructed of felt or analogous material. 2nd. The combination, with a bobbin, of a seamless cover constructed of felt or analogous material secured thereon, as set forth. 3rd. The combination, with a bobbin, of a seamless cover of conical form constructed from felt or analogous material, and scarfed off within the smaller end to fit close upon the bobbin stem, as set forth.

### No. 36,682. Truss. (Bandage herniaire.)

Frederick W. Christians, Hubbard, Wisconsin, U.S.A., 29th May, 1891; 5 years.

*Claim.*—A truss, comprising a non-elastic flexible band A, tapering inwardly upwardly, the ends of which band are secured together adjustably by a lacing cord located in front and between the pads, yielding cores C, in the band at its lower edge pads D, secured detachably to the band at a distance from the bottom and so as to be partly inside thereof, and to be held to their work by the encompassing band flexible straps F, secured adjustable laterally to the band at the rear and detachable at the front and supplementary pads K, affixed to and forming a part of the straps F, and located immediately below and independent but forming a continuation of the pads D, substantially as described.

### No. 36,683. Transposing Key-Board Instruments. (Transposition de clavier d'instruments.)

Anders Holstrom, New York, State of New York, U.S.A., 29th May, 1891; 5 years.

*Claim.*—1st. The combination, with a movable transposing key-board, of a latch device comprising an apertured plate on the key-board and a relatively stationary spring actuated plate having a pin

adapted to the apertures of the key-board plate, substantially as described. 2nd. The combination, with a movable transposing key-board, of a latch device comprising an apertured plate on the key-board, a relatively stationary spring actuated plate having a pin adapted to the apertures of the key-board plate, and lever and pull-rod connections operating the spring actuated plate, substantially as described. 3rd. The combination, with a movable transposing key-board, of a latch device comprising an apertured plate D, d, on the key-board, a re-enforcing apertured plate F, f, on the instrument frame next the plate D, and a spring actuated plate E, having a locking pin e, adapted to the apertures d, f, of the plates D, E, and means for operating the plate E, to withdraw its pin e, from the apertures d, f, substantially as described. 4th. The combination, with a movable transposing key-board, of an apertured plate D, d, thereon, a spring latch plate E, having a pin e, adapted to the apertures d, of the plate D, a stem or arm g, on the spring plate, and lever and pull rod connections H, I, J, actuating the latch, substantially as described. 5th. The combination, with a movable transposing key board of an adjustable retainer for the keys, substantially as described, whereby the keys will be held against depression at the front and lifting at the rear and the action will be protected from injury as the key board is adjusted, as set forth. 6th. The combination, with the movable key board of a musical instrument, of an adjustable transverse bar ranging along or next the keys and retaining them against depression when adjusted to one position and allowing free depression of the keys when adjusted to another position, substantially as described. 7th. The combination, with the movable key board of a musical instrument, of a transverse rocking retainer bar or plate H, m, ranging along or next the keys, a rod I, on said bar, and a pull key or button J, fitted in the instrument case and linked to said rod, substantially as described. 8th. The combination, with a movable transposing key board, of a latch device therefor and a retainer preventing depression of the keys, relatively arranged substantially as described, whereby as the retainer is adjusted to hold the keys the key board will simultaneously unlatch to allow adjustment to it, as set forth. 9th. The combination, with the key board of a musical instrument, of a latch device D, d, E, e, for the key board, said latch plate E, e, carrying a stem g, a rocking retainer H, for the keys adapted to said stem, and pull connections I, J, to the retainer, all arranged for operation, substantially as described, for the purposes set forth.

### No. 36,684. Machine for and Method of Making Bags. (Machine et méthode de faire les sacs.)

William H. Kerr, Concord, North Carolina, U.S.A., 29th May, 1891; 5 years.

*Claim.*—1st. In an organized machine for the manufacture of cloth bags from a continuous strip of cloth, the combination, with a printing mechanism, of a folder constructed and arranged, substantially as shown and described, to take the printed strip and lay its longitudinal edges one upon the other, a sewing mechanism adapted to unite the edges of the folded strip, a cutter for severing the tube thus formed, and a second sewing mechanism for uniting one end of the severed section, said mechanisms being combined and arranged for operation, substantially as shown and described. 2nd. In an organized machine for the manufacture of bags from a continuous strip of cloth, the combination, with a horizontal bed or table, of a sewing mechanism or mechanisms mounted thereon, an upright cloth carrier, a printing mechanism adapted to act upon the material, as it unwinds from the carrier, and a folder arranged, substantially as shown and described, to take the strip of material as it comes from the printing mechanism and deliver it with its edges folded one upon the other in position to be acted upon by the sewing mechanism. 3rd. In an organized machine for the manufacture of bags from a continuous strip of cloth, the combination, with a printing mechanism, of a folder adapted to fold the printed strip through the middle with the printed face inside, and with the edges of said face lying one upon the other, and a sewing mechanism or mechanisms for uniting the edges of the folded strip, all combined and arranged to operate, substantially in the manner shown. 4th. In a machine for the manufacture of bags from a continuous strip of cloth, the combination of the following instrumentalities to wit, a printing mechanism arranged to print upon the continuous strip of cloth, a folding device adapted to receive and to fold the printed strip longitudinally through the middle, and a bag-sewing mechanism (or mechanisms) to receive the folded material and sew it in proper form for use as bags, the said parts being arranged to operate, substantially in the manner set forth. 5th. In a bag machine, the combination, with the printing and sewing mechanisms, of a base A, a socketed screw A', a plate or disk A'', and a stem or spindle A'', passing through the plate and into the screw. 6th. In a machine for the manufacture of bags, the combination, with a frame A, and an upright roll-supporting spindle as A', of a horizontal table F, provided with sewing mechanism, and a folder comprising two arms D', and D'', extending from the upper and lower parts of the frame A, diagonally to the table F. 7th. In a bag machine, the combination, with a frame A, provided with an upright cloth spindle A', of a table F, (the top of which is about on line with the middle of the spindle) the arm D', extending from the upper part of the frame A, downward and rearward to the table and the arm D'', extending from the lower part of frame A, upward and rearward to the table F. 8th. In a bag machine, the combination, with a printing mechanism, of a stitching mechanism, a folder adapted to fold the bag material lengthwise through the middle with the printed face inside, and a feed roller reduced in diameter between its ends and adapted to bear upon the cloth only at one or both ends. 9th. In a bag machine, the combination, with the table F, and a sewing mechanism, of a printing mechanism, the feed roller D'', having enlarged ends E', and a covering applied to the reduced portion of the roller. 10th. In a bag machine, the combination, with the table F, and a sewing mechanism feed rollers D', D'', journaled in bearings on the table, worm wheel Z, secured to one of said rollers, a shaft E', provided with a gear wheel D'', and a shaft D'', provided at opposite ends with a gear D', and a worm D', said shaft D'', being hung upon the shaft

E<sup>1</sup>, substantially as shown. 11th. In a bag machine, the combination, with the printing mechanism, of a folder adapted to fold the material lengthwise through the middle with the printed face inside, two feed rolls D<sup>3</sup>, and E<sup>4</sup>, adapted to bear only at their ends upon folded bag material, and a stitching mechanism interposed between the feed rolls. 12th. In a bag machine, the combination, with a table having an opening or recess as E<sup>3</sup>, of a stitching mechanism, and a continuously rotating feed roll on one side of said opening and an intermittently-acting feed roll and an intermittently-acting cutter on the other side of said opening. 13th. In a bag machine, the combination, with the table F, having an opening or recess as E<sup>3</sup>, of the feed rollers D<sup>3</sup>, and E<sup>4</sup>, and the interposed stitching mechanism G, located in advance of the opening an intermittently-acting cutter in rear of the opening, and an intermittently-acting feed roller F<sup>6</sup>, also located in rear of the opening but in advance of the cutter. 14th. In a bag machine, the combination, with a suitable sewing mechanism, of a cutter and a feed roller and intermediate connections, substantially as shown, whereby the roller is adapted to be thrown out of action by the cutter. 15th. In a bag machine, the combination, with a suitable sewing mechanism, of a cutter, a feed roller gearing for imparting motion to the feed roller, an arm carried by the cutter frame and connected with the gearing, whereby when the cutter descends the gearing will be thrown out of action and when the cutter ascends it will be thrown into action. 16th. In a bag machine, the combination, with a suitable sewing mechanism, of a cutter a feed roller provided with operating mechanism adapted to be automatically thrown into and out of operation by the movements of the cutter, and means, substantially as shown, for throwing said operating mechanism out of operation manually without stopping the action of other parts of the machine. 17th. In combination, with the reciprocating cutter frame provided with an arm G<sup>1</sup>, a feed roll provided with a worm wheel F<sup>6</sup>, a shaft F<sup>8</sup>, provided with a yoke G<sup>3</sup>, gear G<sup>1</sup>, and a worm F<sup>7</sup>, a rod G<sup>5</sup>, connected with the shaft F<sup>8</sup>, and arm G<sup>7</sup>, and a shaft E<sup>1</sup>, provided with a gear G<sup>2</sup>. 18th. In combination, with the reciprocating cutter frame having an arm G<sup>1</sup>, a feed roll F<sup>6</sup>, provided with a worm wheel F<sup>6</sup>, a shaft E<sup>1</sup>, provided with a gear wheel G<sup>2</sup>, a second shaft F<sup>8</sup>, hung upon the shaft E<sup>1</sup>, and provided with a worm F<sup>7</sup>, and gear wheel G<sup>1</sup>, a block G<sup>3</sup>, through which shaft F<sup>8</sup>, passes, a rod G<sup>5</sup>, passing through the arm G<sup>1</sup>, and connected with the block G<sup>3</sup>, and a spring H<sup>8</sup>, arranged for operation, substantially as shown. 19th. In a bag machine, the combination, with a sewing mechanism and suitable feed rollers, of a cutter adapted to sever the material into bag lengths, a second sewing mechanism arranged out of line with the first and adapted to sew the end of the severed length, a horizontally-acting pusher adapted to carry the severed section from the cutter to the second sewing mechanism, and means for imparting motion to the various parts. 20th. In a bag machine, the combination, with a sewing mechanism, a cutter adapted to sever the material transversely as it comes from the sewing mechanism, a pusher movable horizontally and at approximately right angles to the line of feed of the sewing mechanism, substantially as shown, and a second sewing mechanism adapted to receive and sew the severed section and means for imparting motion to the various parts. 21st. In a bag machine, the combination, with two sewing mechanisms operating substantially at right angles to each other, of a cutter and a horizontally-moving pusher interposed between the sewing mechanism, all substantially as shown. 22nd. In a bag machine, the combination, with two sewing mechanisms operating continuously, of an intermittently-acting cutter and an intermittently-acting pusher interposed between the sewing mechanisms to carry the severed section horizontally from one sewing mechanism to the other, and means for imparting motion to the several parts, all substantially as shown. 23rd. In a bag machine in which the bags are made from a continuous strip of cloth folded longitudinally through the middle, the combination of the following elements to wit, (1) a sewing mechanism adapted to sew the folded strip along its edge, (2) a cutter adapted to sever transversely the tube thus formed, (3) a horizontally moving pusher adapted to move the severed section approximately at right angles to the line of movement of the cloth tube, and (4) a second sewing mechanism adapted to sew the severed bag section across its end, the said elements being timed to operate, substantially in the order set forth. 24th. In a bag machine, the combination, with a sewing mechanism G, of a cutter H, adapted to cut the material into lengths suitable for the formation of a bag as it comes from the said sewing mechanism, a cam or eccentric for operating the cutter, a laterally moving pusher J, adapted to take hold of the severed section and move it sidewise in the plane in which it passes beneath the cutter, a second sewing mechanism K, arranged to sew one edge of the severed bag section, and a cam or eccentric for operating the pusher, the cutter and pusher cams being so arranged that as soon as the cutter descends and severs the tube of cloth the pusher will be brought into action to remove the severed section. 25th. In a bag machine, the combination, with two sewing mechanisms, of a vertically reciprocating cutter and a horizontally-moving pusher interposed between the two mechanisms. 26th. In combination, with a bed or table and the elevated guides or supports I, a pusher J, mounted thereon, a pivoted lever L<sup>3</sup>, a link connecting the lever and pusher, a driving shaft and a cam thereon for actuating the lever. 27th. In combination, with guides or supports I, I, a pusher J, comprising frame or cross head I<sup>1</sup>, and pivoted plate I<sup>2</sup>, a lever L<sup>3</sup>, a link connecting the lever with the plate above the pivot of the latter, and a cam or eccentric for moving the lever. 28th. In combination, with table F, having grooved bracket J<sup>2</sup>, shaft H<sup>9</sup>, provided with cam J<sup>3</sup>, a pivoted lever L<sup>3</sup>, and pusher J, and a block I<sup>1</sup>, carried by the lever and engaging the bracket and cam. 29th. In combination, with table F, bracket J<sup>2</sup>, having the

separated arms grooved, as at J<sup>1</sup>, a shaft H<sup>5</sup>, provided with a cam J<sup>3</sup>, to run between the arms of the bracket, a pivoted lever L<sup>3</sup>, and pusher J, and a bifurcated block I<sup>1</sup>, secured to the lever, the said block being provided with a stud J<sup>1</sup>, to engage the cam and studs I<sup>9</sup>, to engage the grooves J<sup>1</sup>, in the bracket. 30th. In a bag machine, the combination, with two sewing mechanisms and their feeding devices, of a pusher for carrying the material from one mechanism to the other, and means independent of the sewing mechanisms or their feeding devices for raising or elevating the pusher, as it recedes. 31st. In a bag machine, the combination, with the table F, of a sewing mechanism K, and overhanging arm J<sup>9</sup>, and a roller J<sup>8</sup>, carried by said arm. 32nd. In a bag machine, the combination, with arm or bracket J<sup>9</sup>, and the roller J<sup>8</sup>, carried thereby of the worm wheel K<sup>1</sup>, secured to the roller shaft outside of the arm or bracket, a shaft J<sup>7</sup>, provided with a bevel gear K<sup>4</sup>, a shaft K<sup>3</sup>, provided at one end with a worm K<sup>2</sup>, and at the other end with a bevel gear K<sup>5</sup>, and a yoke K<sup>4</sup>, connecting the shafts J<sup>7</sup>, and K<sup>3</sup>. 33rd. In a bag machine, the combination, with the roller J<sup>8</sup>, of the reciprocating pusher J, adapted to carry the material under the roller and a stitching mechanism arranged opposite the roller. 34th. In a bag machine, the combination, with sewing mechanism G, and H, and suitable feed rollers to act in conjunction therewith, of a reciprocating cutter, a horizontally moving pusher to convey the bag material from one sewing mechanism to the other, a main driving shaft and gearing, substantially as shown, for imparting motion to the several mechanisms from said driving shaft. 35th. In a machine for making bags from a continuous strip of cloth, the combination of mechanism for folding the strip longitudinally and placing its inner faces in opposition throughout, means for holding the edges of the folded strip in alignment, and a sewing mechanism adapted to stitch the opposing edges together and thereby to form a seam which when the bag is turned shall have its edges within the bag, all substantially as shown and described. 36th. An improvement in the method of manufacturing bags in one continuous operation, which consists in folding the strip lengthwise through its middle, moving the same forward longitudinally, sewing the edges of the folded strip, severing the folded and sewed strip, and moving the severed sections transversely to the line of travel of the folded strip, and finally sewing the severed section across one end. 37th. The improvement in the method of making bags, consisting in severing from a longitudinally folded and moving strip of cloth a length sufficient for the formation of a bag, moving the severed section transversely to the line of travel of the folded strip, and finally stitching the severed section along the line of the cut, the whole constituting a continuous operation. 38th. An improvement in the method of manufacturing bags in one continuous operation, which consists in first printing upon the continuous web or sheet of bag material, and subsequently folding, sewing, cutting and sewing the printed web, substantially in the manner shown. 39th. An improvement in the method of manufacturing bags in one continuous operation, which consists in first printing upon the continuous web or sheet of bag material, second, folding the printed sheet lengthwise through the middle and sewing its edges so as to form a tube, third, severing the tube and moving the severed section transversely to the tube, and fourth, sewing the severed section across one end. 40th. An improvement in the method of manufacturing bags at a continuous operation, which consists in first printing upon the continuous web or sheet of bag material, second, folding the web or sheet longitudinally through its middle with the printed face inside, and subsequently sewing, cutting and sewing the folded printed strip.

### No. 36,685. Chase for Printers.

(Châssis d'imprimeur.)

Malcolm Nicholson, Goderich, Ontario, Canada, 29th May, 1891; 5 years.

Claim.—The chase, consisting of frame A, the longitudinal and cross bars B, and C, the tenons at the ends of said bars B, and C, the mortise W, with openings X, X, the cross bars D, D, with screws E, E, the wedges F, F, all substantially as and for the purposes hereinbefore set forth and as described.

### No. 36,686. Safety Vault, etc. (Voûte de sûreté.)

George Shiras Clark, Philadelphia, Pennsylvania, U.S.A., 29th May, 1891, 5 years.

Claim.—1st. The combination, of a vault or analogous structure, the floor of the vault being on the same plane as the floor of the building, with a movable raised sill, substantially as described. 2nd. The combination, of a vault or analogous structure, with a raised sill pivoted so as to be moved to provide an uninterrupted passage into the vault, substantially as described. 3rd. The combination, in a vault or analogous structure, of a movable raised sill with a filling plate, substantially as described. 4th. The combination, in a vault or analogous structure having one or more inner doorways, and an outer doorway, the floor of the vault being on the same plane as the floor of the building, a depressed vestibule between the doorways with a movable sill for the outer door to fit against, and a movable filling plate adapted to the space between the doorways, substantially as described. 5th. The combination, in a vault or analogous structure, of the movable sill and a hinged filling plate, substantially as described. 6th. The combination, in a vault or analogous structure, of the floor, of a building floor of the vestibule and floor of the vault, all on or about the same plane, with a movable sill or sills between the several floors, substantially as set forth.

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

2167. WILLIAM STEPHENSON, 3rd five years of No. 12,729, from the 3rd day of May, 1891. Improvements on Combined Boiler, Land Roller, Seed Drill and Harrow, 1st May, 1891.
2168. ROBERT E. JAMESON, 2nd five years of No. 24,004, from the 7th day of May, 1891. Improvements in Reaper and Mower Knife Sharpeners, 5th May, 1891.
2169. JONATHAN NELSON, 2nd five years of No. 24,012, from the 10th day of May, 1891. Improvements in Ice Cream Soda, 5th May, 1891.
2170. SOLAR REFINING COMPANY, (assignees), 2nd and 3rd five years of No. 24,034, from the 11th day of May, 1891. Improvements in the Distillation of Hydro-carbon Oils, 5th May, 1891.
2171. MARYLAND HOMING AND CORALLINE COMPANY, (assignees), 2nd five years of No. 24,061, from the 17th day of May, 1891. Improvements in Prepared Cereals and the Mode of Production, 5th May, 1891.
2172. SCHLICHT AND FIELD COMPANY, (assignees), 2nd five years of No. 24,023, from the 10th day of May, 1891. Improvements in Filing Cabinets for Papers, 7th May, 1891.
2173. PETROLEUM ENGINE COMPANY, (assignees), 2nd five years of No. 29,278, from the 2nd day of June, 1891. Improvements in or Applicable to Motor Engines Operated by the Combustion of Liquid Hydro-carbon, 11th May, 1891.
2174. BUSHNELL AND COMPANY, (assignees), 2nd and 3rd five years of No. 28,750, from the 23rd day of March, 1893. Improvements in Refining Petroleum, 12th May, 1891.
2175. CADWALLADER M. RAYMOND, 2nd five years of No. 24,109, from the 20th day of May, 1891. Improvements in Extension Ice Skates, 12th May, 1891.
2176. JOHN N. BROWN, 2nd five years of No. 24,217, from the 2nd day of June, 1891. Improvements in Vehicle Gears, 12th May, 1891.
2177. WILBERT HOOEY and JAMES HANNAH, 2nd five years of No. 24,180, from the 29th day of May, 1891. Improved Refrigerator, 13th May, 1891.
2178. FRANK BEALL and HUGH CREA, 2nd five years of No. 24,130, from the 22nd day of May, 1891. Improvements in Grinding Mills, 13th May, 1891.
2179. ROBERT WILLIAM KING, 2nd five years of No. 24,132, from the 22nd day of May, 1891. Improvements in Steam Radiators, 13th May, 1891.
2180. THOMAS RODGER, THOMAS BLACK, and ROBERT CRAWFORD, 2nd five years of No. 24,135, from the 22nd day of May, 1891. Improved Self Emptying Hopper Wagons for Ballasting on Railways, 13th May, 1891.
2181. THOMAS RODGER, THOMAS BLACK and ROBERT CRAWFORD, 2nd five years of No. 24,136, from the 22nd day of May, 1891. Improved Plow for Spreading and Trimming Ballast for Railways, 13th May, 1891.
2182. PIERRE M. RENAUD, 2nd five years of No. 24,103, from the 20th day of May, 1891. Improvements in Lifting Implements, 14th May, 1891.
2183. JOHANNES SPIEL, 2nd five years of No. 24,042, from the 15th day of May, 1891. Improvements in Petroleum and Gas Engines, 14th May, 1891.
2184. JAMES TAYLOR HOYT, 2nd five years of No. 24,117, from the 21st day of May, 1891. Improvements on Sanitary or Toilet Paper, 16th May, 1891.
2185. JAMES TAYLOR HOYT, 2nd five years of No. 24,118, from the 21st day of May, 1891. Improvements on Cabinets for Sanitary or Toilet Paper, 16th May, 1891.
2186. CALEB FRENCH WHITCHER and HORACE SAWYER, 3rd five years of No. 12,854, from the 21st day of May, 1891. Improvements in Compositions for Roofs of Buildings, Ship Bottoms, etc., 18th May, 1891.
2187. ROBERT EDWARD PHILLIPS and ERNEST RICHARD SHIPTON, 2nd five years of No. 24,434, from the 6th day of July, 1891. Improvements in and Relating to Brooches or Badges, for Clubs and Other Bodies whose Membership is Defined by the Payment of Periodical Subscriptions, 19th May, 1891.
2188. MERRITT CLARK BARDEN, 2nd and 3rd five years of No. 24,671, from the 7th day of August, 1891. Improvements in Cream Separators, 23rd May, 1891.
2189. WILLISTON I. ALVORD, 2nd five years of No. 24,145, from the 25th day of May, 1891. Improvements in Knob Attachments, 25th May, 1891.
2190. WILLISTON I. ALVORD, 2nd five years of No. 24,146, from the 25th day of May, 1891. Improvements in Knob Attachments, 25th May, 1891.
2191. WILLISTON I. ALVORD, 2nd five years of No. 24,257, from the 10th day of June, 1891. Improvements in Knob Attachments, 25th May, 1891.
2192. WILLISTON I. ALVORD, 2nd five years of No. 24,268, from the 10th day of June, 1891. Improvements in Knob Attachments, 25th May, 1891.
2193. ALVA LA SALLE KITSELMAN, 2nd and 3rd five years of No. 28,585, from the 1st day of March, 1893. Improvements on Wire Fabric Machines, 27th May, 1891.
2194. ABRAM D. WILT, 2nd five years of No. 24,192, from the 1st day of June, 1891. Improvements in Account Books or Holders, 29th May, 1891.
2195. WILLIAM HARRISON and THOMAS ANDREW BICKLEY, 2nd and 3rd five years of No. 36,288, from the 2nd day of April, 1896. Improvements on Nut Locks, 30th May, 1891.
2196. HEATON PENINSULAR BUTTON FASTENER COMPANY, (assignees), 2nd five years of No. 24,247, from the 8th day of June, 1891. Improvements in Button Fastening Staples for Boots and Shoes, 30th May, 1891.

## MAY LIST OF TRADE MARKS.

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

4025. } THE HARTLEPOOL'S SALT AND BRINE CO., of Greatham, County of Durham,  
4026. } England. General Trade Mark, 1st May, 1891.
- 40 7. } WM. CROFT, & SONS, of Toronto, Ont.  
4028. } Needles and Pins, 2nd May, 1891.
4029. JAMES P. LAMB, of Athens, County of Leeds, Ont. Certain Indian Medicines,  
2nd May, 1891.
4030. E. T. DANIELS & CO., of 17 and 18 St. Dunstan's Hill, London, England. Tea, 8th  
May, 1891.
4031. } WESTON NELSON, of Yarmouth, N. S.  
4032. } Nelson's Dyspepsia Bitters.  
4033. } Nelson's Firine Syrup.  
Nelson's Pain Expeller.  
8th May, 1891.
4034. ALEXANDER GORDON, of Detroit, Michigan, U.S.A., and HARRIS RAYNOLDS,  
of Windsor, Ont., trading at said Windsor as GORDON &  
RAYNOLDS. Cigars, 8th May, 1891.
4035. KAST & EHINGER, of Stuttgart, in Wurtemberg, Empire of Germany. Printing  
and Lithographic Inks, 8th May, 1891.
4036. HILLIARD & PELOW, of Peterborough, Ont. Flour, 8th May, 1891.
4037. THE STANSTEAD COAL AND FUEL CO., of Boston, Massachusetts, U. S. A.  
Compositions of Matter to be used for Increasing or Enhancing  
the Combustion of Coal or other Fuel, 9th May, 1891.
4038. ISABELLA MADDEN, of Kingston, Ont. Japan, Enamel and Paint, 11th May,  
1891.
4039. SERAPHIN LACHANCE, de Montréal, Qué. Un Article de Toilette, "Capilline,"  
11 Mai, 1891.
4040. } MORITZ SML. ESCHÉ, of Chemnitz, Saxony, Germany. Hosiery and Gloves.  
4041. } Hosiery, 11th May, 1891.
4042. RICHARD WELLINGTON WILLIAMS, of Three Rivers, Que. General Trade  
Mark, 11th May, 1891.
4043. } JOHN MICHAELS, doing Business under the Name. Style and  
4044. } Firm of H. JACOBS & CO., of Montreal, Que.  
4045. } Cigars, 13th May, 1891.
4046. H. N. BATE & SONS, of Ottawa, Ont. American Refined Petroleum, 14th May,  
1891.
4047. THE BRONSON SUPPLY CO., of Cleveland, Ohio, U. S. A. Sheet Metal Kitchen  
Utensils, known as "Hollow-ware," 15th May, 1891.
4048. LOUIS OVIDE GROTHÉ, of Montreal, Que. Cigars, 15th May, 1891.
4049. JAMES CROZIER, of Orangeville, County Dufferin, Ont. Pop, Ginger Ale and  
Other Non-intoxicating Beverages, 19th May, 1891.
4050. FERNANDO ALVAREZ, of Toronto, Ont. Cigars, 19th May, 1891.
4051. CALVIN POMEROY REID of Toronto, Ont. Whisky, 21st May, 1891.
4052. WESTON NELSON, of Yarmouth, N. S. Weston's Liniment, 21st May, 1891.
4053. HIRAM RICKER & SONS, of South Poland, State of Maine, U.S.A. Poland  
Mineral Spring Water, 23rd May, 1891.
4054. ELIZABETH ANN COWLING, of Toronto, Ont. Pills, 23rd May, 1891.
4055. ANGELO MICHEL FRANCIS GIANELLI, of Toronto, Ont. Marsala Wine, 23rd  
May, 1891.
4056. DE LAAGE, FILS ET CIE., de Saint Savinien-sur-Charente, France. Eaux-de-Vie,  
26 Mai, 1891.
4057. ARTHUR S. JOHNSON, of Charlottetown, P.E.I. Pills, 26th May, 1891.
4058. THE THETIS COMPANY, L'd., of Stockholm, Kingdom of Sweden. Waterproof  
Fabrics, 27th May, 1891.
4059. HENRY CHARLES FORTIER, GEORGE WILLIAM BOOTH, AND CHARLES  
JOHN PETER, of Toronto, Ont., trading as TORONTO BIS-  
CUIT AND CONFECTIONERY CO. Biscuits and Confection-  
ery, 29th May, 1891.
4060. JOSEPH LYONS, of 17 Park Street, Cheetham, Manchester, England, trading as  
WILLIAM LYONS. General Trade Mark, 30th May, 1891.



## COPYRIGHTS.

Entered during the month of May at the Department of Agriculture—Copyright and  
Trade Mark Branch.

5926. SOLDIER JACK, Song, Words by Samuel K. Cowan, M.A., Music by Theo. Bonheur.  
The Anglo-Canadian Music Publishers' Association, Limited, London, England, 4th May, 1891.
5927. THE VIRGIN MARY AND OTHER SERMONS, by Rev. John Ellis Laneley, Wm. Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 8th May, 1891.
5928. TEN YEARS IN MY FIRST CHARGE, by Rev. Alexander Hugh Scott, M.A., Perth, Ont., 11th May, 1891.
5929. GOOD BYE, by John Strange Winter (book). John Lovell & Son, Montreal, Que., 12th May, 1891.
5930. HIGH SCHOOL HISTORY OF ENGLAND, by Arabella B. Buckley. Adapted for High Schools and Collegiate Institutes, by W. J. Robertson, B. A., L. L. B. The Copp, Clark Company, Limited, Toronto, Ont., 13th May, 1891.
5931. TO, BEFORE AND ON THE ALTAR, by Rev. Ralph C. Horner, B. O. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 14th May, 1891.
5932. ERIC BRIGHT EYES, by H. Rider Haggard. Wm. Bryce, Toronto, Ont., 15th May, 1891.
5933. THE PHONOGRAPHIC TEACHER. A Guide to a Practical Acquaintance with the Art of Phonography or Shorthand, by Isaac Pitman.  
Isaac Pitman & Sons, Bath, England, 16th May, 1891.
5934. HAPPY THOUGHTS. Valse for the Piano, by Charles Johnstone. }
5935. OH TIME SPEED ON. Words and Music by J. E. Hall. I. Suckling & Sons, Toronto, Ont., 16th May, 1891. }
5936. MARTIN'S ARITHMETICAL TABLES. Robert T. Martin, Toronto, Ont., 18th May, 1891.
5937. FROM THE ALTAR TO THE UPPER ROOM. In Four Parts. }
5938. PENTECOST, by Rev. Ralph C. Horner, B. O. Wm. Briggs, (Book Steward of the Methodist Book and Publishing House), Toronto, Ont., 18th May, 1891. }
5939. POEMS GRAVE AND GAY, by Albert Ernest Stafford Smythe, Toronto, Ont., 21st May, 1891.
5940. CLOTHED WITH THE SUN, or From Olivet to the Gates of Glory. By Rev. Joseph H. Hilts, Dundas, Ont., 21st May, 1891.
5941. COLLEGE POLKA. For the Piano. On Popular Students' Songs from the University of Toronto Song Book, by Arthur Percival. I. Suckling & Sons, Toronto, Ont., 22nd May, 1891.
5942. JESUS THE MESSIAH, IN PROPHECY AND FULFILMENT, by Edward Hartley Dewart, D. D. Wm. Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 23rd May, 1891.
5943. PLAN OF THE CITY OF TORONTO AND SUBURBS. S. R. G. Penson, Toronto, Ont., 26th May, 1891.
5944. THE BELL TELEPHONE COMPANY OF CANADA, OTTAWA EXCHANGE, SUBSCRIBERS' DIRECTORY, JUNE, 1891. The Bell Telephone Company of Canada, Montreal, Que., 27th May, 1891.
5945. PASSE PIED. Danse Ancienne pour Piano, par Ernest Gillet. I. Suckling & Sons, Toronto, Ont., 29th May, 1891.
5946. VARSITY SCHOTTISCHE, (Military), by S. D. Schultz. Whaley, Royce & Co., Toronto, Ont., 29th May, 1891.
5947. THE COMMERCIAL AGENCY REGISTER, for the Provinces of Quebec, Ontario and Maritime Provinces, January, 1891, Volume three. Chaput Frères, Montreal, Que., 30th May, 1891.
5948. CONSTANCE WALTZ, for the Piano, by Adelyn Torrence. I. Suckling & Sons, Toronto, Ont., 30th May, 1891.



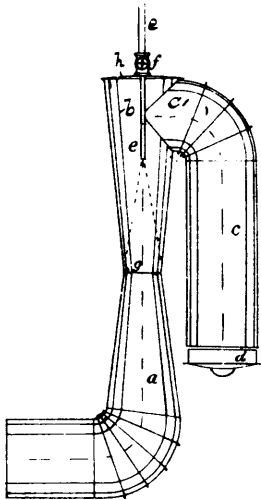
**THE**  
**CANADIAN PATENT OFFICE RECORD**

**ILLUSTRATIONS.**

Vol. XIX.

MAY, 1891.

No. 5.



36502 Merriam's Steam Syphon.

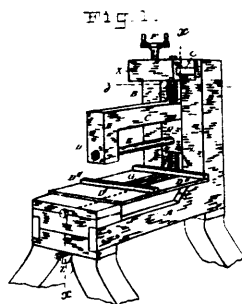


Fig. 2.

36503 Alleigh's Machine for Ornamenting Wood, etc.

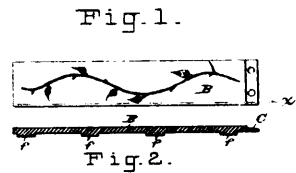


Fig. 1.

Fig. 2.

Fig. 3.

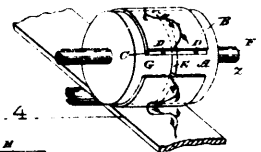
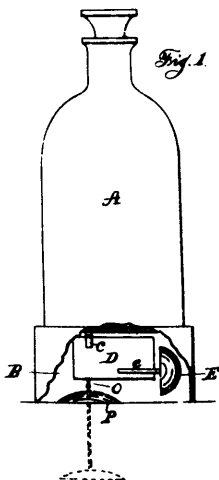
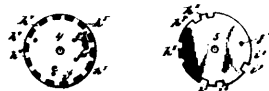
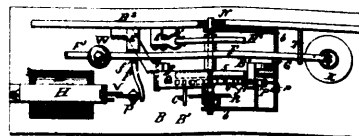
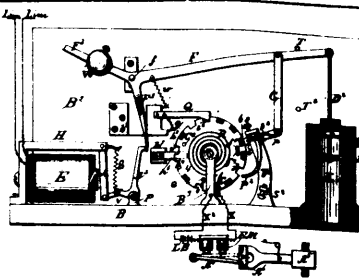


Fig. 4.

36504 Alleigh's Die for Ornamenting Wood, etc.



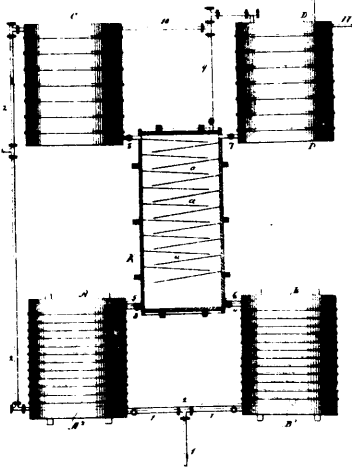
36505 Trottier's Bottle for Pharmaceutical Purposes.



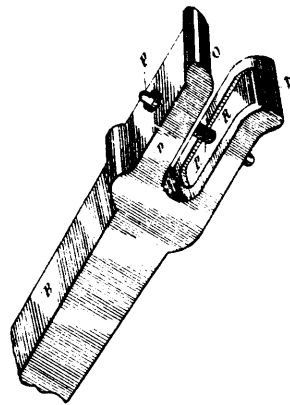
36506 Alexander's Electro Mechanical Combination Lock and Magnetic Power Equaliser.



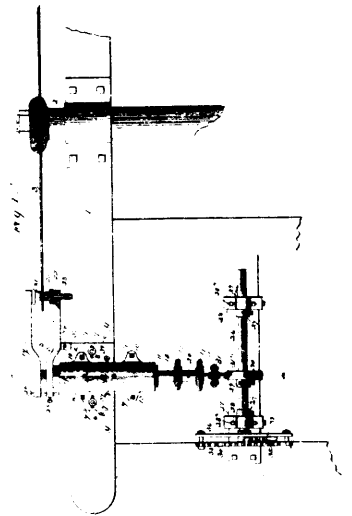
36507 Cowan's Dust Protector.



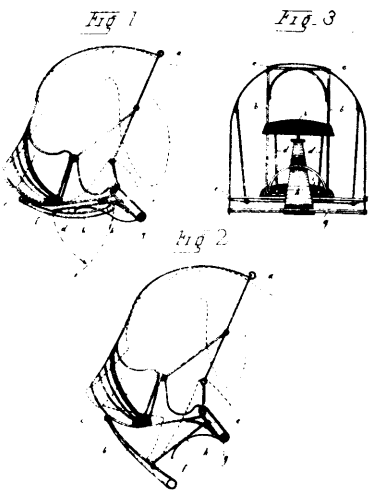
36508 Wender and Spiro's Machine for the Manufacture of Sulphite Lye.



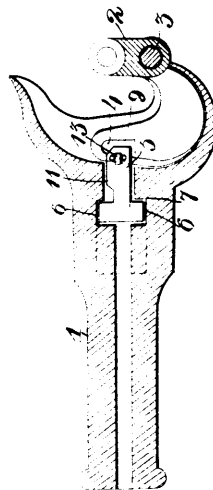
36509 Mowl's Car Coupling.



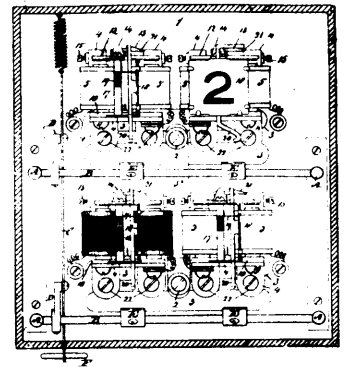
36510 Bill's Saw Guide.



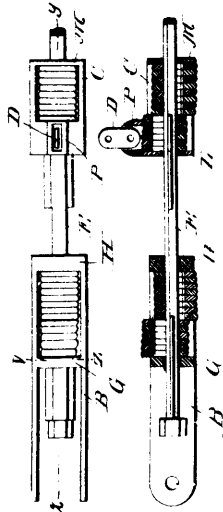
36511 Canary's Dog Muzzle.



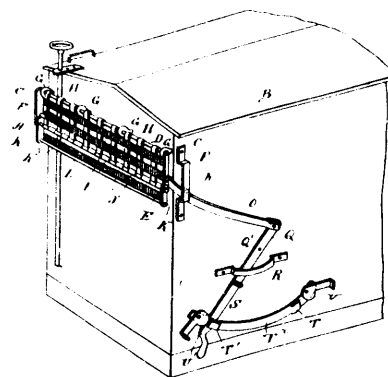
36513 Walker's Car Coupling.



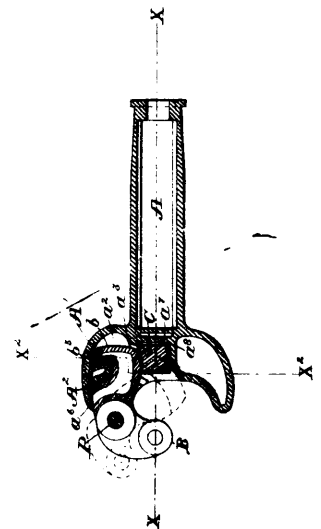
36514 Cortland's Electric Annunciator.



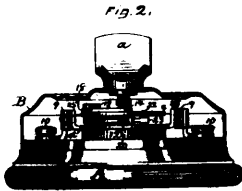
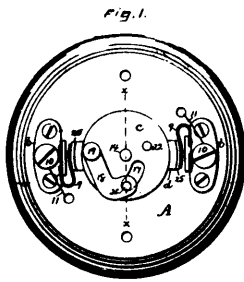
36515 Burgey's Car Brake.



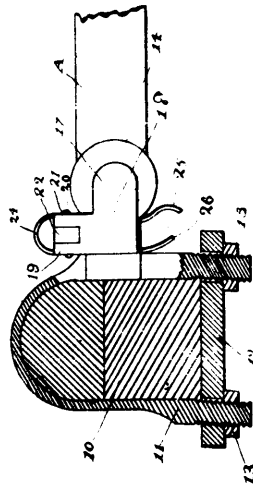
36516 Tyrrell's Platform for Freight Cars.



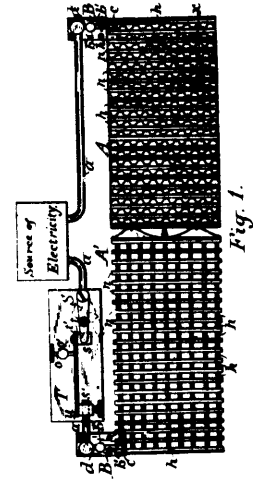
36517 Thurmond's Car Coupler.



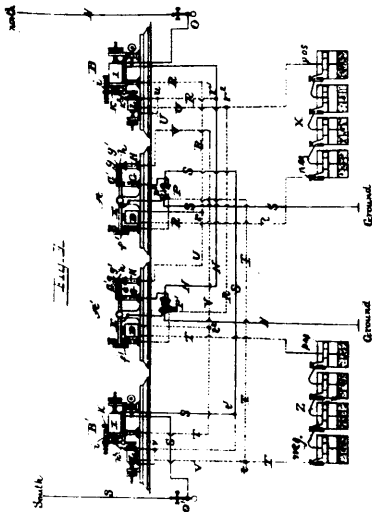
36518 Hart's Electric Snap Switch.



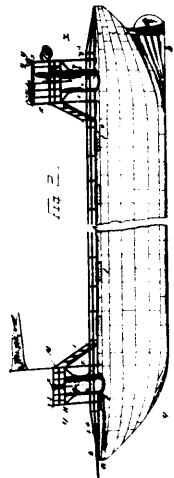
36519 Jaenicke's Vehicle Shaft Support, etc.



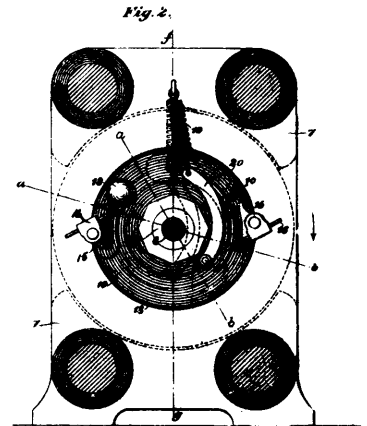
36520 Dewey's Electric Heating Apparatus.



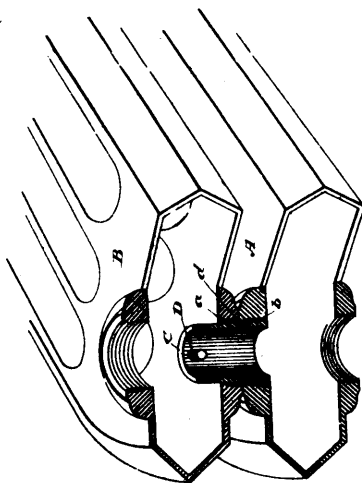
36521 McIlheney's Telegraph Repeater.



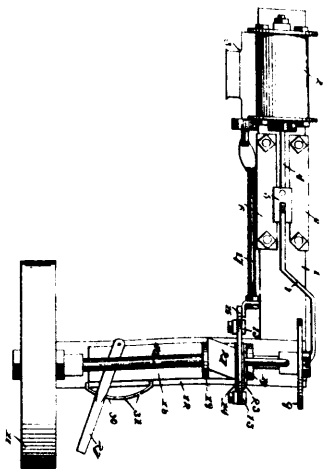
36522 McDougall's Tow Boat.



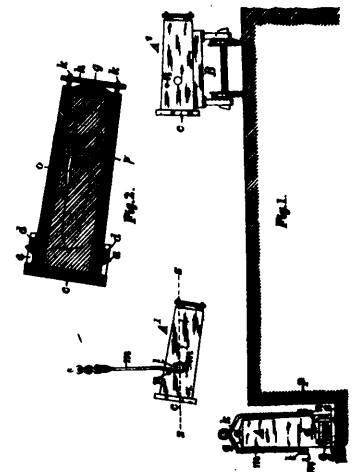
36523 Ball's Regulator for Dynamo Electric Machines.



36524 Morrison's Joint Coupling for Sections of a Radiator.

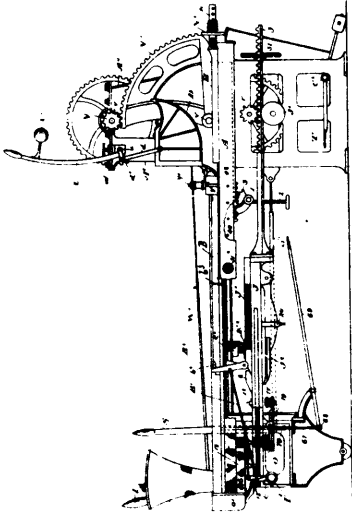


36525 Barnes' Engine Reversing Gear.

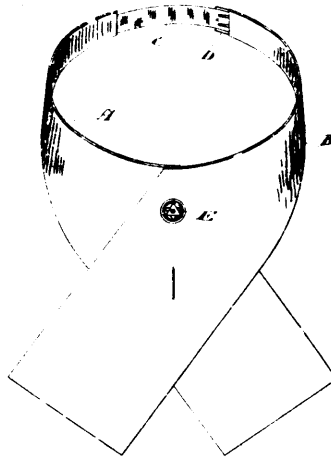


36526 Hinsdale's Method of Casting Ingots.





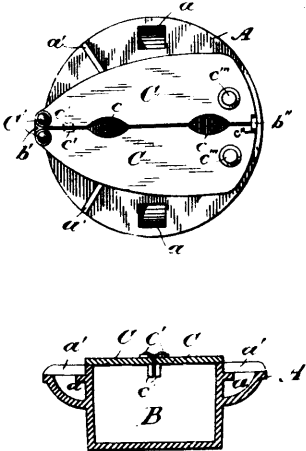
36527 Montague's Machine for Bending Vehicle Shafts, etc.



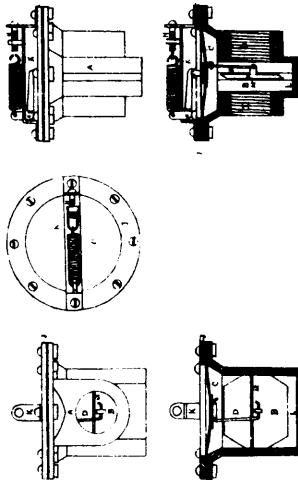
36528 Sword's Clavat.



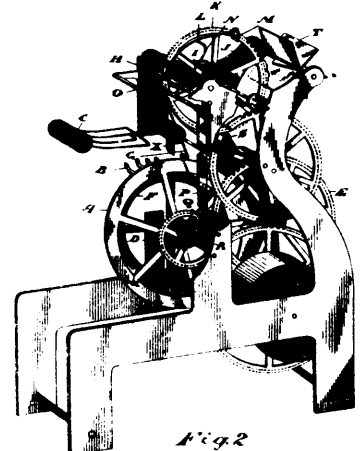
36529 Doane's Sleigh Knee.



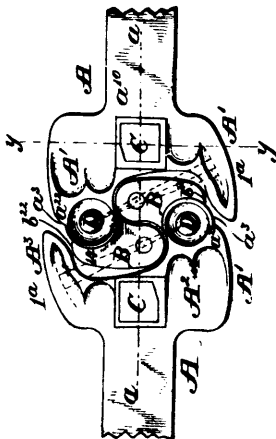
36530 Bailey's Sad Iron Heater.



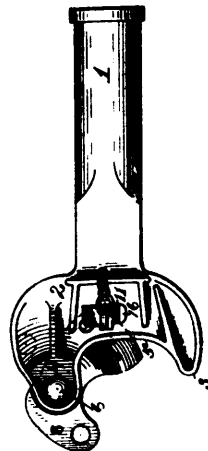
36531 Bowman and Hanson's Automatic Governors for Gas Pressure.



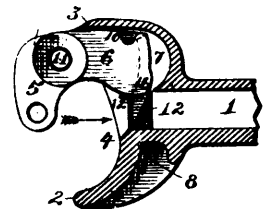
36532 Willcock's Clock.



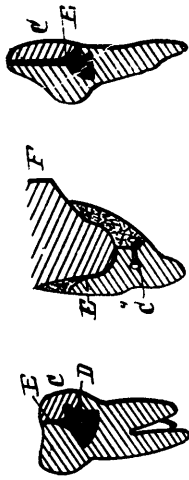
36533 Thurmond's Car Coupler.



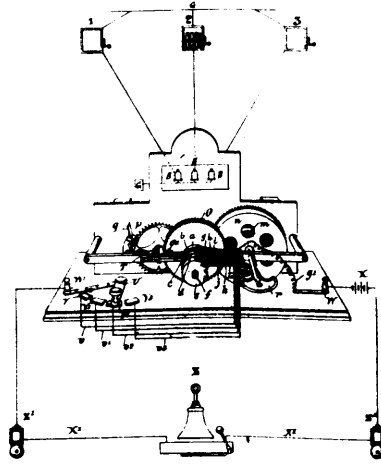
36534 McKeen's Car Coupler.



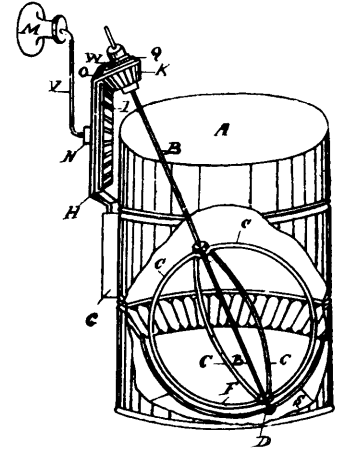
36535 McKeen's Car Coupler.



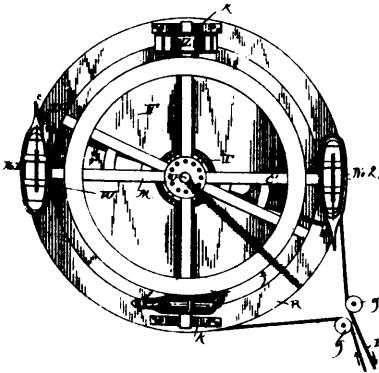
36536 Land's Artificial Denture.



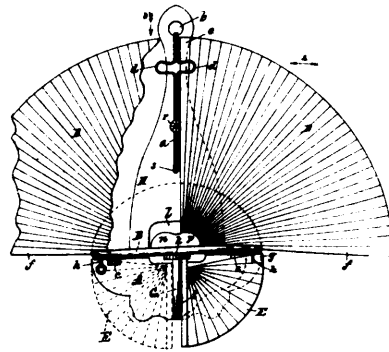
36537 Brown's Electrical Fire Alarm System.



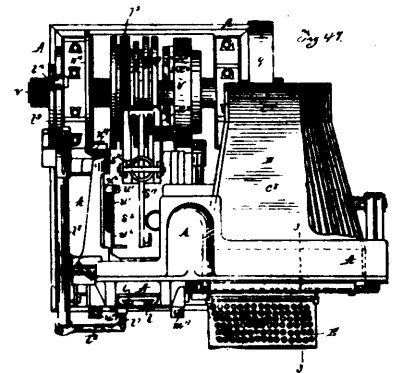
36539 Smyth's Egg Beating Utensil.



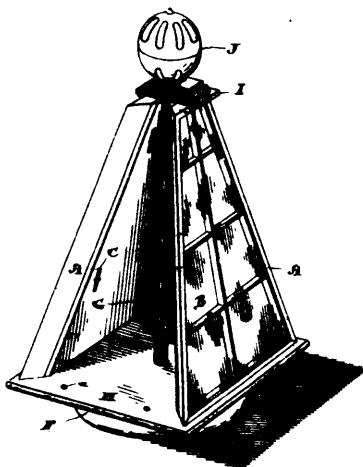
36540 Kay, Wilkinson and Fisher's Round-about.



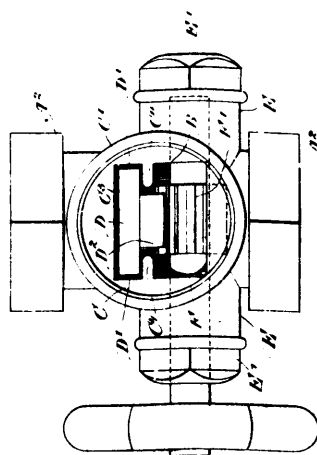
36541 Conegan's Wall Ornament.



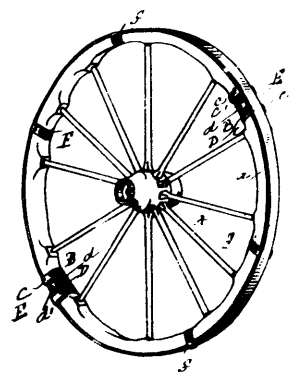
36542 Mergenthaler's Machine for Forming Type Bars.



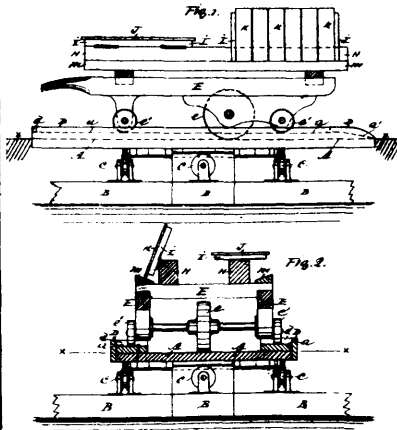
36543 Landy's Sample Case.



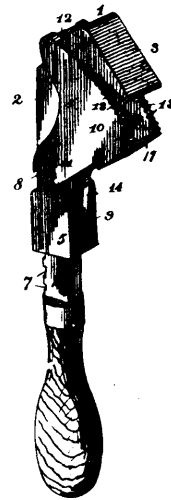
36544 Meadowcroft's Valve.



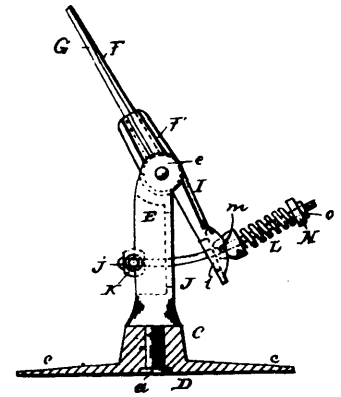
36545 Widdow's Tire Tightener.



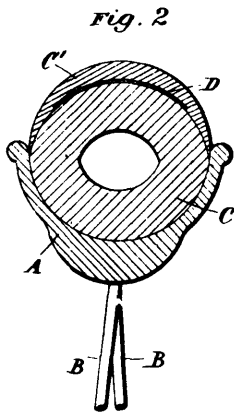
36548 New's Loading Barrow and Turn Table.



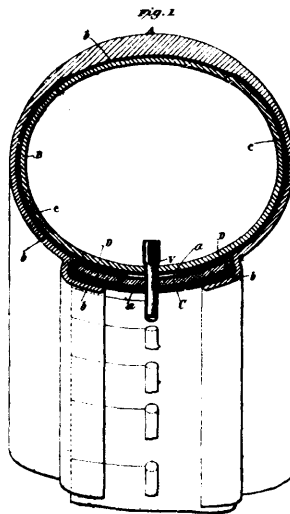
36549 Keith's Wrench.



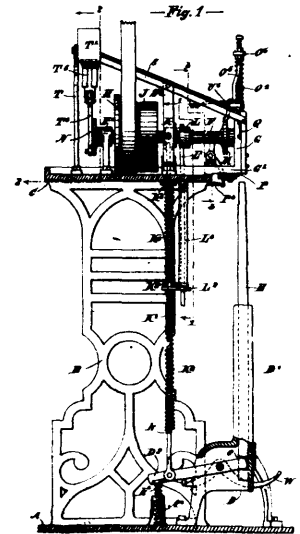
36550 Bae's Trolley Support.



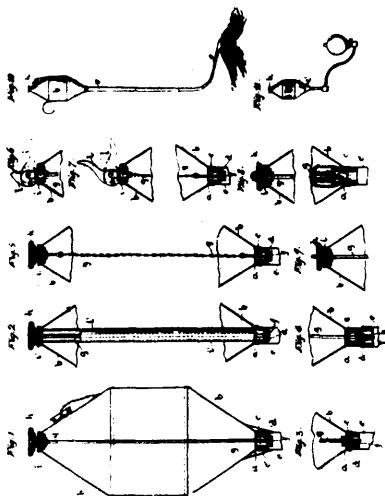
36551 Dunlop's Vehicle Tire.



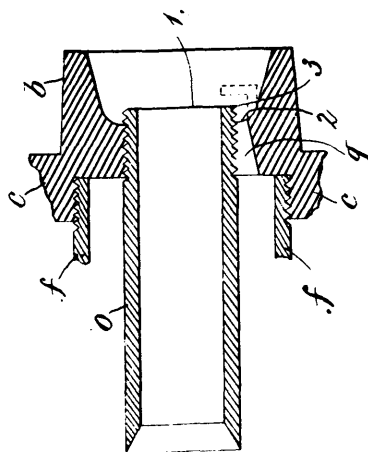
36552 Dunlop's Vehicle Tire and Means of Securing the same to Wheel Rims.



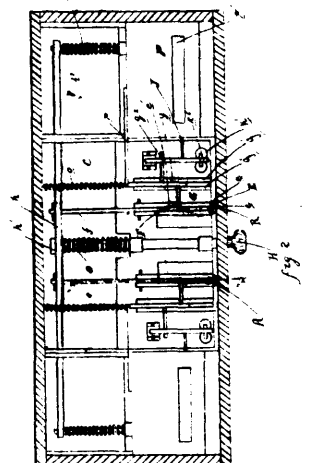
36553 Cutter's Boot and Shoe Slugging Machine.



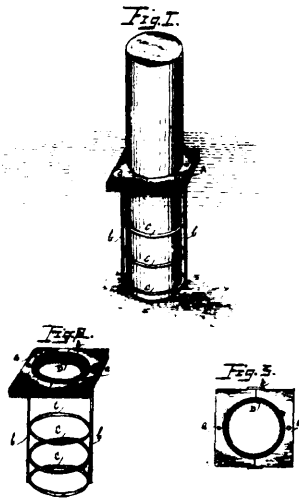
36554 Noton's Means of Stopping and Regulating the Flow of Oil from Lamps, etc.



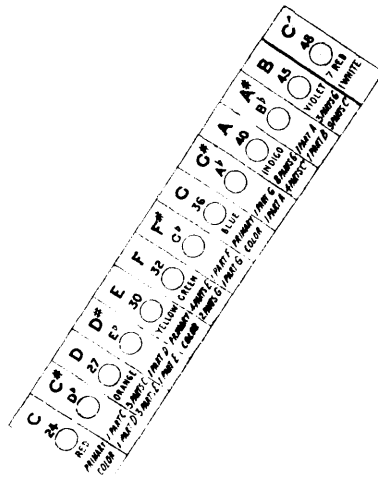
36555 Hersey's Liquid Hydro-carbon Burner.



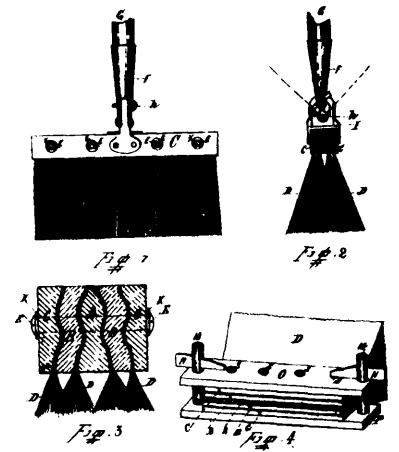
36556 Dunan's Mechanical Cigar Box.



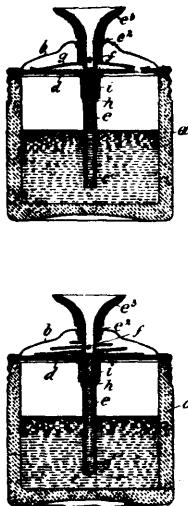
36557 Clark's Protector for Piles and Other Timbers.



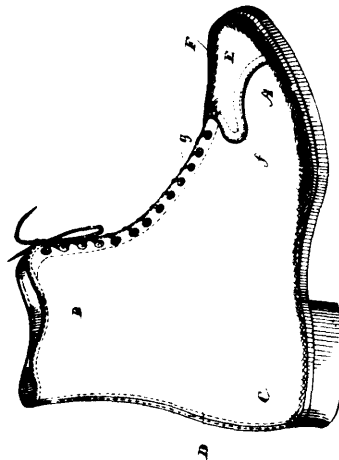
36558 Wilkinson's Harmonious Colouring.



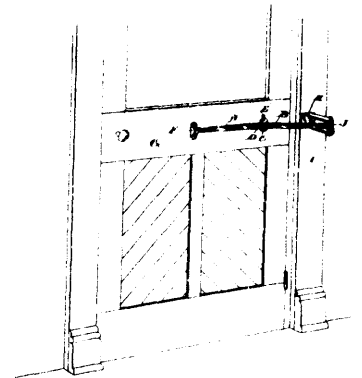
36554 Richardson and Kinleyside's Broom.



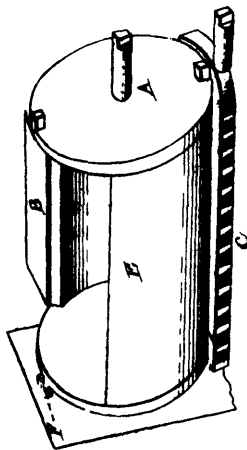
36561 Ingraham's Ink stand.



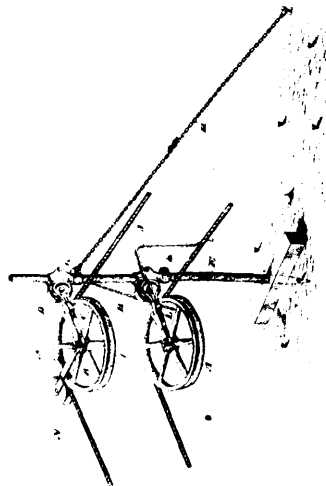
36562 Jarden's Boot.



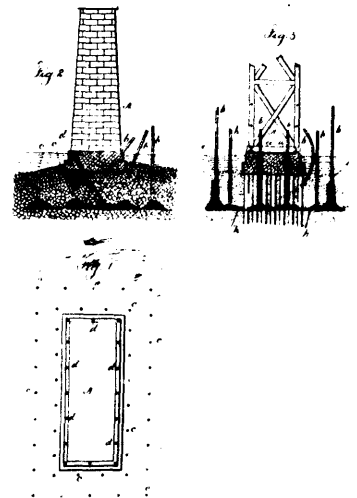
36563 Stong's Door Closer.



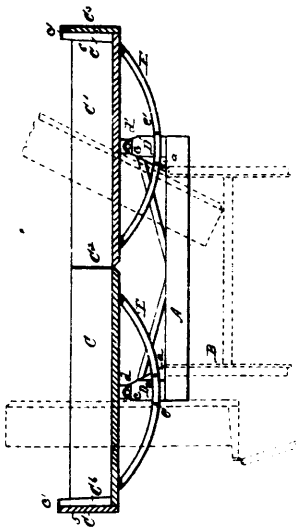
36564 Henderson's Revolving Fire Box.



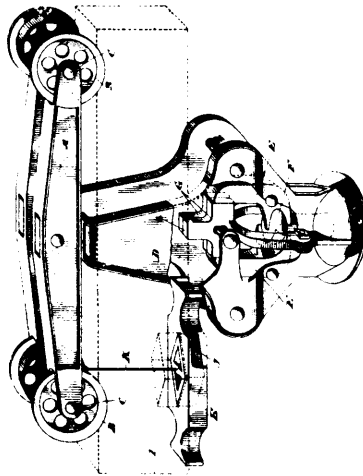
36565 Tolton's Transmission of Power.



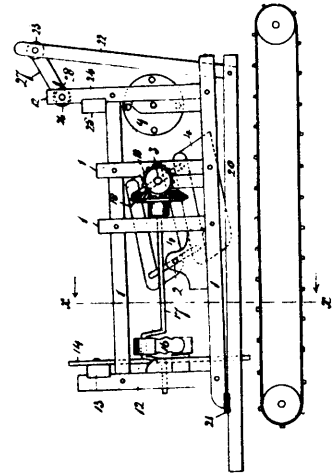
36566 Harris' Foundation for Piers, etc.



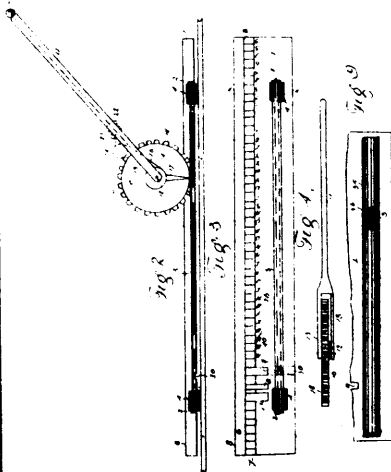
36567 Smith's Dumping Car.



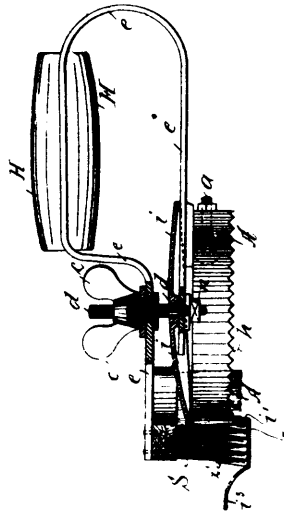
36568 Provan's Hay Carrier.



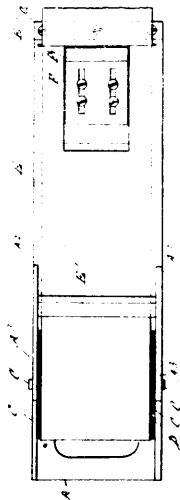
36569 Brintnell's Band Cutter.



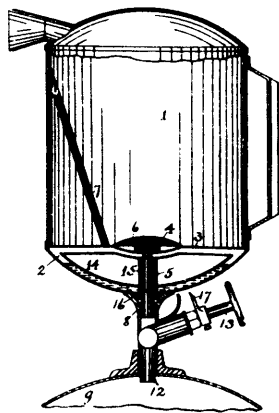
36570 Fisher's Type Writer.



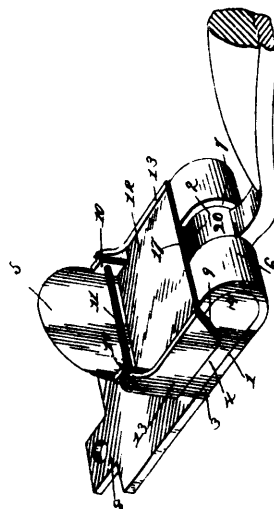
36571 Schulz's Curry Comb.



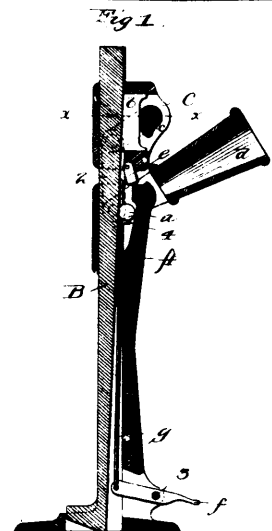
36572 Pruyn's Combined Memorandum and Order Rest and Tablet.



36573 Hollingsworth's Oil Feeding Device for Vapor Stoves.

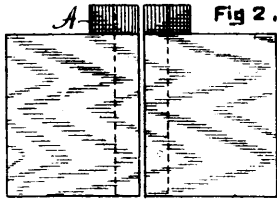
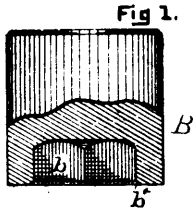


36574 Hollingsworth's Shaft Coupling.

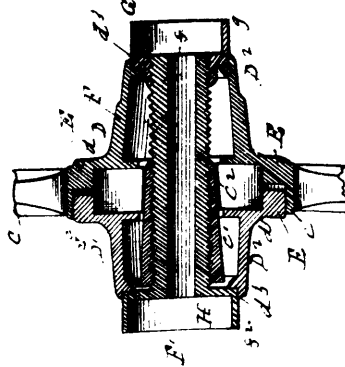


36575 Creclius' Lifting Jack.

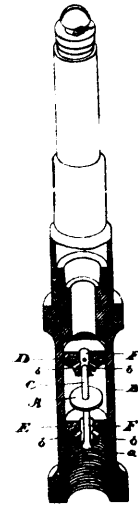




36576 Seaton and Thurston's Die for Heading Bolts.



36578 Jeffery's Vehicle Wheel.



36579 Hall's Gas Governor.

Fig. 1.

Fig. 2.

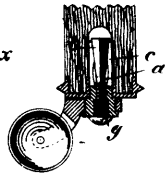
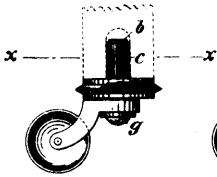


Fig. 3.

Fig. 4.

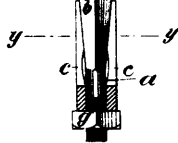
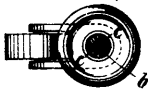
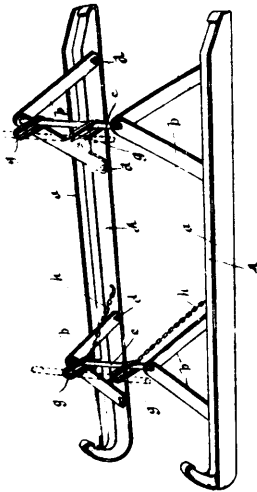


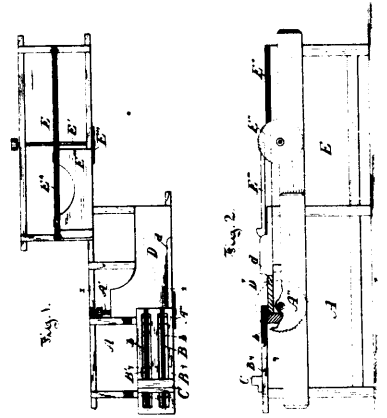
Fig. 5.



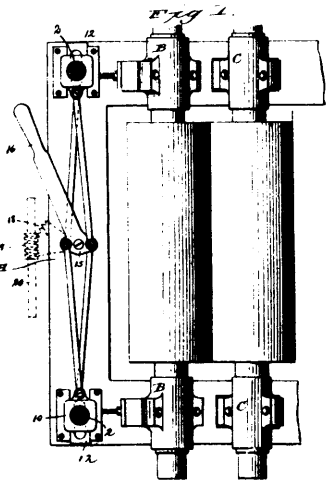
36580 Thimes' Fastener for Casters.



36581 Radley's Sleigh Runner.



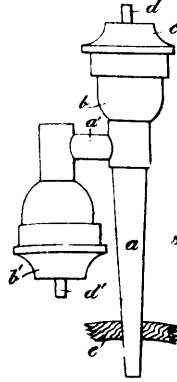
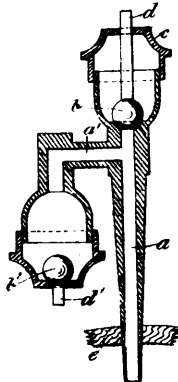
36582 Cassidy's Shingle Jointing Machine.



36583 Brewster's Roller Mill.

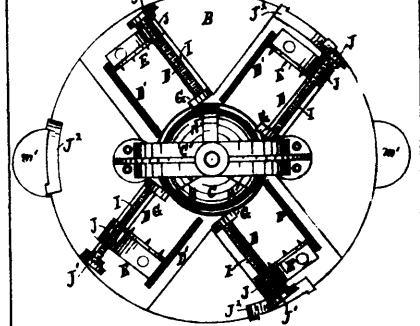
Fig. 1.

Fig. 2.

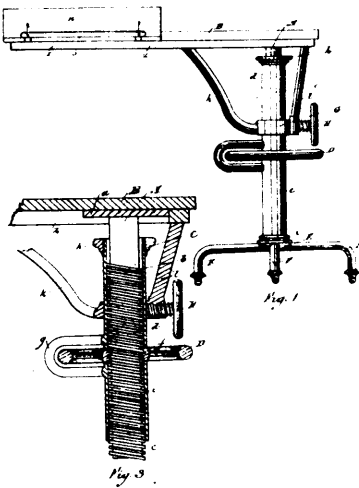


36584 Sharp's Spile for Beer Barrels, etc.

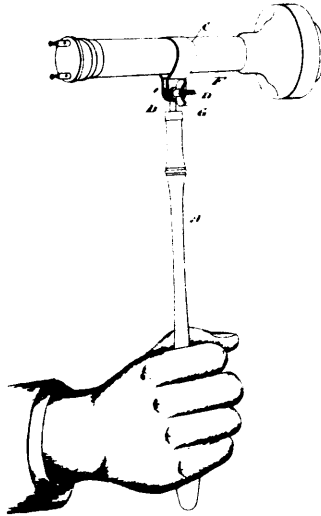
Fig. 1.



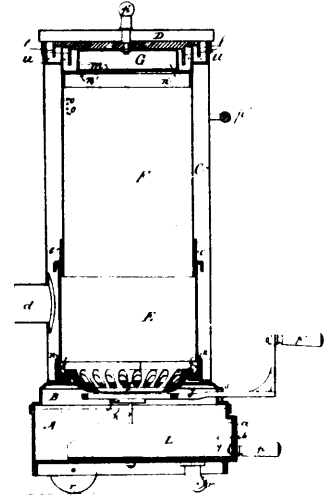
36585 Calkins' Wooden Dish Machine.



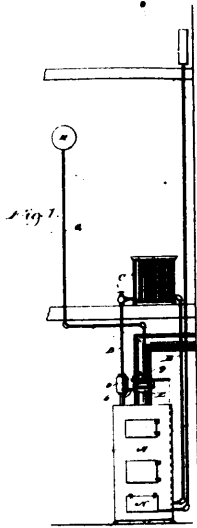
36586 Brodeur's Invalids' Table.



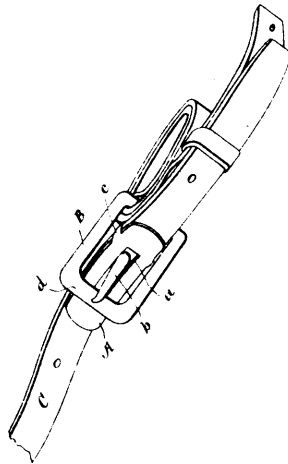
36587 Le Maintre's Detachable Hand-Phone Handle.



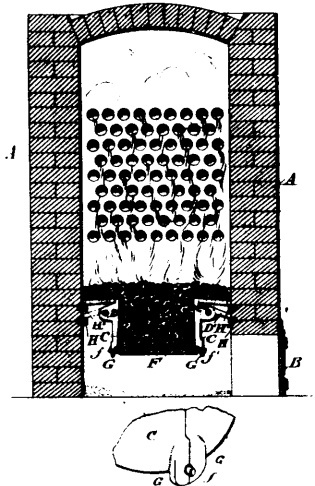
36588 Hartenstein's Furnace.



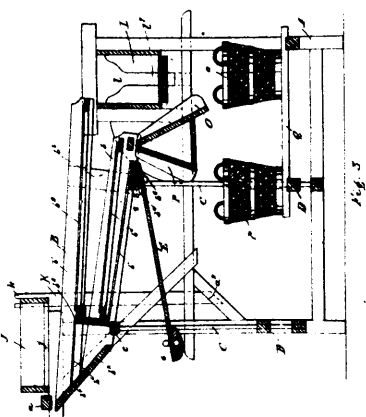
36589 Power's Heat Controller.



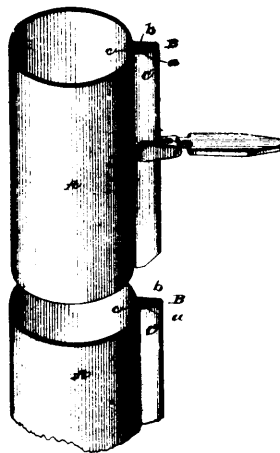
36590 Nichols' Strap and Buckle Shield.



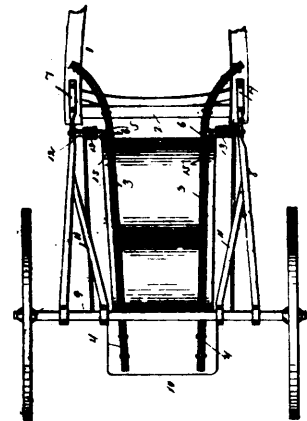
36591 Ensinger's Furnace.



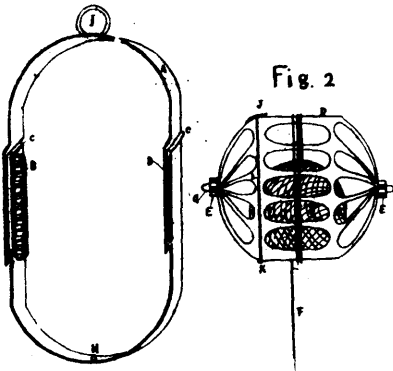
36592 Charest's Potato Separator.



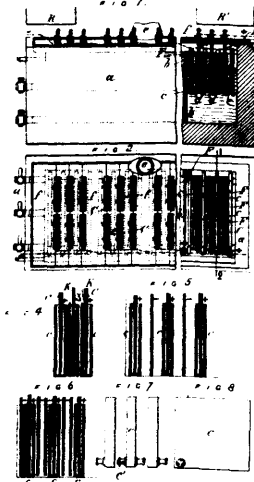
36594 Abrahams' Joint for Water Conductors.



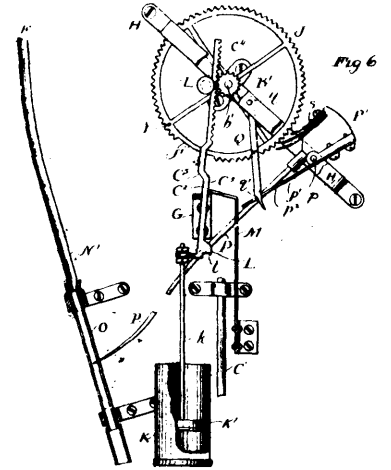
36595 Turner's Road Cart.



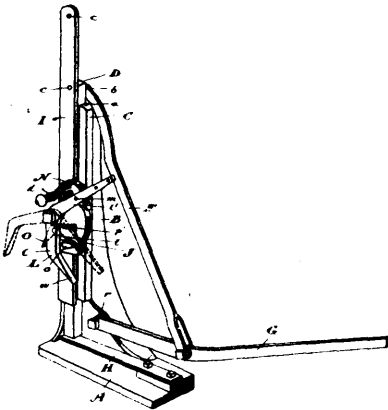
36596 Wareham's Automatic Gravitating Twine Holder.



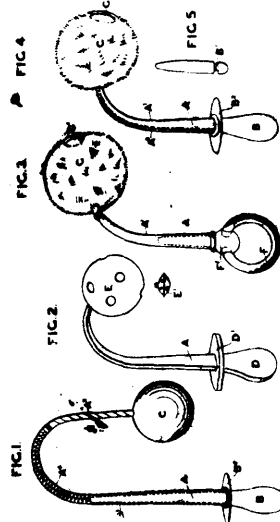
36597 Lloyd's Electro Chemical Generator.



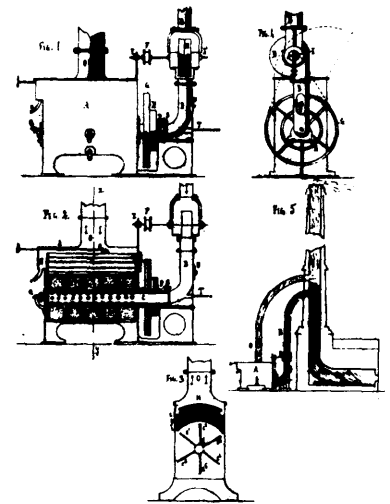
36598 Ingersoll's Coin Controlled, Self-Registering Testing Machine.



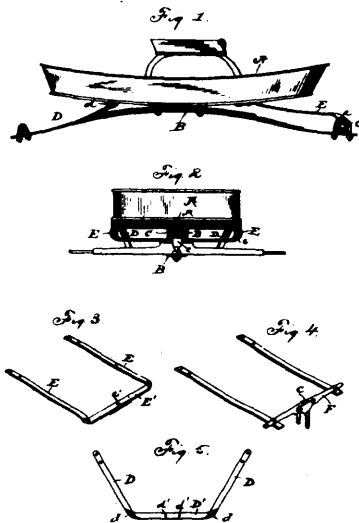
36599 Payette's Mill Dog.



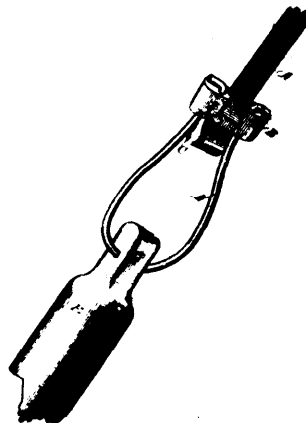
36600 Parkinson's Toy.



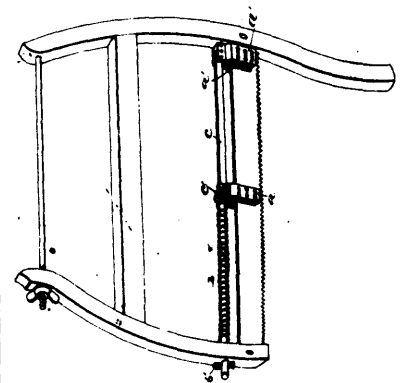
36601 Elliott's Apparatus for Treating Smoke.



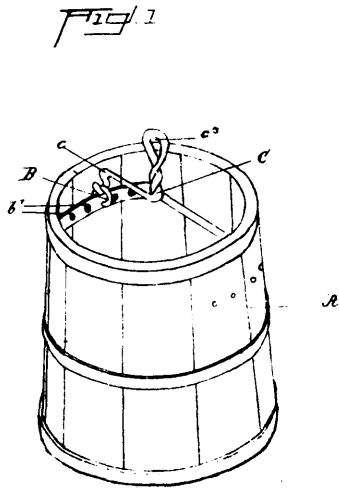
36602 Gunkelmann's Spring Vehicle.



36603 Gardner's Sash Balance.

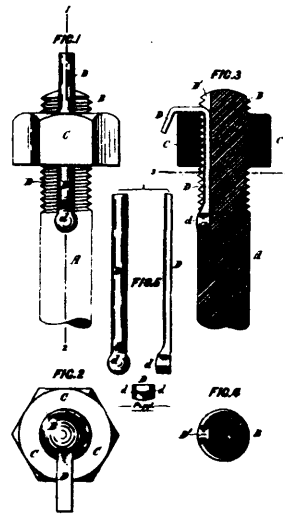


36604 Edwards' Saw Lubricator.

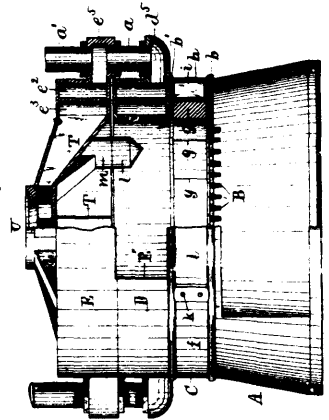


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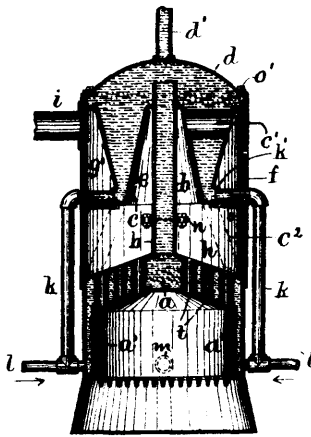


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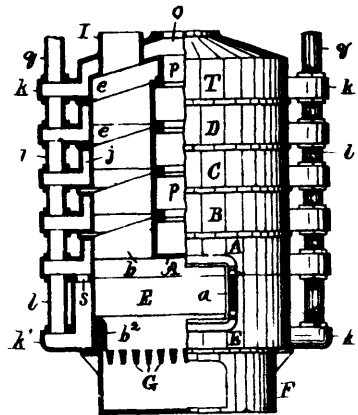
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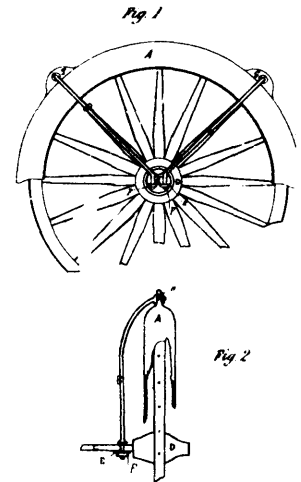


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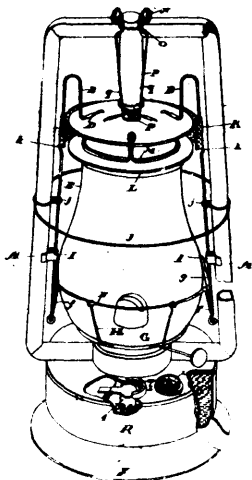


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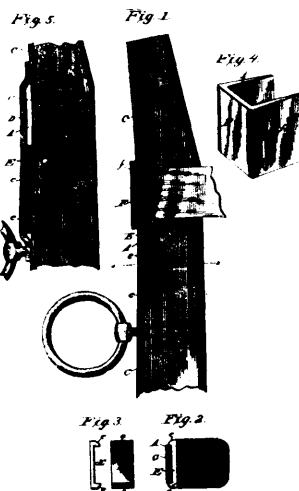
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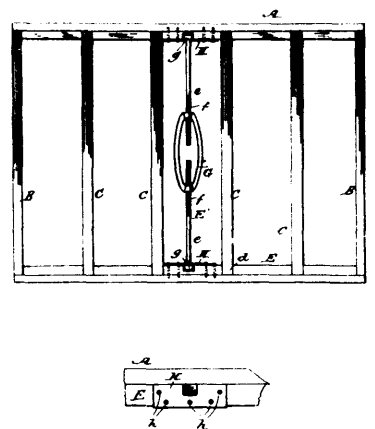
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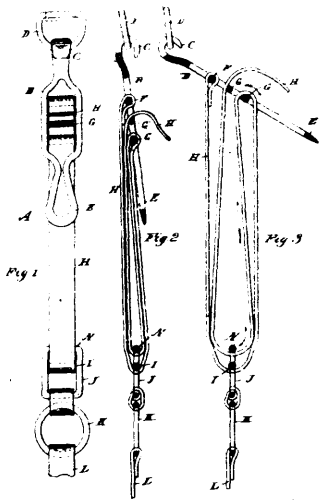
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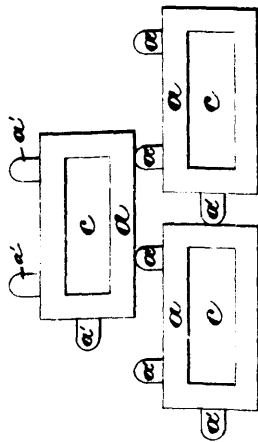


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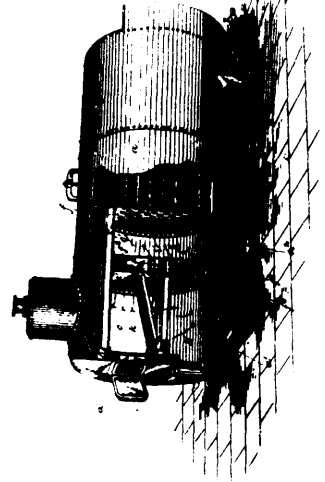
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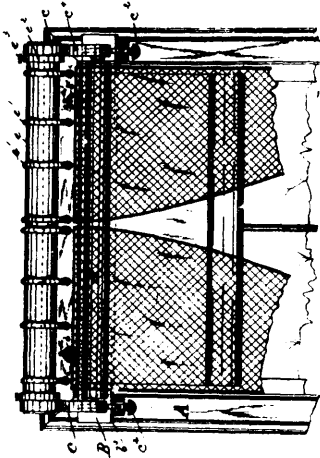
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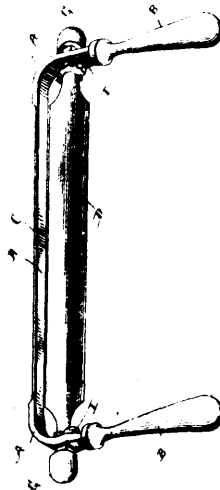
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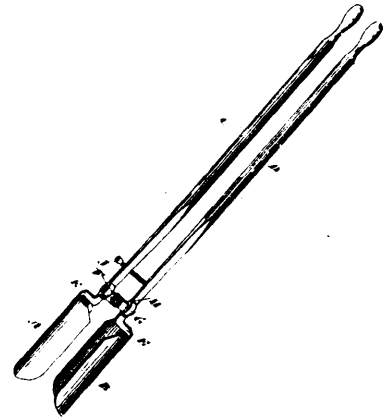
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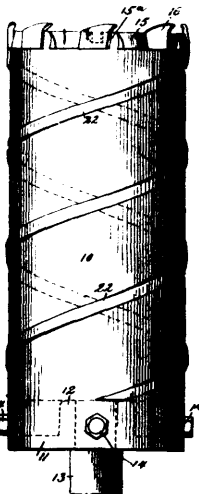
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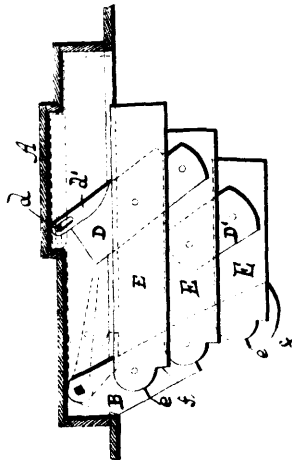
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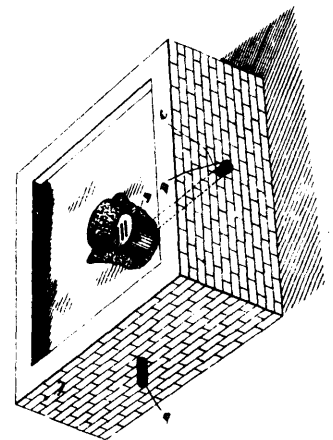
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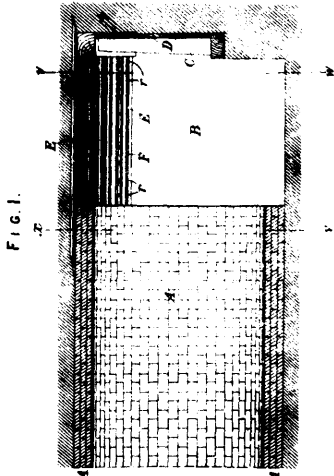


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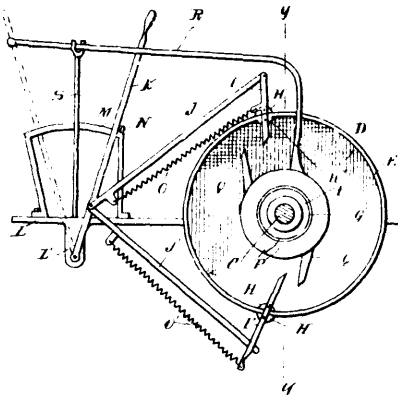


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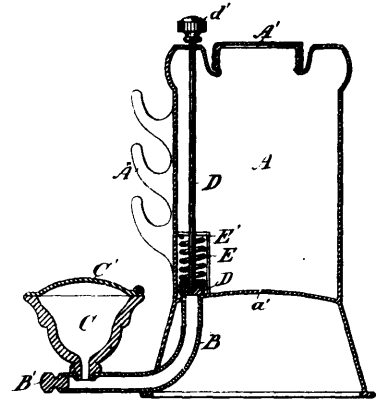




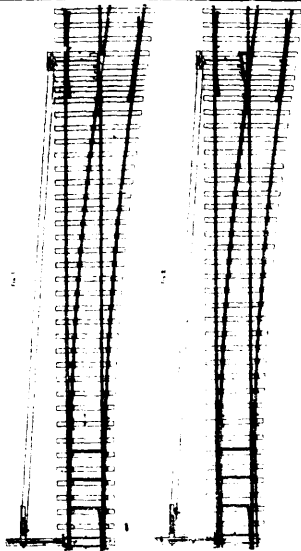
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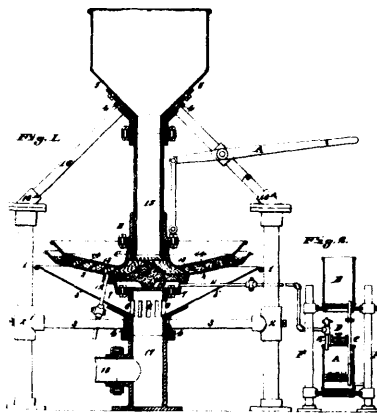
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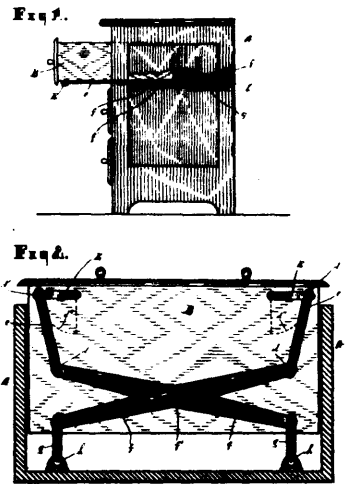
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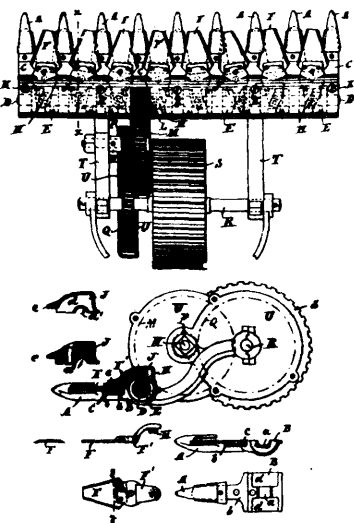
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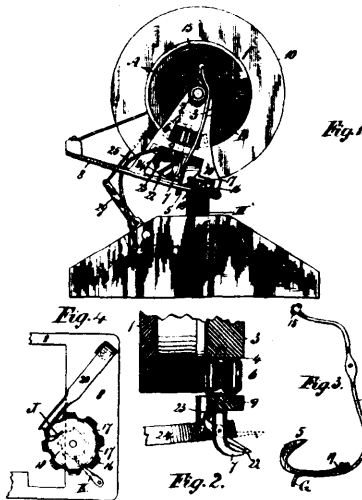
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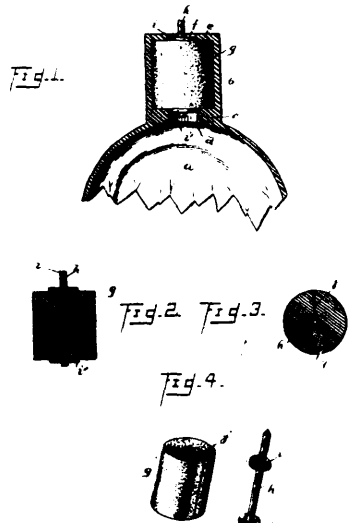
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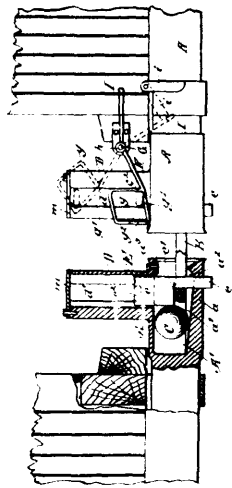
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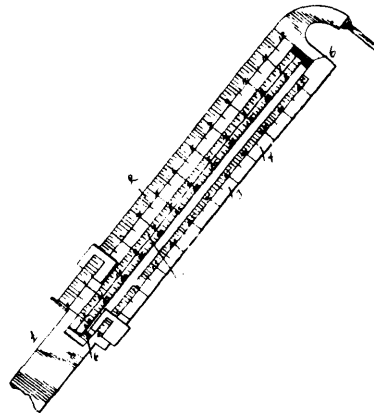
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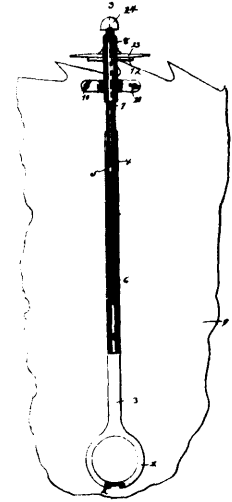
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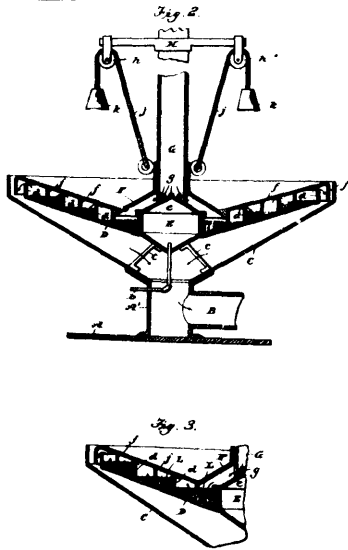
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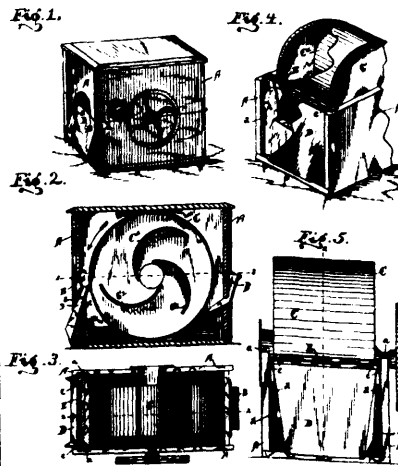
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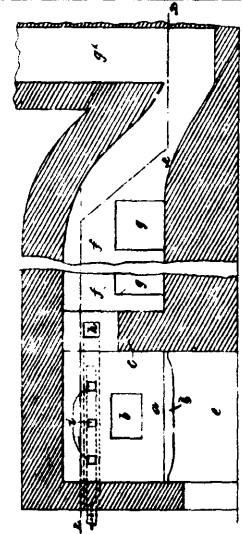
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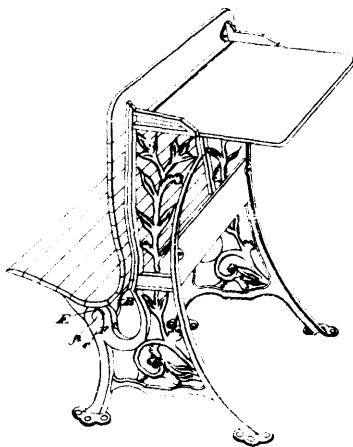
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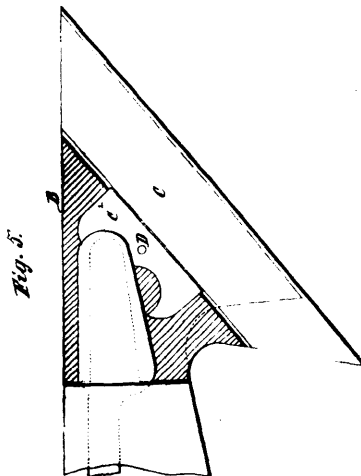
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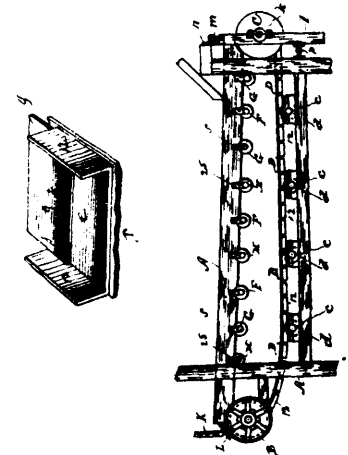
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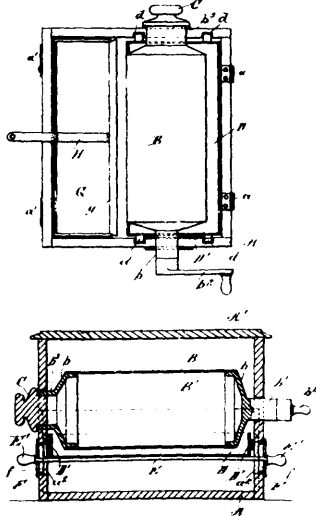
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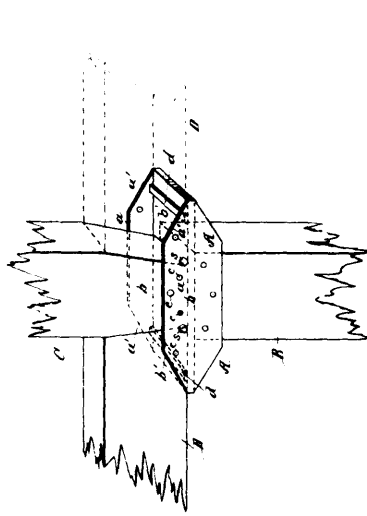
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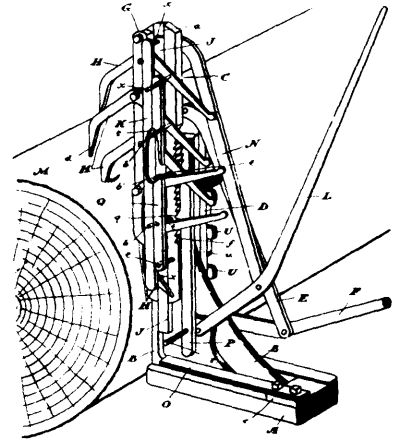
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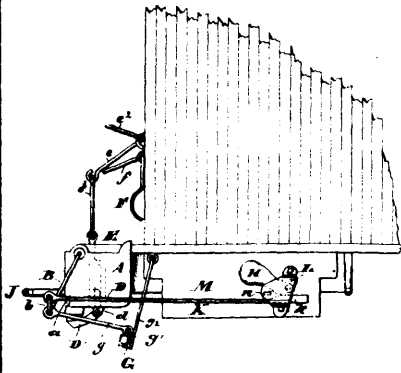
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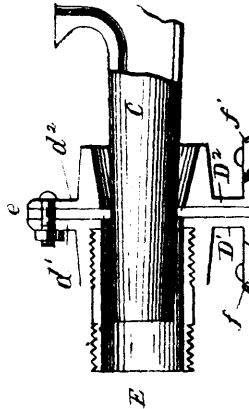
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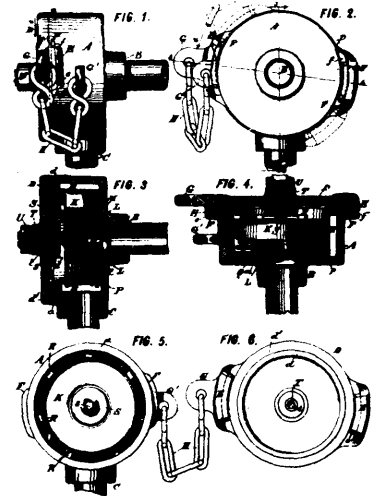
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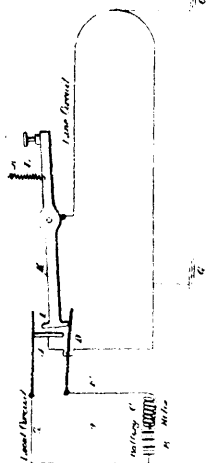
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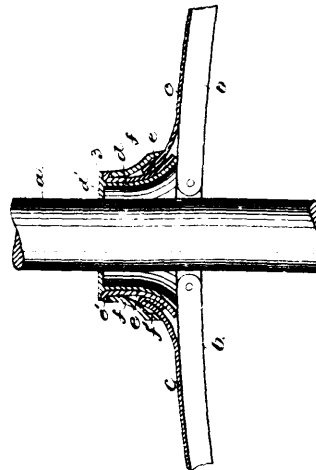
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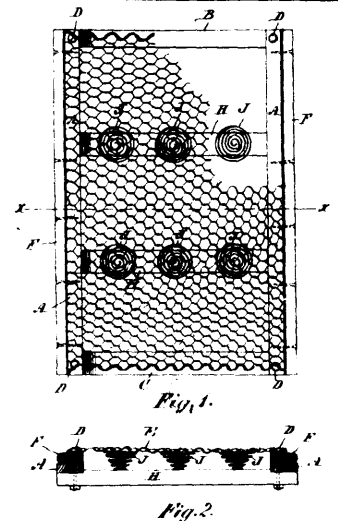
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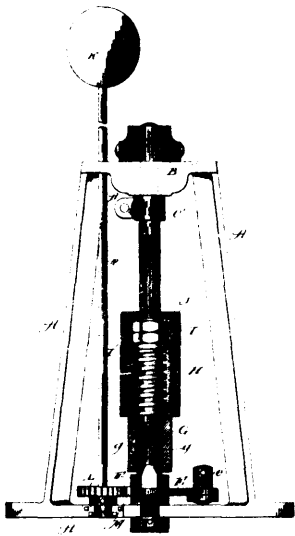
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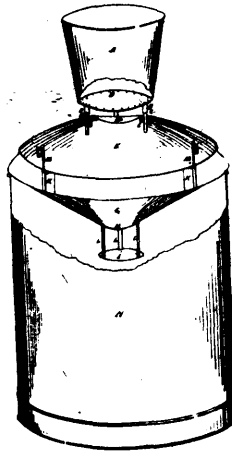
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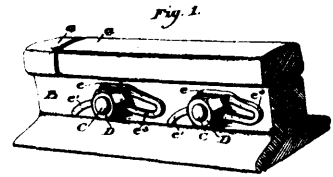
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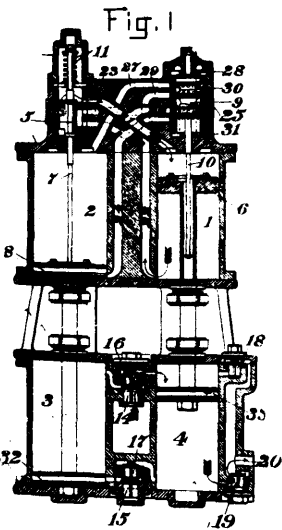
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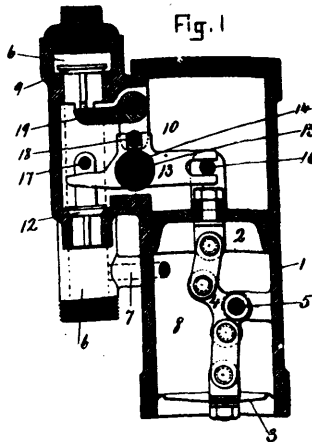
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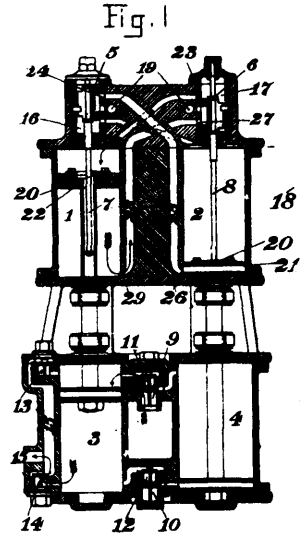
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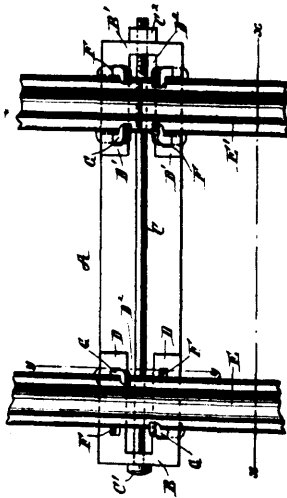
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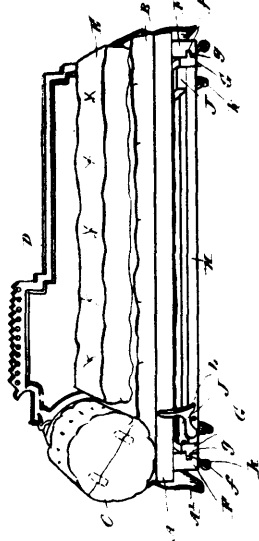
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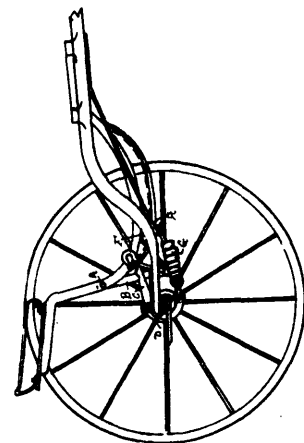
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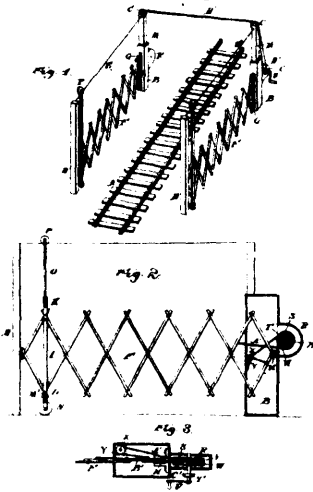
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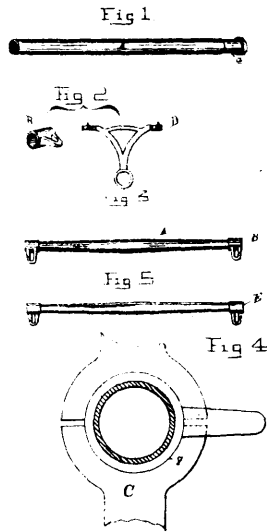
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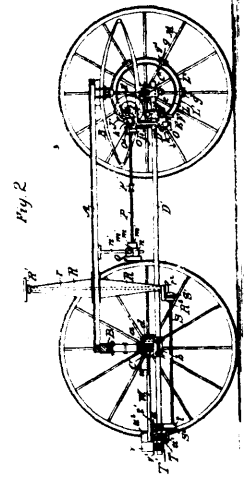
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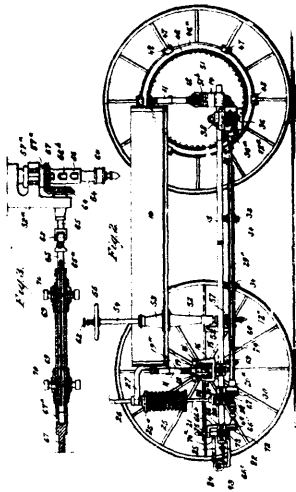
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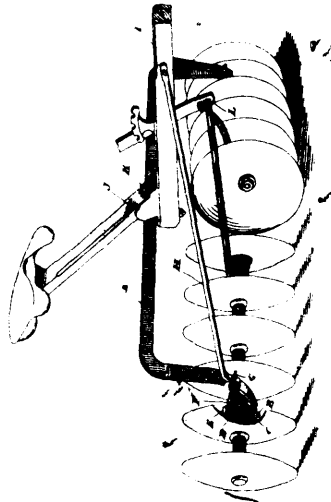
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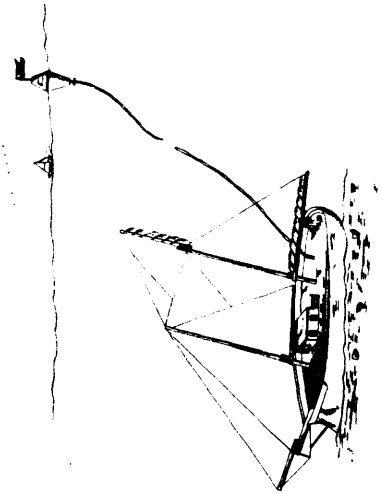
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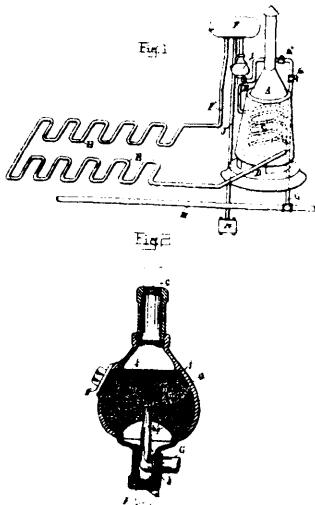
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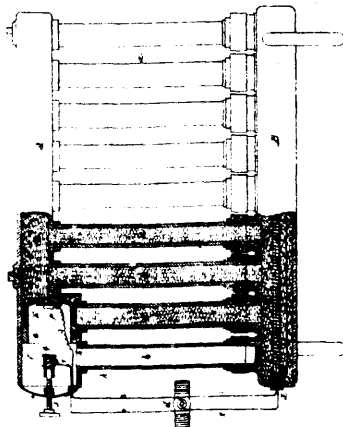
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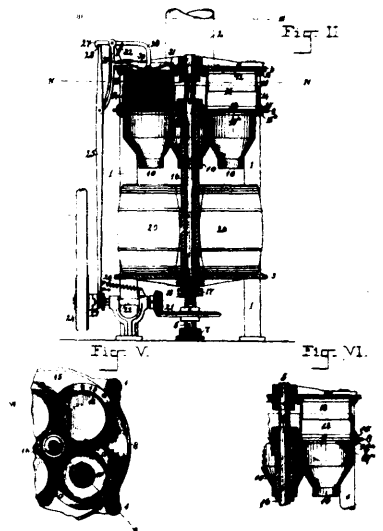
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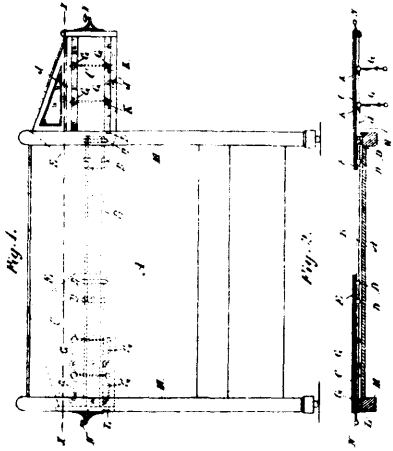
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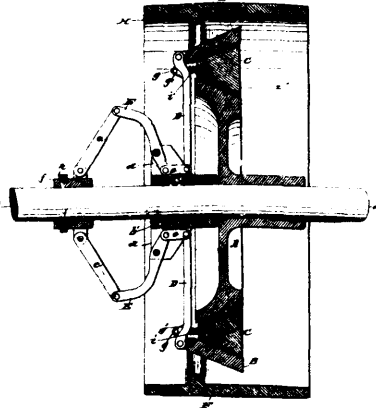
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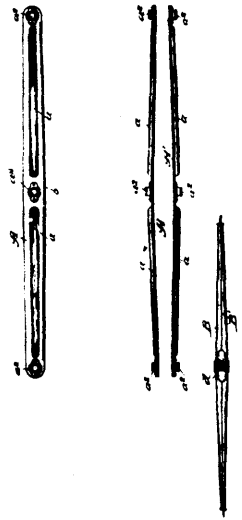
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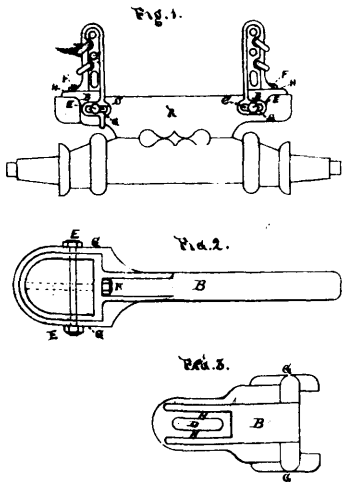
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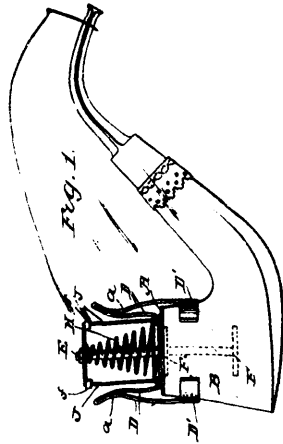
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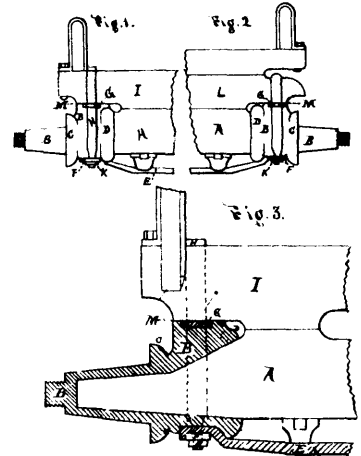
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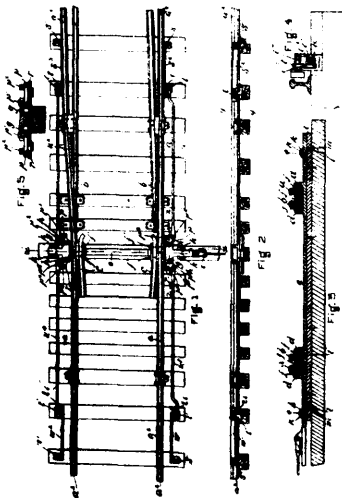
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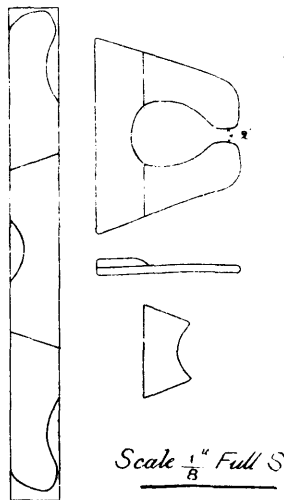
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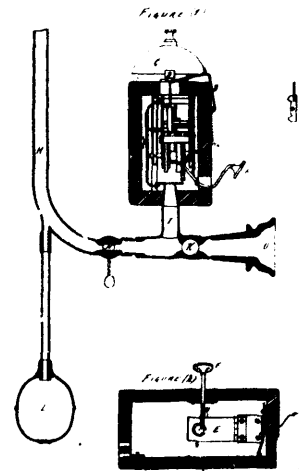
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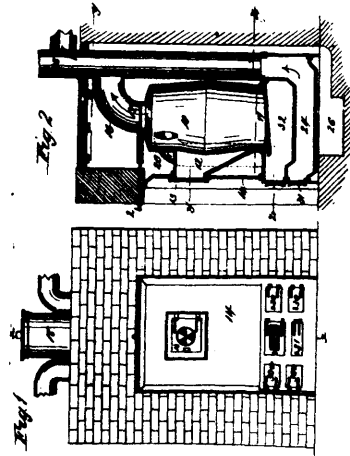


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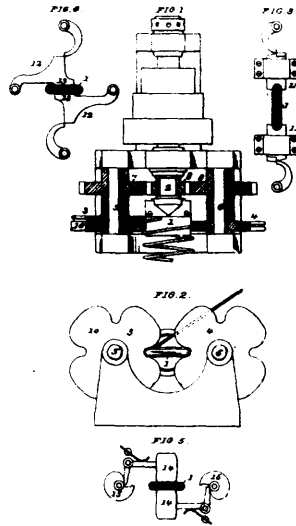


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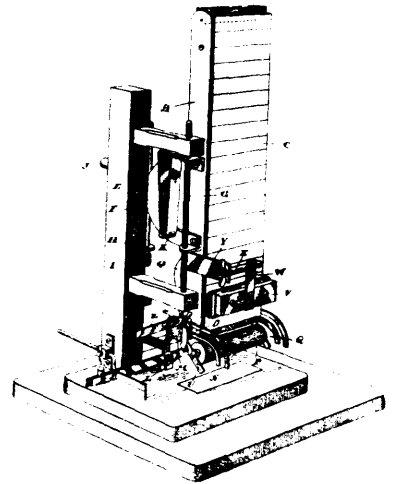




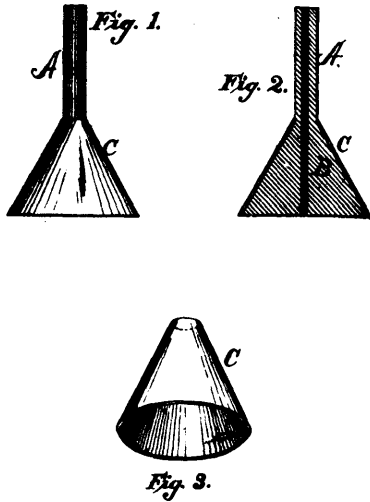
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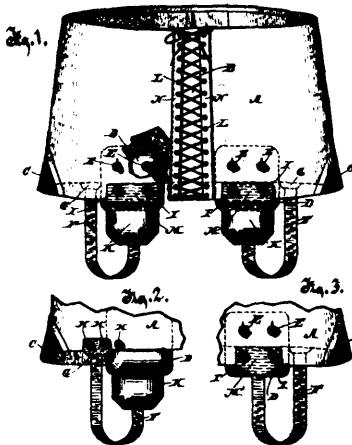
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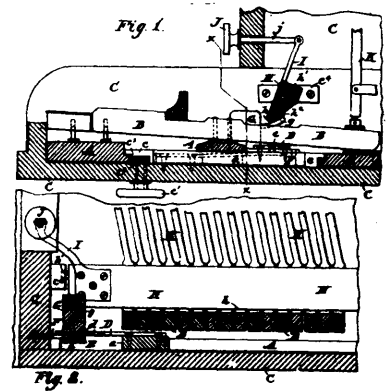
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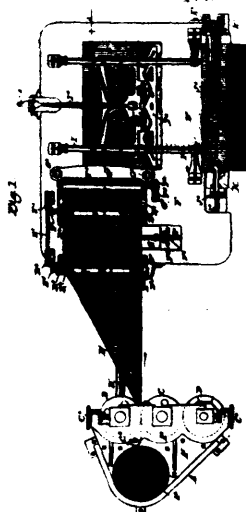
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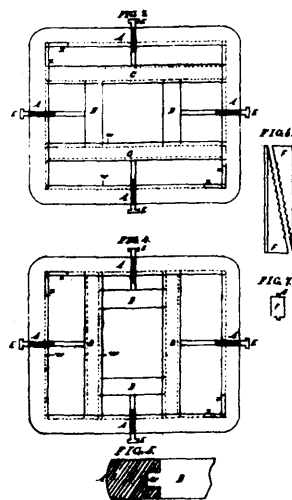
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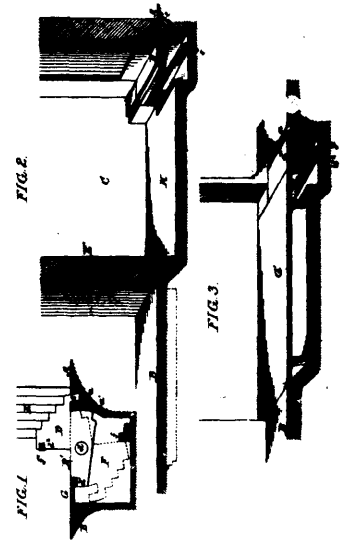
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| Shotwell, Walter S. Wooden dish machine.....  | 36,585 |
| Simpson, Wallace. Stake for waggon bolsters.....                                      | 36,672 |
| Slaughter, Nicholas H. Brace for bedsteads.....                                       | 36,613 |

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| Thatcher, Hervey Dexter. Baking powder .....                                 | 36,653               | Wareham, Ethelbert. Holder for twine.....  | 36,596 |
| Thlunes, Jacob. Fastening for casters, etc.....                              | 36,580               | Wendler, Alexander. Apparatus for the continuous manufacture of sulphite lye ..... | 36,508 |
| Thompson, Albert H. Mattress.....  | 36,649               | Widdows, Henry. Tightener for tires.....   | 36,545 |
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