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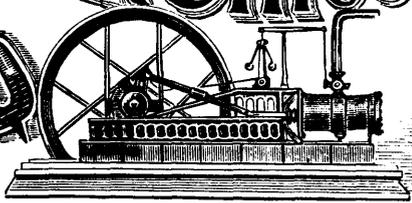
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# The Canadian Patent Office

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Vol. XXVIII.—No. 12.

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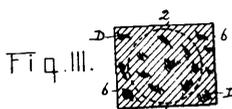
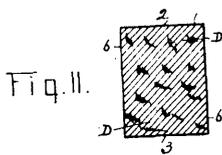
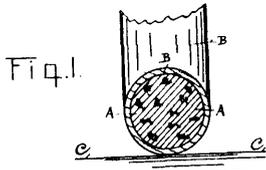
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### INVENTIONS PATENTED.

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No. 69,564. **Bicycle Tire.** (*Bandage de bicycles.*)

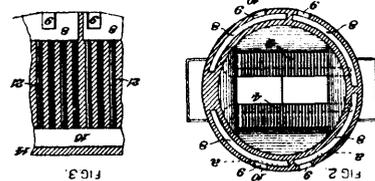
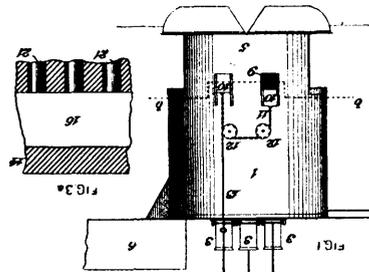


69564

Ben Broughton. Hamilton, Ontario, Canada, 3rd December, 1900; 6 years.—(Filed 27th August, 1900.)

*Claim.*—1st. A tire consisting of a cork core, said core having undergone a process of kneading or pounding of the upper and base parts thereof, to give inherent resiliency to the core, a rubber covering surrounding said core, and said covering vulcanized on the core, as described. 2nd. In a tire, cork kneaded or pounded on the upper and base parts thereof, a core shaped from said cork, the base of the core being the kneaded and pounded parts of the cork to give inherent resiliency to the core, a rubber covering surrounding the core and said covering vulcanized on the core, as described. 3rd. A tire comprising cork, said cork kneaded and pounded on the upper and base parts thereof, a core shaped from said cork, the base part of said core being the kneaded and pounded part of said cork to give inherent resiliency to the core, a rubber covering surrounding said core, and said covering vulcanized on the core, as described.

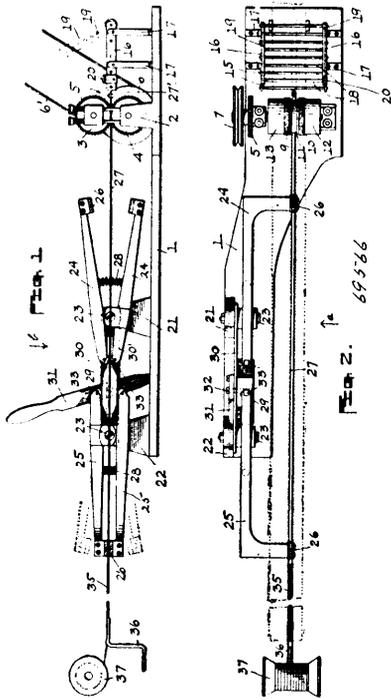
No. 69,565. **Gas Producer.** (*Appareil à gaz.*)



William Swindle, Allegheny, Pennsylvania, U.S.A., [3rd December, 1900; 6 years. (Filed 3rd August, 1900.)

*Claim.*—1st. The combination, in a gas producer, of a gas generating chamber, and an annular series of vertical air heating pipes built into the wall of and surrounding the generating chamber. 2nd. The combination, in a gas producer, of a gas generating chamber, a lower air receiving chamber and an upper air discharge chamber each formed in the wall of the producer, and a plurality of air heating pipes built into the wall of the gas generating chamber and connecting the air receiving and air discharge chambers. 3rd. The combination, in a gas producer, of a gas generating chamber, separate independent air receiving chambers formed in the lower portion of the producer wall, an upper air discharge chamber in the wall, and a plurality of air heating pipes built into the wall of the gas generating chamber and connecting the air receiving and discharge chambers. 4th. The combination, in a gas producer, of a gas generating chamber, separate independent air receiving chambers formed in the lower portion of the producer wall, an air discharge chamber located in the upper portion of the producer wall and divided into independent compartments, a plurality of air heating pipes built into the wall of the gas generating chamber and connecting the air receiving and discharge chambers, and means for regulating air supply from the air receiving chambers to either compartment of the air discharge chamber. 5th. The combination, in a gas producer, of a gas generating chamber, a gas discharge flue leading therefrom, an air receiving chamber formed in the lower portion of the wall of the producer, a valve controlled air supply port or opening in said chamber, an air discharge chamber formed in the upper portion of the wall of the producer, air discharge flues leading therefrom on opposite sides of the gas discharge flue, and a plurality of air heating pipes built into the wall of the gas generating chamber and connecting the air receiving and discharge chambers.

**No. 69,566. Machine for Threading Ribbon into Lace.**  
(Machine pour enfiler du ruban dans la dentelle.)



Carroll Walter Dodge, Worcester, Massachusetts, U.S.A., 3rd December, 1900; 6 years. (Filed 16th July, 1900.)

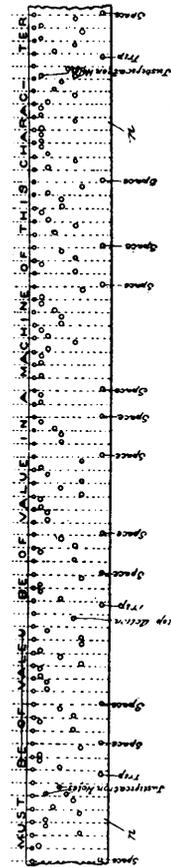
*Claim.*—1st. In a machine of the class described, the combination with a needle having a movable point at one end, and means for holding the needle, of friction rolls for drawing the lace onto the needle, and a tension device for the lace, substantially as shown and described. 2nd. In a machine of the class described, the combination with movable clamps or nippers, and means for opening and closing them, and friction rolls, of a needle held by the nippers, and having a movable point at one end, onto which the lace is drawn by the friction rolls, substantially as shown and described. 3rd. In a machine of the class described, the combination with two pairs of clamps or nippers, and means for closing one pair and opening the other, and friction rolls, and means for operating the same, of a strip for holding the ribbon, a needle connected therewith and held by the nippers, and having a movable point to enter the perforations in the lace, which is strung on the strip and needle, substantially as shown and described. 4th. In a machine of the class described, the combination with two pairs of clamps or nippers, and means for closing one pair and opening the other, and friction rolls, and means for operating the same, and a tension device for the lace, of a strip for holding the ribbon, a needle connected therewith and held by the clamps, and having a movable point to enter the perforations into the lace, which is strung on the strip and needle, substantially as shown and described. 5th. In a machine of the class described, the combination with movable clamps or nippers and means for opening and closing them, and friction rolls, of a needle consisting of a flat strip of metal, to be held by the nippers, and having a movable point at one end, onto which the lace is drawn by the friction rolls, substantially as shown and described. 6th. In a machine of the class described, a friction roll, comprising a central shaft, two discs of pliable material mounted thereon an intermediate disc with a circumferential groove therein, and two outside discs or collars, one fast on said shaft, and the other loose, and an adjusting nut turning on a thread on said shaft, and extending within a recess in the loose disc, to adjust the same, substantially as shown and described.

**No. 69,567. Machine for the Production of Print.**  
(Machine pour la production d'impressions.)

George Arthur Goodson, Providence, Rhode Island, U.S.A., 3rd December, 1900; 6 years. (Filed 3rd April, 1900.)

*Claim.*—1st. A representative pattern or dummy, for controlling the sections of an automatic machine, such as a type casting or setting machine, which pattern when containing typographical errors, or other undesired matter in its representation, also contains the representation of a stop action, for preventing the automatic machine from reproducing in its product the undesired matter represented on the strip, substantially as described. 2nd. In an automatic machine, controlled by a representative pattern or

dummy to produce a desired product represented on the pattern, such as a set line of type, a stop action device also controlled by



said pattern, for rendering the machine inoperative to produce any product containing typographical error or other undesired matter, represented on said pattern, substantially as described. 3rd. In an automatic type casting or setting machine, controlled by a pattern or dummy representing the desired composition, and it may be also some typographical error, or other undesired matter, a stop action device also controlled by said strip, for rendering the type casting or setting machine inoperative to cast or set type corresponding to the erroneous or undesired matter represented on the strip, substantially as described. 4th. In a type casting and setting machine, wherein the type casting actions are directly controlled by electric devices and the circuit connections for said electric devices are controlled by a representative pattern or dummy, the combination with said circuit connections of a circuit breaker under the control of said pattern or dummy, for opening the circuit through the electric devices controlling the casting action throughout the time that said pattern is making its necessary feed movements or travel, to pass the undesired matter represented thereon, substantially as described. 5th. In a type casting and setting machine, wherein the casting actions are directly controlled by electric devices, including a pump trip magnet, the combination with the punctured representative strip, of circuit connections for said electric devices controlled by said strip, including the bank of thrust pins, the two way switch, the setting branches, the working circuit branches having a common return wire through said pump trip magnet, the clutch trip and its special circuit connections, a circuit breaker in said common return branch of the working circuit, and an electric trip for said circuit breaker in one branch of the setting circuit and subject to the control of a stop action hole on said strip, substantially as and for the purposes set forth.

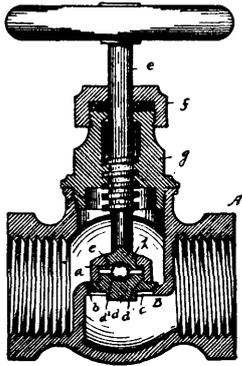
**No. 69,568. Process of Bleaching Sugar Juices.**  
(Procédé pour blanchir le jus de sucre.)

Isador Kitsée, Philadelphia, Pennsylvania, U.S.A., 3rd December, 1900; 6 years. (Filed 27th November, 1899.)

*Claim.*—1st. The process of treating sugar solution, which consist in first subjecting the solution to a bleaching agent and next, to an olefiant gas. 2nd. The process of treating sugar solution which consists in first subjecting the solution to a bleaching agent and next to a hydro carbon gas. 3rd. The process of decolorizing sugar solution, which consists in subjecting the solution first to the

action of chlorine gas to bleach the same and next to the action of an olefiant gas which removes said chlorine gas. 4th. The process of treating sugar solution, which consists in first subjecting the solution to the action of a bleaching agent and next subjecting said solution to the action of an agent capable of uniting with said bleaching agent and forming a compound insoluble in said solution and thereby removing the same out of the solution.

**No. 69,569. Valve. (Soupape.)**

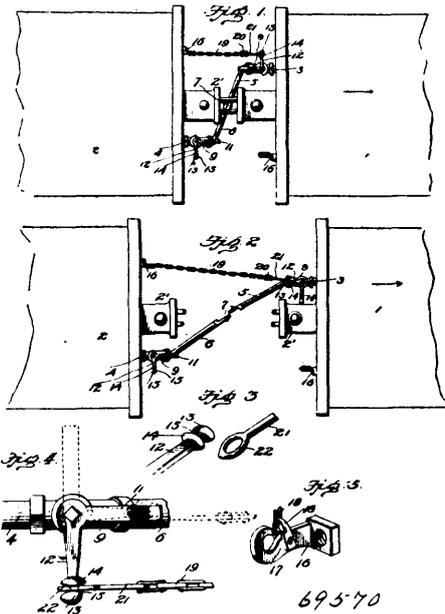


69569

Helen Monnier, assignee of Edward Monnier, both of Detroit Michigan, U.S.A., 3rd December, 1900; 6 years. (Filed 15th December, 1899.)

*Claim*—1st. In combination with a valve, a valve stem made separate therefrom and provided with a collar *b*, a ball interposed over the stem and the valve, and a coupling arranged to engage over the collar and hold the stem to the valve, substantially as described. 2nd. In combination with a valve provided with a threaded neck having a cavity therein, a valve stem having at its end a collar and provided with a cavity arranged to register with the cavity in the neck of the valve, a coupling arranged to hold the parts together, and a ball interposed between the valve and the stem in said cavity, substantially as described.

**No. 69,570. Air Brake. (Frein à air.)**



69570

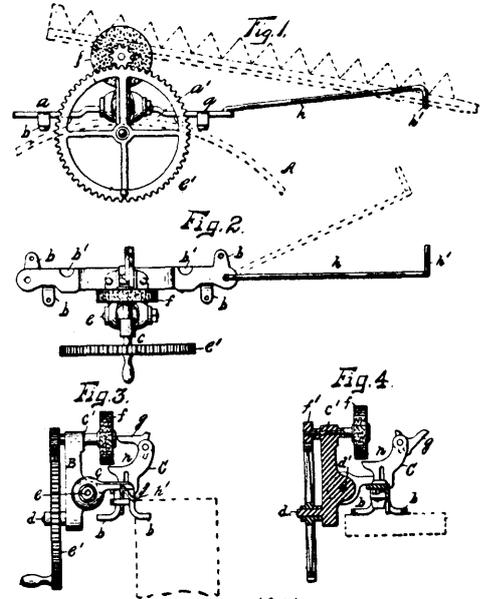
John R. Richardson and John F. Thomas, both of Scranton, Pennsylvania, U.S.A., 3rd December, 1900; 6 years. (Filed 9th November, 1900.)

*Claim*.—1st. In an air brake system, the combination, with adjoining cars of a train provided with air cocks and couplings to connect the same, of a valve closing connection between one of the cars and the cock on the other car to close said cock upon the parting of the cars, said connection being of such length and arrangement as to leave the cock momentarily open upon the parting of the cars and couplings to effect a partial reduction of pressure, and then close

the cock to prevent a further reduction of pressure, substantially as set forth. 2nd. In an air brake system, the combination with the train, of air pipes, one of which is provided with an air cock having a member, the outer end of which is formed with a stop shoulder and a knob of less diameter than said shoulder, air tubes connecting said pipes, and a connection comprising a chain adapted to be secured to one car and having a swivelled ring at one end adapted to be slipped over the outer end of said valve member and to lie in the groove between the shoulder and knob, said connection being of greater length than the distance between the car to which it is attached and the valve member in the open position of the latter, so as to close the air cock after the parting of the air tubes, substantially as set forth. 3rd. In an air brake system, an air cock having a handle and an operating arm arranged at right angles to the handle and formed at its outer end with a stop shoulder and an oval knob of less diameter than said shoulder and having a bevelled end, and a valve closing connection provided with an oval ring or eye adapted to slip over said knob and lie between the knob and shoulder, substantially as set forth. 4th. In an air brake system, an air cock having an operating member, and a valve closing connection comprising an attaching bracket having a hook, and a chain connected at one end to the bracket and provided at its free end with a ring or eye adapted to engage said valve operating member when the parts are to be connected and to engage said hook when the connection is not in use, substantially as set forth.

**No. 69,571. Mower Knife Grinder.**

(Machine à aiguiser les faux des faucheuses.)



69571

The Taughanock Emery Wheel Company, Cortland, assignee of George Henry Fowler, Tauchanock Falls, both in New York, U.S.A., 3rd December, 1900; 6 years. (Filed 9th July, 1900.)

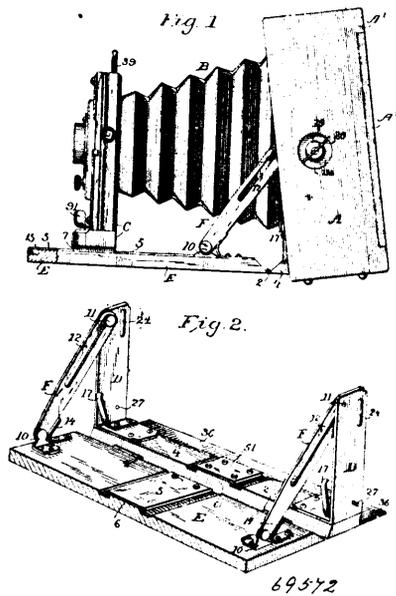
*Claim*.—1st. In a machine of the class described, a base having means for securing it in position, a frame connected thereto, an emery wheel mounted in said frame, means for rotating it, a bracket mounted on said base and having a knife rest hinged thereto, as set forth. 2nd. In a machine of the class described, a base having means for securing it in position, a frame connected thereto, an emery wheel mounted in said frame, means for rotating it, a bracket mounted on said base and having a knife rest hinged thereto, and a swinging arm secured to either end of the base, as set forth. 3rd. In a knife grinding machine of the class described, a base having means for securing it in position, a frame, ball and socket connections between the base and frame, a revoluble grinding mechanism mounted on the frame, and an adjustable rest supported by the base. 4th. In a knife grinding machine of the class described, a base having means for securing it in position, a frame pivotally connected thereto, a grinding mechanism mounted on the frame, a knife rest adjustably connected to the base, and a swinging arm also connected to the base, substantially as set forth.

**No. 69,572. Camera. (Camera.)**

William Frank Carlton, co-inventor with and assignee of Harvey W. Locke, both of Rochester, New York, U.S.A., 3rd December, 1900; 6 years. (Filed 15th November, 1899.)

*Claim*.—1st. A swing back photographic camera having, in connection with the camera front and bellows, a swinging camera box of sufficient size to encase the said camera front and bellows when

this latter is collapsed, supports inside of said box on which said box is angularly adjustable, and a camera bed having a hinge con-

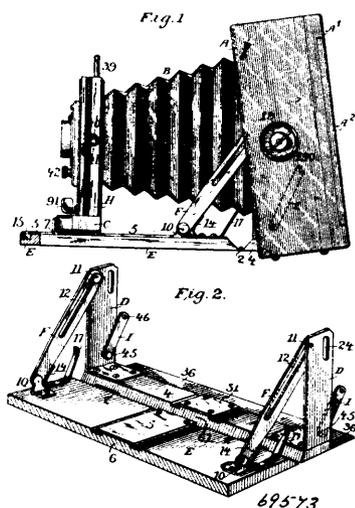


nection with said supports and provided with means for locking it thereto in the extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 2nd. A swing back photographic camera having, in connection with the camera front and bellows, a swinging camera box of sufficient size to encase the said camera front and bellows when this latter is collapsed, an intermediate frame composed of supports inside of said box on which said box is angularly adjustable and of a cross piece at the bottom of the said box between said supports, and a camera bed hinged to said frame in the extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 3rd. A swing back photographic camera having, in connection with the camera front, and bellows, a swinging camera box of sufficient size to encase the said camera front and bellows when this latter is collapsed, an intermediate frame composed of supports inside of said box, on which said box is angularly adjustable, and a cross piece at the bottom of the said box between said supports, provided with a portion of the runway for said camera front, a camera bed provided with the main portion of said runway and hinged to said frame so that the said cross piece and the runway thereon prolongations respectively of the extended bed and the runway thereon, said bed being provided with means for locking it to said frame in the extended position and forming when turned up a cover to the mouth of said box, substantially as described. 4th. A swing back photographic camera having in connection with the camera front and bellows a swinging camera box of sufficient size to encase the said camera front and bellows when this latter is collapsed, supports inside of said box on which said box is angularly adjustable, and a camera bed having a hinge connected with said supports and provided with links hinged at one end to said bed and pivotally and slidably connected at the other with said supports for locking the said bed thereto in the extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 5th. A swing back photographic camera having, in connection with the camera front and bellows, a swinging camera box of a sufficient size to encase the said camera front and bellows when this latter is collapsed, an intermediate frame composed of supports inside of said box, on which said box is angularly adjustable and a cross piece at the bottom of the said box between said supports, and a camera bed hinged to the said cross piece and provided with links hinged at one end to said bed and pivotally and slidably connected at the other with said supports for locking the bed thereto in extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 6th. In a swing back photographic camera, the combination of a swinging camera box, a device inside of said box for supporting or holding said box in the position to which it may be swung, and a fastener which passes through said device and the wall of said box for clamping them together and which is composed of a nut and a screw, one of them provided with a head inside of said box and the other with a thumb head exposed on the outside of the box for manipulation by the photographer's fingers, substantially as described. 7th. In a swing back photographic camera, the combination of a swinging camera box, supports inside of said box, on which said box is angularly adjustable, a fastener which passes through one of said supports

and the wall of said box for clamping them together, and which is composed of a nut and a screw, one of them provided with a head inside of said box and the other with a thumb head exposed on the outside of said box for manipulation by the photographer's fingers, and a camera bed having a hinge connection with said supports and provided with means for locking it thereto in the extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 8th. In a swing back photographic camera, the combination of a swinging camera box, a device inside of said box for supporting or holding said box in the position to which it may be swung, and a fastener which passes through said device and the wall of said box for clamping them together and which is composed of a nut and a screw, one of them provided with a head inside of said box and a squared portion fitting in a correspondingly shaped hole and the other with a thumb head exposed on the outside of said box for manipulation by the photographer's fingers, substantially as described. 9th. In a swing back photographic camera, in combination with two parts which are movable relatively to each other in swinging the camera back, a double-headed screw and nut fastener which passes through both said parts at a point where they have relatively to each other a motion of translation, as opposed to a mere rotation about the axis of said fastener, one of the clamped parts being provided with a slot to permit said motion of translation and one element of the fastener having a squared portion travelling in said slot, the width of the slot corresponding with that of the said squared portion, substantially as described. 10th. In a swing back camera, in combination with the swinging camera box and a slotted device inside of said box for supporting or holding said box, in the position to which it may be swung, a fastener which passes through the wall in said box and the slot in said inside device at a point where said box has in swinging a motion of translation relatively to said device and which is composed of a nut and a screw one of them provided with a head inside of said box and a squared portion fitting in the slot of corresponding width in said device and the other of them provided with a thumb head exposed on the outside of said box for manipulation by the photographer's fingers, substantially as described. 11th. A swing back photographic camera having, in connection with the camera front, and bellows, a swinging camera box of sufficient size to encase the said camera front and bellows when this latter is collapsed, supports inside of said box on which said box is angularly adjustable, a screw fastener for clamping together the side of said box and the corresponding inside support, which fastener is located at a point where said box has in swinging a motion of translation relatively to said corresponding support, and a camera bed having a hinge connection with said supports and provided with means for locking it thereto in the extended position, said bed forming when turned up a cover to the mouth of said box, substantially as described. 12th. A swing back photographic camera, in which the swing back is pivotally connected with the rest of camera by means of two pins travelling in guides eccentric to both said pins and interconnected so as to travel together and not independently, substantially as described. 13th. A swing back photographic camera, in which a camera box of sufficient size to encase the camera front and collapsed bellows is pivotally connected with supports inside of said box by means of two pins travelling in guides eccentric to both said pins and interconnected so as to travel together and not independently, substantially as described. 14th. A swing back photographic camera having, in connection with the camera front, and bellows a swinging camera box of sufficient size to encase the said camera front and bellows when this latter is collapsed, supports inside of said box on which said box is angularly adjustable, and a camera bed having a hinge connection with said supports and provided with means for locking it thereto in the extended position, said bed forming when turned up a cover to the mouth of said box, and the said box being pivotally connected with said supports by means of two pins travelling in guides eccentric to both said pins and interconnected so as to travel together and not independently, substantially as described. 15th. In a photographic camera, the camera box of sufficient size to encase the camera front and collapsed bellows, which box has its bottom cut away, in combination with an intermediate frame having the cross piece which forms the bottom of said frame hinged to the camera bed and located in the cut-away place in the bottom of said box in the same horizontal plane with the remaining portion of the box bottom, said box being pivotally connected with supports inside of the box, which supports form part of said intermediate frame, substantially as described. 16th. In a photographic camera, the camera box of sufficient size to encase the camera front and the collapsed bellows, which box has its bottom cut away, in combination with an intermediate frame having the cross piece which forms the bottom of said frame hinged to the camera bed and located in the cut-away place in the bottom of said box in the same horizontal plane with the remaining portion of the box bottom, said box being pivotally connected with supports inside of said box, which supports form part of said intermediate frame, and one of said bottoms being provided with a lip to cover the joint between them, substantially as described. 17th. In a photographic camera, the camera box of sufficient size to encase the camera front and the collapsed bellows, which box has its bottom cut away, in combination with an intermediate frame having the cross piece which forms the bottom of said frame hinged to the camera bed and

located in the cut-away place in the bottom of said box in the same horizontal plane with the remaining portion of the box bottom, said box being pivotally connected with supports inside of said box, which supports form part of said intermediate frame, and the pivotal connection between the said box and the said supports being provided with vertical slots so that the said box can be lifted to bring its bottom above that of said intermediate frame and can be swung when lifted, substantially as described. 18th. In combination with the camera bed, and the camera box, an intermediate frame composed of a cross piece to which said bed is hinged, and supports to which said box is pivotally connected, said supports being provided with vertical slots so that said box can be lifted relatively to said frame and can be swung by the aid of its pivotal connections with said supports, substantially as described. 19th. A swing back photographic camera having, in combination, a camera bed, a swing back, a pivotal connection between said bed and back, which is movable relatively to said bed, and means for fastening the swing back in its different positions of adjustment, substantially as set forth. 20th. A swing back photographic camera, having in combination, a camera bed, a swing back, a pivotal connection between said bed and back which is movable relatively to said bed, and a supplementary connection between said back and bed, whereby when said back is tilted, said pivotal connections automatically move relatively to said bed, substantially as set forth.

**No. 69,573. Camera. (Camera.)**



William Frank Carlton, assignee of Harvey W. Locke, both of Rochester, New York, U.S.A., 3rd December, 1900; 6 years. (Filed 15th November, 1899.)

*Claim.*—1st. The combination of a camera bed, a swing back pivotally and slidably connected therewith, and links pivotally connected at opposite ends to said camera bed and swing back respectively, whereby said swing back moves vertically as it swings, substantially as set forth. 2nd. The combination of a camera bed having vertically extending supports, a swing back pivotally and slidably connected to said supports at approximately the middle line of said swing back, and links pivoted at opposite ends to said camera bed and to said swing back, substantially as set forth. 3rd. The combination of a camera bed which furnishes the bottom of the camera casing, a swing back constructed so as to form the sides and top of the camera box or casing, thus constituting a swinging box, said swinging box being pivotally and slidably connected with said camera bed, and links pivotally connected at opposite ends to said bed and box respectively, substantially as set forth.

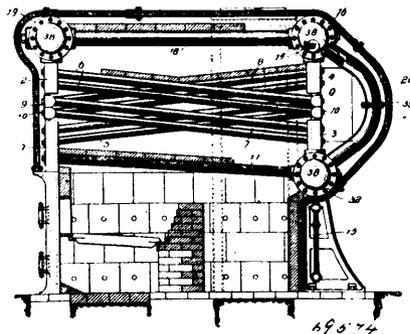
**No. 69,574. Steam Boiler and Water Heater.**

(*Chaudière à vapeur et chauffeur d'eau.*)

Archie Gerry Hohnstein, New Haven, Connecticut, U.S.A., 4th December, 1900; 18 years. (Filed 20th October, 1900.)

*Claim.*—1st. A water tube boiler having in combination three drums, each consisting of two or more connected sections, two of said drums arranged in or approximately in the same horizontal plane above the other drum, two series of tubes extending from each section of the lower drum and connected respectively to corresponding sections of the upper drums, tubes connecting the sections of the upper drums and a downtake pipe connecting each section of one of the upper drums to a section of the lower drum, all of said parts being arranged in parallel or substantially parallel vertical planes, substantially as set forth. 2nd. A water tube boiler consisting of a series of two or more detachable units, each unit forming in and of itself a complete boiler, substantially as set forth. 3rd. A water tube boiler consisting of a series of two or more detachable units,

each unit having the parts or elements thereof arranged in parallel in substantially parallel vertical planes, substantially as set forth.



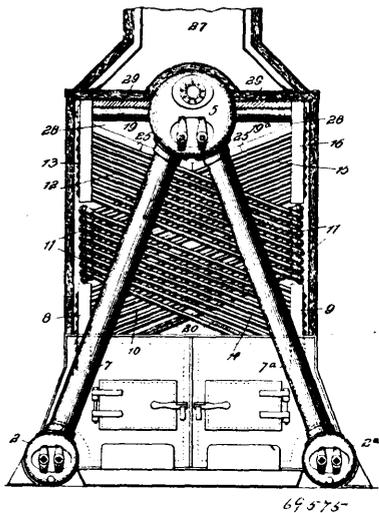
4th. A water tube boiler, having in combination a drum, a header connected to the drum, a series of tubes connected to the header, the points of connection of the header to the tubes and drum being in different vertical planes, substantially as set forth. 5th. A water tube boiler, having in combination an upper drum, a lower drum, and a sectional downtake pipe connecting said drums, substantially as set forth. 6th. The combination of boiler, a chamber or receptacle for the reception of solids, etc., outside of the general path of circulation of the boiler but connected thereto and a feed water pipe passing along a portion at least of the circulating system of the boiler and connected to the settling chamber or receptacle, substantially as set forth. 7th. In a boiler, the combination of a downtake, a chamber or receptacle connected to the boiler, and feed water tubes passing through the downtakes and connected to said chamber or receptacle, substantially as set forth. 8th. In a boiler, the combination of upper and lower rear drums, downtakes connected to said drums, a chamber or receptacle connected to the lower drum, and feed water tubes passing through the downtakes and connected to said chamber or receptacle, substantially as set forth. 9th. In a boiler, the combination of downtakes connected at or rear their upper and lower ends to other portions of the boiler, diaphragms arranged in the downtakes above and below the points of connection of the downtakes with the other portions of the boiler, feed water tubes arranged within the downtakes and projecting through the diaphragms and a chamber or receptacle connected to the boiler and the feed water tubes, substantially as set forth. 10th. In a boiler, the combination of upper and lower rear drums, downtakes connected to said drums, a chamber or receptacle connected to the lower drum, feed water tubes passing through the downtakes and connected to said chamber or receptacle and a by-pass connecting the feed water pipe to the upper drum, substantially as set forth. 11th. In a boiler, the combination of a downtake adapted to be connected at or near its ends with other portions of a boiler and provided with tube sheets or diaphragms above and below its points of connection with the boiler, tubes extending through the downtakes and having their ends connected to the chambers formed outside of the diaphragms, substantially as set forth. 12th. In a boiler, a downtake forming a portion of the circulating system of the boiler and provided with chambers above and below its points of connection with the other portions of the boiler, in combination with tubes arranged within the downtake, and having their ends connected to said chambers, and a removable cap on the upper chamber, substantially as set forth. 13th. In a boiler, the combination of drum, a hollow stand connected to said drum and serving as a support for said drum, a downtake pipe connected to the drum and to another portion of the circulating system of the boiler, and a feed water tube extending through the downtake and connected to the stand, substantially as set forth. 14th. In a boiler, the combination of upper and lower drums, a hollow Y-shaped stand having its arms connected to the lower drum, a diaphragm or tube arranged in one of the arm below its point of connection with the drum, a downtake tube connecting the upper drum with said arm and a feed water tube arranged in the downtake and extending through the diaphragms, substantially as set forth.

**No. 69,575. Steam Boiler. (Chaudière à vapeur.)**

Archie Gerry Hohenstein, New Haven, Connecticut, U.S.A., 4th December, 1900; 18 years. (Filed 20th October, 1900.)

*Claim.*—1st. In a steam boiler, the combination of two lower drums, an intermediate upper drum, two pairs of tubular columns connecting the lower drums to the upper drum, two series of headers connected to the lower drums, two series of headers connected to the upper drum, and two diverging banks of tubes extending across the combustion chamber and connecting each series of upper headers with the corresponding series of lower headers, substantially as set forth. 2nd. In a steam boiler, the combination of two lower drums, an intermediate upper drum, two pairs of tubular columns connecting the lower drums to the upper drum, two series of lower headers having their lower portions outwardly inclined and connected to the

lower drums, two upper headers connected to opposite sides of the upper drum, and two diverging banks of tubes connecting each



series of upper headers to the upper portions of the corresponding series of lower headers, substantially as set forth. 3rd. A header for boilers having its body bent so that the portion at one end will lie in a plane at an angle to a plane passing through the other portion, one of said portions being constructed to permit of the attachment of tubes to one side and the removal of tubes through the opposite side, substantially as set forth. 4th. In a boiler, the combination of two parallel or approximately parallel lower drums, tubular columns connected to said drums, two series of headers connected respectively to said drums, and forming the sides of the fire box, two series of upper headers the headers of each upper series being connected by diverging banks of tubes to the headers of the corresponding lower series, and connected upper drums connected to the tubular columns and to the upper headers, substantially as set forth. 5th. In a boiler, the combination of two parallel or approximately parallel lower drums, tubular columns connected to said drums, two series of headers connected respectively to said drums and forming the side of the fire box, two series of upper headers, the headers of each upper series being connected by diverging banks of tubes to the headers of the corresponding lower series, two upper drums arranged at or approximately at right angles to the lower drums and connected to the tubular columns, the connection between the upper drums being connected to the upper series of headers, substantially as set forth. 6th. In a boiler, the combination of two parallel or approximately parallel lower drums, two parallel or approximately parallel upper drums arranged at or approximately at right angles to the lower drums, tubular columns connecting the upper and lower drums, one or more drums connecting the upper drums, two series of lower headers connected respectively to the lower drums and forming the sides of the fire box, two series of upper headers connected to the drum or drums forming the connection between the upper front and rear drums, and two diverging banks or series of tubes connecting each series of lower headers with the corresponding series of upper headers, substantially as set forth. 7th. In a boiler, the combination of two lower drums, two upper connected drums, tubular columns connecting the upper and lower drums, two series of lower headers connected to the lower drums, two series of upper headers having inwardly bent necks connected to the connection between the upper drums, and two diverging banks of tubes connecting each of the upper series of headers with the corresponding lower series of headers, substantially as set forth. 8th. In a boiler, the combination of two parallel or approximately parallel lower drums, a transverse drum connecting the latter at points adjacent to their rear ends, tubular columns connected to said drum, two series of headers connected respectively to the lower side drums and forming the sides of the fire box, two series of upper headers the headers of each upper series being connected by diverging banks of tubes to the headers of the corresponding lower series, connected upper drums connected to the tubular columns and to the upper headers, and a series of tubes connected to the lower transverse drum and to the upper drums and forming the rear wall of the combustion chamber, substantially as set forth.

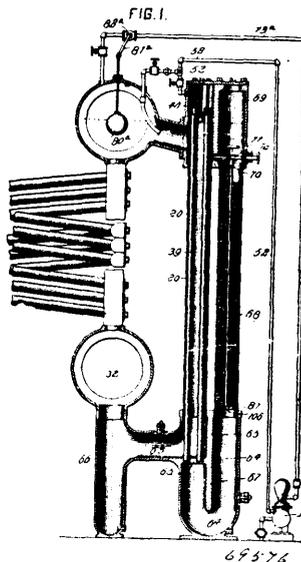
**No. 69,576. Feed Water Heater and Purifier.**

(*Chauffeur et purificateur d'eau d'alimentation.*)

Archie Gerry Hohenstein, New Haven, Connecticut, U.S.A., 4th December, 1900; 18 years. (Filed 20th October, 1900.)

*Claim.*—1st. A feed water heater having in combination one or more tubes for the passage of feed water, a chamber for the collection of precipitates at the discharge end of the tube or tubes, and a rising

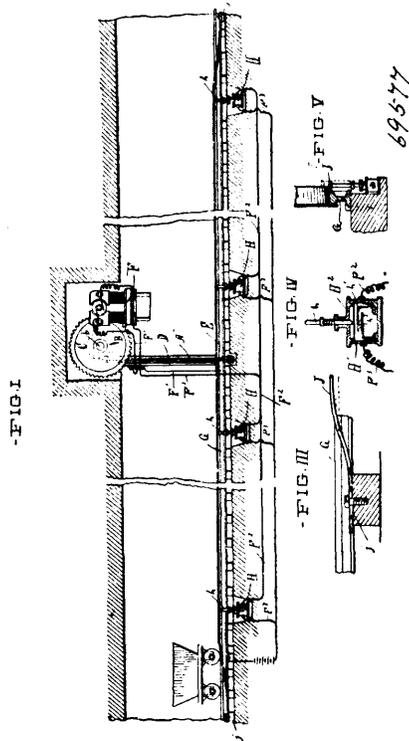
tube or gas separating chamber connected to the collecting chamber and the boiler, substantially as set forth. 2nd. A feed water heater



having in combination one or more tubes for the passage of feed water, a chamber for the collection of precipitates at the discharge end of the tube or tubes, and a rising tube or gas separating chamber connected to the collecting chamber and the boiler at points below the normal water level in the heater, substantially as set forth. 3rd. A feed water heater having in combination a chamber at its upper end adapted to receive the feed water, a heating chamber below the receiving chamber having connections to the boiler for the circulation of water or steam therethrough, a chamber for the collection of precipitates arranged below the heating chamber, tubes connecting the receiving and collecting chambers, and passing through the heating chamber, and a rising tube or gas separating chamber connected to the collecting chamber, and to the boiler, substantially as set forth. 4th. In a boiler, the combination of downtakes, feed water tubes passing through the downtakes, a settling chamber connected to said tubes, and rising tubes connected to the settling chamber and to the boiler, substantially as set forth. 5th. The combination of a boiler, feed water tubes passing through a portion of the boiler, a settling chamber connected to said tubes and rising tubes connected to the settling chamber and the boiler, substantially as set forth. 6th. The combination of a boiler, feed water tubes passing through a portion of the boiler, settling chambers connected to said tubes and rising tubes extending from the settling chamber to a point above the normal water level in the boiler, and having a connection with the boiler below the normal water level substantially as set forth. 7th. The combination of a boiler, feed water tubes subjected to the heat of the water of the boiler, a settling or collecting chamber connected to said tubes, a rising tube or gas separating chamber connected to said tubes and to the boiler, and a filtering material arranged in the rising tube, substantially as set forth. 8th. The combination of a boiler, a feed water heater, a connection between the boiler and heater to permit of the flow of water from the boiler, an injector having its nozzle connected to the feed water portion of the heater and its feed inlet connected to the heating portion of the heater, and its outlet connected to the boiler, and means for feeding water to the heater, substantially as set forth. 9th. The combination of a boiler, a feed water heater, in and out connections between the boiler and heater, an injector having its nozzle connected to the feed water portion of the heater, and its feeding portion forming a part of the connection between the boiler and heater, means for feeding water to the heater, and means operative on changes of water level in the heater or boiler for controlling the means for feeding water to the heater, substantially as set forth. 10th. The combination of a boiler, means for feeding water to the boiler and means for effecting a circulation of water in the boiler proportional to the rate of feed of water to the boiler, substantially as set forth. 11th. The combination of a boiler, means for feeding water to the boiler, means operative on a change of water level in the boiler for controlling the rate of feed of water to the boiler, and means controlled by the feed water for producing a circulation of the water in the boiler, substantially as set forth. 12th. In a feed water heater having in combination a receiving chamber, a settling chamber, an intermediate heating chamber, tubes extending from the receiving chamber through heating chamber into the settling chamber, and a rising tube connected to the settling chamber and extending above the normal water level in the receiving chamber, substantially as set forth. 13th. A feed water heater having in combination a receiving chamber, a heating chamber arranged below the receiving chamber, tubes extending from the

receiving chamber through the heating chamber, a settling chamber connected to the discharge ends of the tubes, a rising tube connected to the settling chamber and extending through the heating chamber to a point above the receiving chamber, substantially as set forth.

**No. 69,577. Mine Trap Door. (Porte de mines.)**



Alvin Hurford, Canton, Ohio, U.S.A., 4th December, 1900; 6 years. (Filed 6th December, 1899.)

*Claim.*—1st. An air-trap for mines comprising a roller supported in suitable bearings, a flexible door or curtain mounted on said roller; an electric motor connected to said roller; means operated by a passing car for cutting said motor into circuit to roll up the curtain, and means for cutting out and subsequently cutting in the motor, comprising a switch operated by a contact device carried near the lower end of the curtain. 2nd. In a mine trap door or curtain-operating device, the combination with a roller, of a weighted curtain, an electric motor for operating said roller during the upward movement of the curtain, and a switch device for first cutting out and subsequently cutting in the motor, said switch device being operated by a contact device on the curtain. 3rd. An air-trap for mines comprising a roller provided at one end with a gear wheel, a door of curtain mounted on said roller and adapted to roll up thereon, an electric motor in gear with said gear-wheel, electrical connections for supplying current to said motor, means for cutting the motor into circuit to raise the curtain, and device a carried by the curtain for cutting the motor out of circuit after the curtain is raised to permit the curtain to descend by gravity. 4th. In an air-trap for mines, the combination with the flexible door or curtain, of a roller operating said curtain, a motor operating the roller and a cut-out switch located at the upper end of the trap-frame, said switch operated by a projection on the curtain to cut off the current to the motor and permit the curtain to unroll and descend by gravity, substantially as shown and described.

**No. 69,578. Sensitizing Paper for Photographic Printing. (Appareil à sensibiliser le papier pour photographics.)**

Bedfield Benjamin West, Guilford, Connecticut, U.S.A., 4th December, 1900; 6 years. (Filed 10th May, 1900.)

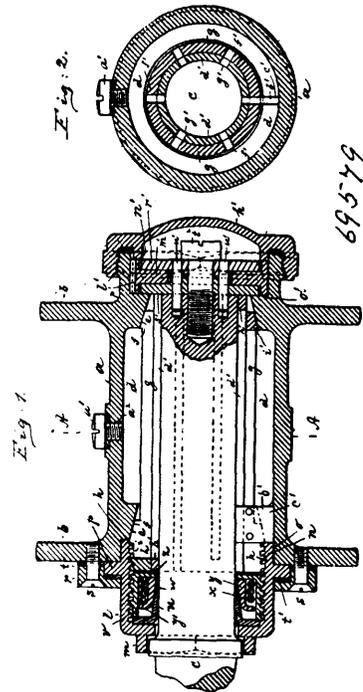
*Claim.*—The herein described composition for sensitizing paper, consisting of a soluble nitro prusside, ammonio-citrate of iron and water, in the proportions substantially as described.

**No. 69,579. Shaft and Axle Bearings. (Coussinet pour essieux.)**

Theodore Miller, New York City, New York, U.S.A., 4th December, 1900; 6 years. (Filed 31st August, 1900.)

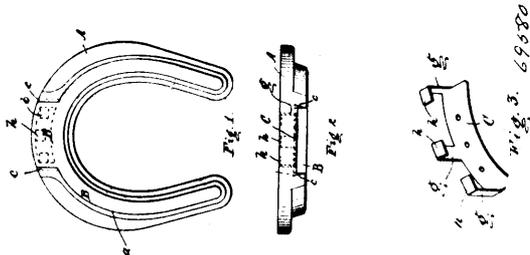
*Claim.*—1st. In a bearing, an oil-chamber surrounding the shaft or axle, a packing ring of soft or pliable material, and a spring-

influenced ring for pressing said packing ring against the shaft or axle, substantially as specified. 2nd. In a bearing, a cone-seated



adjusting sleeve *g*, an adjusting nut *l*, engaging said sleeve, and means for securing the adjusting nut to the bearing so as to admit of its being rotated for the purpose of setting the adjusting sleeve, substantially as specified. 3rd. In a bearing, the bearing sleeve *d*, slotted axially, the axially slotted and cone-seated adjusting sleeve *g*, an oil-chamber surrounding said sleeves, a packing ring *u*, of soft or pliable material for retaining the lubricant within said oil-chamber, and means for adjusting said sleeves, substantially as specified. 4th. In a bearing, an oil chamber *d*, surrounding the bearing, a packing ring *u*, of soft or pliable material, a spring-influenced conical ring *v*, that forms a fluid-tight contact between said packing ring *u*, and the shaft *c*, and means for clamping said packing ring *u*, against the oil chamber, substantially as specified. 5th. In a bearing, an oil chamber *d*<sup>1</sup>, surrounding the bearing, a circumferentially adjustable bearing sleeve *d*, a cone-seated adjusting sleeve *g*, slotted lengthwise, and a packing ring *u*, of soft or pliable material spring-seated upon the shaft or axle, substantially as specified. 6th. In a bearing, an oil-chamber *d*, surrounding the bearing, a spring-seated packing ring *u*, of soft or pliable material for retaining the lubricant within the oil-chamber, an end thrust-ring secured to the oil chamber, and an end thrust-ring secured to the shaft, substantially as specified. 7th. In a bearing, an oil-chamber *d*, surrounding the bearing, a packing ring *u*, of soft or pliable material surrounding the shaft, a ring *y*, engaging the packing ring, and a spring *x*, for forcing said ring *y*, axially against the packing, substantially as specified. 8th. In a bearing, the combination of an inner slotted sleeve with a surrounding outer slotted sleeve, a hub, cone-bearings between the outer sleeve and hub, and an adjusting nut engaging the outer sleeve, substantially as specified. 9th. In a bearing, the combination of a hub with a cone-seated slotted sleeve, an intervening oil chamber, and means for setting the sleeve longitudinally within the hub, substantially as specified. 10th. In a bearing, the combination of a hub with a cone-seated slotted outer sleeve, an intervening oil chamber, a slotted inner sleeve embraced by the outer sleeve, and a nut that engages the outer sleeve and is adapted to set the same longitudinally within the hub, substantially as specified. 11th. In a bearing, a flexible tapering packing adapted to engage the shaft or axle, a flanged tapering ring engaging the packing, and a spring which engages the flanged ring and is adapted to slide the same over the packing, substantially as specified. 12th. In a bearing, the combination of a hub with an enclosed cone-seated slotted outer sleeve, an intervening oil-chamber, a slotted inner sleeve, a nut that engages the outer sleeve, a threaded ring enclosed by the nut, a tapering flexible packing within the threaded ring, and a spring influenced tapering ring that engages the packing, substantially as specified.

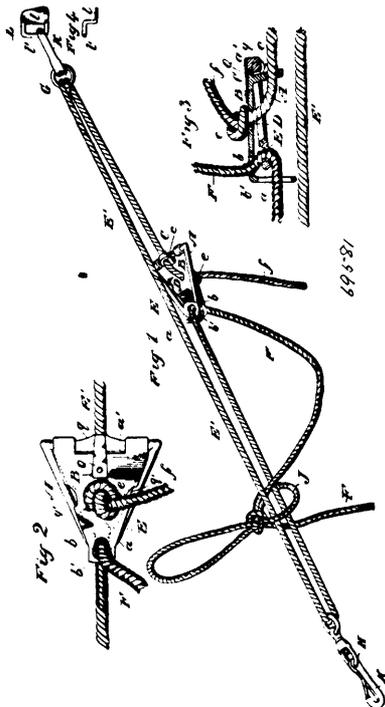
**No. 69,580. Elastic Tread Horseshoe.**  
(*Semelle élastique pour fer à cheval.*)



William R. Howe, Dayton, Ohio, U.S.A., 4th December, 1900; 6 years. (Filed 20th October, 1900.)

*Claim.*—1st. In a horseshoe provided with a groove in the under surface, an elastic packing fitting in said groove, and means for attaching said packing at the toe only, substantially as described, 2nd. In a horseshoe provided with a groove in the under surface, an elastic packing fitting in said groove, and a metal plate secured to the base of said packing at the toe, and means for attaching said plate to the shoe, substantially as described. 3rd. In a horseshoe provided with a groove in the under surface, of an elastic packing in said groove, and a metal plate secured to the base of said packing at the toe, and sprung between the side walls of the groove to retain said packing in place, substantially as described. 4th. In a horseshoe provided with a groove in the under surface, and a dovetailed opening in the front wall at the toe, of an elastic packing in said groove, and a metal plate secured to the base of said packing and inserted between the dovetailed sides of said groove to hold said packing in place, substantially as shown and described.

**No. 69,581. Rope or Strap Grip for Tying Horses.**  
(*Corde ou courroie pour attacher les chevaux.*)

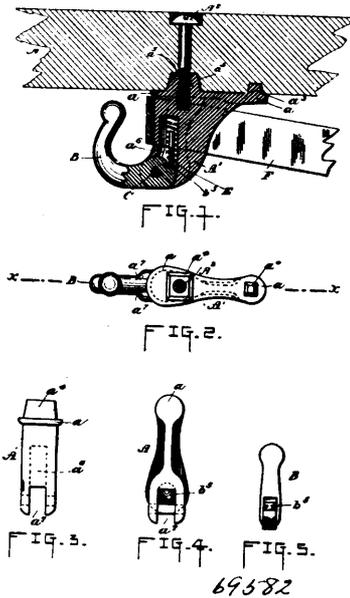


John Hutton Wallace, Brake, Stravithe, R.S.O., Fife, Scotland, 4th December, 1900; 6 years. (Filed 5th November, 1900.)

*Claim.*—1st. The rope grip or strap grip for snaffling, hobbling or tying a horse to himself, also applicable for other purposes, constructed, arranged and operating substantially in the manner as hereinbefore described and shown in the accompanying drawings. 2nd. In a rope grip for snaffling or hobbling horses, also applicable for other purposes, the combination of the frame A, with the plate B or frame hinged thereto, and the spring Q, whereby a pull upon one end

F of a doubled rope shortens the doubled rope, and the tension on it causes the plate B or frame to grip or bite the rope and so prevent its slipping back after each pull, whilst by pulling the other free end of the rope (aided or not by lifting the plate B or frame with finger and thumb) the plate B or frame is separated at apex end from the frame A, allowing the rope to run slack, substantially as hereinbefore described and shown in the accompanying drawings, 3rd. A strap grip for snaffling or hobbling horses, also applicable for use generally as a buckle, consisting of the plate B hinged to the frame A and provided with the spring Q, in combination with straps or a strap, one or one end of which is provided with stops where it passes through the plate B, whilst the other strap or other end of the single strap passes through the jaw of the grip, operating substantially in the manner as and for the purpose hereinbefore described and shown in the accompanying drawings. 4th. The grip applicable for use in connecting together the ends of the straps of the canvas carriers of harvest binder and reaping machines, in which the strap is connected by sewing to a central bar U arranged in the slot of the plate B, substantially as hereinbefore described and shown in Figs. 12 and 13 of the accompanying drawings. 5th. The arrangement and construction of the D ring L by which the rope used in snaffling horses is connected to the saddle, and the modification as applied to military saddles, substantially as hereinbefore described and shown in Figs. 1, 4 and 5 of the accompanying drawings.

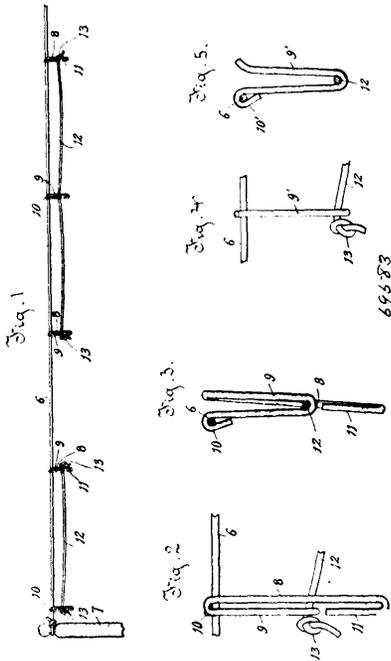
**No. 69,582. Holdback Hook.**  
(*Crochet pour courroies d'avalaires.*)



Joseph Gauthier, St. Johnsbury, Vermont, U.S.A., 4th December, 1900; 6 years. (Filed 12th November, 1900.)

*Claim.*—1st. In combination with a shaft provided with an opening therethrough having a recess or indentation at each end, of a holdback hook consisting of a rigid member, a hollow lug formed integral with said member and adapted to fit in the lower recess of the shaft, a bolt adapted to pass through the shaft and hold the rigid member in place, a smaller lug formed integral with said member and adapted to contact the shaft to prevent the member turning, and a spring actuated hinged hook connected to said member. 2nd. In combination with a shaft, of a holdback, consisting of a rigid member, a hollow lug and a solid lug formed integral with said member, means to secure the member to the shaft, the rigid member provided with a vertical cavity, a hinged hook connected to said member, and a spring pin or bolt arranged in the cavity and engaging the hook to retain it in normal position. 3rd. In combination with a shaft provided with an opening having an enlarged lower end, of a holdback hook consisting of a rigid member, a hollow and a solid lug formed integral with said member, a vertical cavity formed in said member, means to secure the member to the shaft, a hinged hook connected to said member, and a spring pin or bolt arranged in said cavity and engaging the hook to hold it in normal position.

**No. 69,583. Means of Hanging Clothes.**  
(*Moyen d'accrocher le linge.*)



Edward O'Neil, Manitowoc, Wisconsin, U.S.A., 4th December, 1900; 6 years. (Filed 15th November, 1900.)

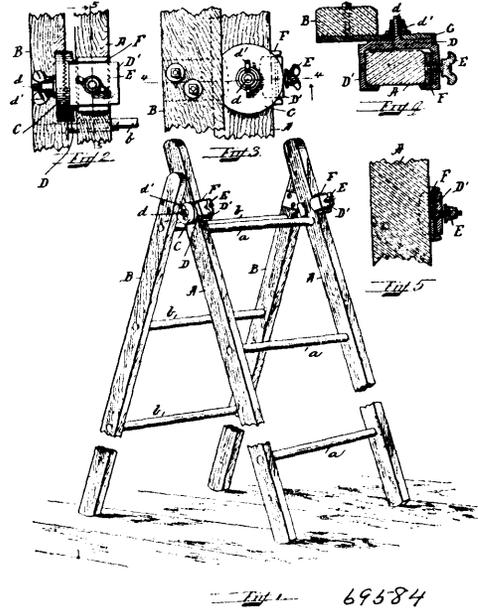
*Claim.*—In means for hanging clothes, the combination of a main line, devices suspended from the main line, said devices being each provided with a loop, and an auxiliary line removably fitted in the loops of the suspended devices. 2nd. In means for hanging clothes, the combination of a main line, devices suspended from the main line, said devices being each provided with a downwardly extending loop, and an auxiliary line removably fitted in the loops of the suspended devices. 3rd. In means for hanging clothes, the combination of a main line, devices suspended from the main line, said devices being each provided with a loop, and an auxiliary line removably fitted in the loops of the suspended devices, said auxiliary line being provided with knots arranged on the outside of the loops to prevent withdrawal of the auxiliary line longitudinally from the loops. 4th. In means for hanging clothes, the combination of a main line, devices suspended from the main line, each device consisting of a main portion bent medially into a downward loop, and having the extremity of one of the sides of said loop bent into a terminal hook to engage over the main line and thereby act as a suspending medium, and an auxiliary line removably fitted in the loops of the suspended devices. 5th. In means for hanging clothes, the combination of a main line, devices suspended from the main line, each device consisting of a main portion bent medially into a downward loop and having the extremity of one of the sides of said loop bent into a terminal hook to engage over the main line and thereby act as a suspending medium, and the said main portion of the suspending device being at an obliquity to the loop, and an auxiliary line removably fitted in the loops of the suspended devices. 6th. In means for hanging clothes, the combination of a main line, devices suspended from the main line, each device consisting of a main portion bent medially into a downward loop and having the extremity of one of the sides of said loop bent into a terminal hook to engage over the main line and thereby act as the suspending medium, and the lower extremity of said main portion being bent upwardly to form a hand grasp, and an auxiliary line removably fitted in the loops of the suspended devices.

**No. 69,584. Adjustable Ladder.** (*Echelle ajustable.*)

William Pearson Libby, Somerville, Massachusetts, U.S.A., 4th December, 1900; 6 years. (Filed 19th November, 1900.)

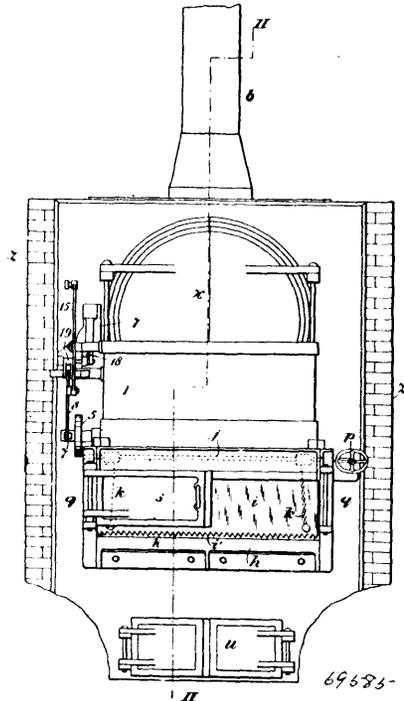
*Claim.*—In combination with a pair of ladders A, B, a serrated disc C secured to the ladder rails B, and a guide D<sup>1</sup> adjustably

secured to the rails A, and provided with a serrated disc D adapted to be interlocked with the serrated disc C, and means for securing



said serrated discs together and the ladder A to the guides D<sup>1</sup>, substantially as and for the purpose set forth.

**No. 69,585. Furnace for Burning Powdered Fuel.**  
(*Fournaise pour bruler le combustible en poudre.*)



Adelaide C. Westlake, Brooklyn, New York, U.S.A., 4th December, 1900; 6 years. (Filed 19th November, 1900.)

*Claim.*—1st. A furnace for burnding dust-like fuel, having a fire box, means back of the fire box for inducing the entry of air at the charging opening in the front thereof, a hearth of non-heat conducting material at the lower margin of said opening, a vertically adjustable slide for covering said opening, said slide being composed in the main of non-heat conducting material, and means for feeding the dust-like fuel down to said hearth in regulated quantity, sub-

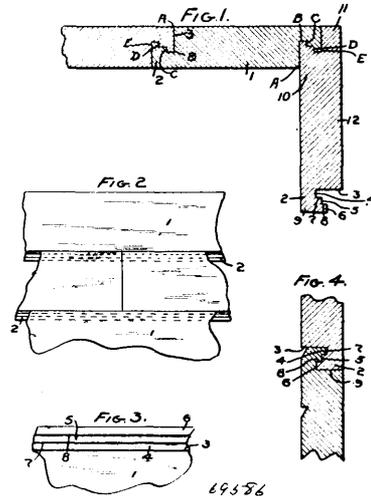
stantially as set forth. 2nd. A furnace for burning dust-like fuel, having a fire box with a charging opening in its front and a projecting hearth below said opening, said hearth and the front of the fire box being mainly composed of non-heat conducting material to avoid the conduction of heat from the fire box, means back of the fire box for inducing the entry of air at said charging opening, and means for feeding the dust like fuel down, outside of the fire box to said hearth in regulated quantity, substantially as set forth. 3rd. A furnace for burning dust-like fuel, having a fire box with a laterally elongated charging opening, a projecting hearth at the lower margin of said opening and extending the width of the same, said hearth being of non-heat conducting material, a hopper for the fuel above the level of the charging opening and above said hearth, means for feeding the fuel from said hopper in regulated quantity, and means for inducing the entry of air at said charging opening, the space or field through which the fuel falls, being open to the atmosphere above, substantially as set forth. 4th. A furnace for burning dust-like fuel, having a grate, an ash box, a door to the ash box, an arch of refractory material over the front portion of said grate, a charging opening with a projecting hearth of non-heat conducting material, a slide composed mainly of non-heat conducting material and adapted to close said opening, and means for feeding the fuel dust down to said hearth exterior to said slide, substantially as set forth. 5th. A furnace for burning dust-like fuel, having a charging opening in its front, a slide of non-heat conducting material over said opening, a projecting hearth of non-heat conducting material at the lower edge of said opening, a feeding device for the fuel above the level of the charging opening and over said hearth and separated from the latter by a space open to the atmosphere on all sides, whereby the fuel in its descent falls through an unenclosed space, as set forth. 6th. A furnace for burning fuel in the form of powder or dust, having means for inducing a draft, a grate to support a bed of burning fuel, an arch of a refractory material above said grate, a charging and air opening, a closing slide or door at said opening, and means for feeding the fuel dust down exteriorly to said closing slide to the opening, whereby the dust is drawn into the fire box under the lower edge of said slide. 7th. A furnace for burning dust-like fuel, having a fire box, a charging opening, a slide adapted to be raised and lowered so as to partially or wholly close said opening, said slide having serrations at its lower edge, and means for feeding the dust-like fuel down exterior to said slide, so that it may be carried into the fire box under the lower edge of the slide by the entering air. 8th. A furnace for burning dust-like fuel, having a fire box with a charging opening, and means for feeding the fuel down in front of and exterior to the furnace front to said charging opening, in combination with a vertically movable slide cover said charging opening, and automatic means for regulating the feed of fuel and the height of said slide in proportion to the heat of the furnace, whereby a substantially uniform heat is maintained. 9th. A furnace for burning dust-like fuel, having a fire box, and means back of the fire box for inducing the entry of air into the charging opening of the same, of means for supplying the fuel to said fire box, said means comprising a receptacle for the fuel exterior to the front of the furnace above the charging opening with an outlet at its bottom, a rotatable feeding shaft in its bottom, a motor, mechanism between said motor and said shaft, whereby the latter is driven by the former, and means for regulating the extent of the fuel feed independently of the speed of the motor. 10th. The combination with a boiler and a draft regulator 11, connected therewith, of a furnace for burning dust-like fuel for generating steam in said boiler, said furnace having a fire box, provided with a charging opening, a suspended, vertically movable slide *l*, over said opening, mechanism for raising and lowering said slide, and means for feeding the fuel down exterior to said slide to the lower edge of same, and an operative connector with coupled said draft regulator, with the fuel feed regulator and with the devices for raising and lowering said slide, whereby the draft regulator controls both the fuel feed and the air supply, substantially as set forth. 11th. A furnace for burning dust-like fuel, having a fire box with a charging opening and grate, a sliding cover, said opening for regulating the same, means for feeding the fuel down exterior to the fire box and to the lower edge of said slide, means for inducing air through said opening to the fire box, and outer protecting doors, between which and said slide the fuel descends, substantially as set forth. 12th. A boiler furnace for burning dust-like fuel, having means for feeding said fuel in regulated quantity down exterior to the front of the fire box at the charging opening, a fire box with the charging opening in its front adapted to be fully opened for the admission of cold air over the fire bed, a grate in said box to support a bed of burning fuel, an ash box below said grate, and means for closing said ash box against the entry of air under the grate, whereby a banked fire may be carried.

**No. 69,586. Timber Joint.** (*Joint pour bois de construction.*)

James F. McCune, Eugene F. Harris, George W. Powell and Harry E. Frazier, all of Indianapolis, Indiana, U.S.A., 4th December, 1900; 6 years. (Filed 12th November, 1900.)

*Claim.*—1st. As an article of manufacture, a board with a lateral extension along each edge from diagonally opposite corners of the board, there being a groove in each extension at its connection with the body of the board and two steps from the groove to widen the head of the extension, the angles of the extension being right angles,

the dimensions of the groove and outer step being the same, and all parts of each extension being of the same form and size as the corresponding parts of the other. 2nd. As an article of manufac-



ture, board with a lateral extension along each edge from diagonally opposite corners of the board, each extension having a groove at its connection with the body of the board and two steps therefrom to form the head of the extension, the thickness of the extension at the inner step being half the thickness of the board, and its thickness at the groove and outer step being respectively less and greater than half the thickness of the board, and the dimensions of the groove and outer step being equal. 3rd. A timber joint comprising two boards whose adjacent edges are similarly but reversely cut, each extension having a groove at its connection with the body of the board and two steps therefrom to form the head of the extension, the angles being all right angles, and the dimensions of the groove and outer step being the same. 4th. A solid corner timber joint comprising two boards, one a corner board that has its corner adjacent to the other board cut out to form a widthwise double stepped rectangular groove and extension throughout its length and the other board with its inner adjacent corner cut out to form a double stepped rectangular groove to receive the extension of the corner board and to leave an extension of similar form to fit in the groove in the corner board, the thickness of such extension being such as to make said board flush on the outside with the edge of the corner board.

**No. 69,587. Cigarette Making Machine.**

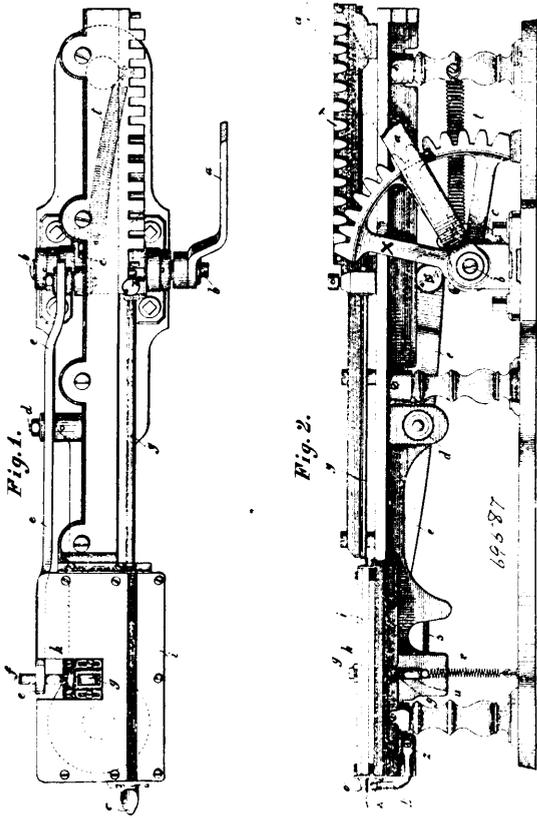
(*Machine à cigarettes.*)

Wilhelm G. Hartlaub, 32 Houttuin, Rotterdam, Netherlands, assignee of Georg Anton Jasmatzi, 17 Blasewitzer Strasse, Dresden, Saxony, German Empire, 4th December, 1900; 6 years. (Filed 2nd January, 1900.)

*Claim.*—1st. In a cigarette machine, the combination of a table having a groove for reception of the charge of tobacco, a hollow nose in line with said groove, on which the cigarette tube is imposed for filling, a plunger for forcing the charge of tobacco into said tube, means for operating the plunger, a lever serving to clip the tube on the holding nose, and means connected with the plunger operating mechanism for advancing said lever to clipping position at an intermediate point in the forward movement of the plunger and permitting its retraction at the end of such forward movement, as explained. 2nd. The combination of the tube holding nose *o*, a plunger *y*, for forcing tobacco into the tube held by said nose, means for operating said plunger, a clipping lever carrying a cushion to clip the tube on its holder, a lever *e*, for advancing said clipping lever to acting position during the forward movement of the plunger, a tripping device serving to release the tube at the termination of the forward movement of the plunger, and means connected with the plunger mechanism, for actuating the said lever *e*, and tripping device, substantially as set forth. 3rd. The combination of the plunger *y*, tube holding nose *o*, a clipping lever *k*, for clipping the tube on the nose, levers *e*, actuating said clipping lever, connected means for operating the plunger *y*, and lever *e*, spring projected pin *l*, through which the lever *e* acts on the clipping lever and the slide *g*, carrying a tripping rod *s*, and connected with the plunger for forcing the pin *l* out of operative position, and thereby releasing the clipping levers at the

termination of the forward stroke of the plunger, as explained. 4th. The combination of the tube holding nose *a*, plunger *u*, lever *a*, rock

with a welt and an upper laid against the outer side of the covered abutment, and stitches engaging said welt and upper and also

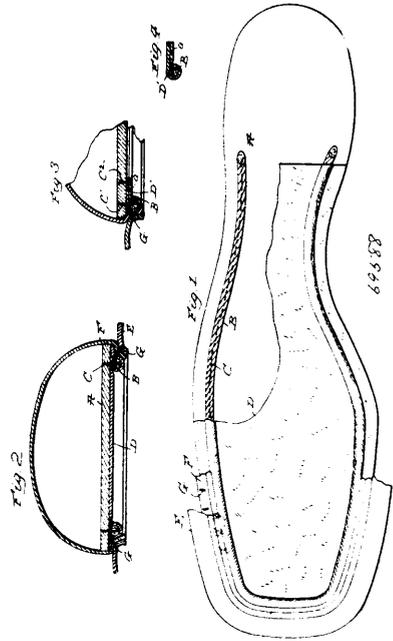


shaft *b*, segment gear *x*, and rack *z*, for operating said plunger, cam *c*, on the rock shaft *b*, lever *e*, actuated by said cam, arm *f*, on which the lever *e* acts, a clipping lever spring pressed pin *l* on lever *k*, projected in the path of the arm *f*, retracting spring *m*, and the slide bar *q*, carrying a tripping rod *s*, and moved by the plunger mechanism to press back the pin *l*, and release the clipping lever *k*, at the termination of the forward stroke of the plunger, as explained.

**No. 69,588. Shoe. (Chaussure.)**

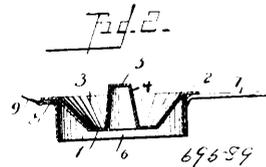
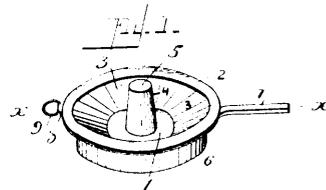
Albert Coney Rounds, and Udo Von Schaurth, both of Buffalo, New York, U.S.A., 4th December, 1900; 6 years. (Filed 9th November, 1900.)

*Claim.*—1st. As an improved article of manufacture, an insole having an abutment disposed below and connected to it at a suitable distance from its edge. 2nd. As an improved article of manufacture, an insole having an abutment of circular form in cross section disposed below and connected to it at a suitable distance from its edge. 3rd. As an improved article of manufacture, an insole having a covered abutment disposed below and connected to it at a suitable distance from its edge. 4th. As an improved article of manufacture, an insole having a hard, covered abutment disposed below and connected to it at a suitable distance from its edge. 5th. As an improved article of manufacture, an insole having a hard abutment disposed below and rigidly connected to it. 6th. As an improved article of manufacture, an insole having a hard abutment of circular form in cross section, and a cover therefor, said abutment and its cover being disposed below and connected to the insole. 7th. As an improved article of manufacture, an insole having a hard abutment, and a cover therefor, said abutment and its cover being disposed below and connected to the insole. 8th. An insole having an abutment disposed below and connected to it, in combination with a welt and an upper laid against the outer side of the abutment, and a connection between said welt and upper and the insole. 9th. An insole having a hard abutment of different material from the insole, disposed below and connected to it, in combination with a welt and an upper laid against the outer side of the abutment, and a connection between said welt and upper and the insole. 10th. An insole having a hard abutment, of circular form in cross section and of different material from the insole, disposed below and connected to it, in combination with a welt and an upper laid against the outer side of the abutment, and a connection between said welt and upper and the insole. 11th. An insole having a hard abutment, of different material from the insole, disposed below and connected to it, and also having a cover arranged over the abutment, in combination



engaging the portions of the cover at opposite sides of the abutment. 12th. An insole having a hard abutment, of circular form in cross section, disposed below and connected to it, and also having a cover arranged over the abutment, in combination with a welt and an upper laid against the outer side of the covered abutment, and stitches extending through said welt and upper and the portions of the cover at opposite sides of the abutment and the insole. 13th. As an improved article of manufacture, an insole having at its underside and abutment of circular form in cross section calculated to form a channel to receive the guide of a welt machine incident to the connection of a welt. 14th. As an improved article of manufacture, an insole having at its underside an abutment and a cover therefor, the said abutment being of circular form in cross section, and therefore calculated to form a channel to receive the guide of a welt machine incident to the connection of a welt.

**No. 69,589. Cooking Pan. (Casserole.)**



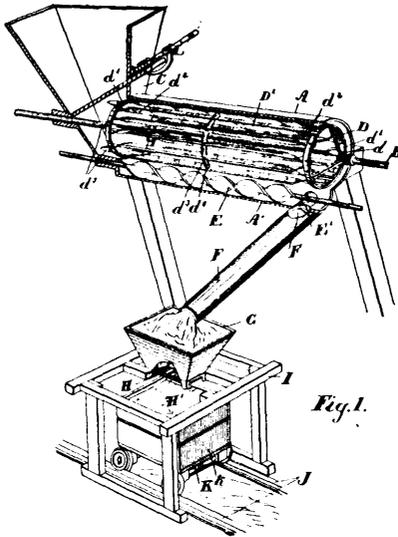
John W. Howle and Grant Green, assignee of Charles W. Garner, all of Searcey, Arkansas, U.S.A., 4th December, 1900; 6 years. (Filed 9th October, 1900.)

*Claim.*—1st. The cooking pan, consisting of a bottom 1, flange 2, cone-shaped wall 3, covered tube 4, vertical wall 6, larger and deeper than the pan, extending all the way around the cone-shaped wall, substantially as shown and set forth and for the purposes set forth. 2nd. The cooking pan, consisting of a bottom 1, flange 2,

cone-shaped wall 3, covered tube 4, vertical wall 6, larger and deeper than the pan, extending all the way around the cone-shaped wall, handle 7, loop 8, and ring 9, substantially as shown and described and for the purposes set forth. 3rd. The cooking pan, consisting of a bottom 1, a flange 2, cone-shaped wall 3, vertical wall 6, larger and deeper than the pan, extending all the way around the cone-shaped wall, handle 7, loop 8, and ring 9, substantially as shown and described and for the purposes set forth.

**No. 69,590. Box for Purifying Peat.**

(Boite pour presser la tourbe.)



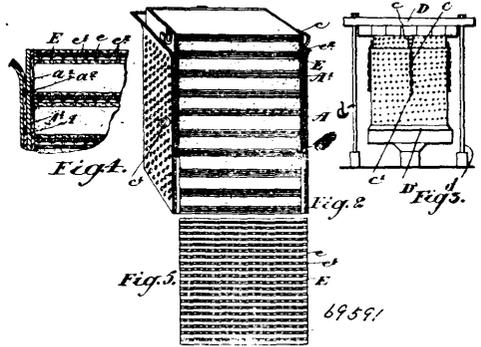
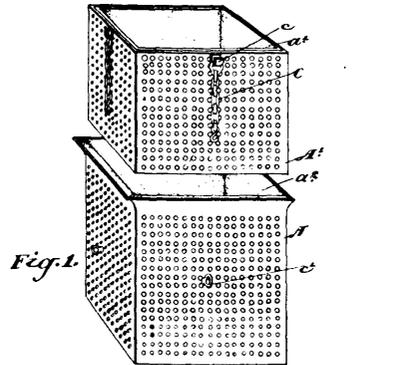
William James Reginald Sims, Kirkfield, and Alfred Lawrence Davis, Peterborough, both in Ontario, Canada, 5th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—1st. The combination with the casing and hopper at the one end thereof, of a slatted cylinder open at both ends and provided with spicular projections at the hopper end for stirring up and keeping the material fed and means for driving such cylinder as and for the purposes specified. 2nd. The combination with the casing and hopper at one end thereof and the incined slatted cylinder suitably driven and open at both ends and communicating at one end with the hopper, and a channel located at the bottom of the casing and a suitable conveying means in such channel whereby the disintegrated peat is carried away separately from the roots and foreign matter, as and for the purposes specified. 3rd. The combination with the casing and hopper at one end thereof and the inclined slatted cylinder suitably driven and open at both ends and communicating at one end with the hopper, and spicular projections extending into the hopper and channel located at the bottom of the casing and a suitable conveying means in such channel whereby the disintegrated peat is carried away separately from the roots and foreign matter as and for the purpose specified. 4th. The combination with the casing having the hopper at one end, of a slatted cylinder comprising the end rings and arms secured to the shaft, such end rings being set with their sides radial and the central encompassing ring extending through recesses in the slats and provided with the compressing sleeves or pipes extending between the slats as and for the purpose specified. 5th. The combination with the casing and hopper and slatted cylinder located in the casing and open at both ends and the channel underneath the cylinder provided at one end with an opening and the conveyer located in such channel, the tube leading from such opening also provided with a conveyer and the hopper designed to receive the peat from the tube and a suitable spreader at the bottom of the hopper as and for the purpose specified. 6th. In a device of the class described, the combination with the disintegrating and feeding device and hopper designed to receive the contents of such devices, of a slatted bottom provided with openings between the slats and a corresponding bottom designed to reciprocate under such bottom, so as to sift and feed the material through and spread the same, as and for the purpose specified. 7th. The combination with the casing and hopper at one end thereof, of a slatted cylinder open at both ends, means for keeping the material stirred up at the entrance end of the cylinder and means for driving such cylinder, as and for the purpose specified. 8th. The combination with the casing and hopper at one

end thereof, of a slatted cylinder open at both ends, means for keeping the material stirred up at the entrance end of the cylinder, means for driving such cylinder and a regulating gate located in the hopper and designed to control the supply, as and for the purpose specified.

**No. 69,591. Box for Drying Peat.**

(Procédé pour traiter et sécher la tourbe.)



William James Reginald Sims, Kirkfield, and Alfred Lawrence Davis, Peterborough, Ontario, Canada, 5th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—1st. The combination with a suitable compressing means, of a bottomless box made with perforated sides and in two portions and designed when pressure is applied to the outer ends to telescope into each other as and for the purpose specified. 2nd. The combination with a suitable compressing means, of a bottomless box made with perforated sides and in two portions and designed when pressure is applied to the outer ends to telescope into each other and a connecting means for attaching the two portions together when telescoped as and for the purpose specified. 3rd. The combination with a bottomless box made in two portions and having the perforated sides and canvas lining, of a series of trays formed of a double layer of cross slats with openings therein and top and bottom canvas covers designed to receive the disintegrated peat and extend between each layer of same and also to form a top and bottom for the box, as and for the purpose specified. 4th. The combination with a suitable compressing means, of a bottomless box provided with a perforated sides and interior lining and trays designed to form the top and bottom of the box and separate the internal layers of peat, as and for the purpose specified. 5th. The combination with a suitable compressing means, of a bottomless box provided with perforated sides, the top and bottom perforated trays designed to receive the peat between them and be brought towards each other by pressure, as and for the purpose specified.

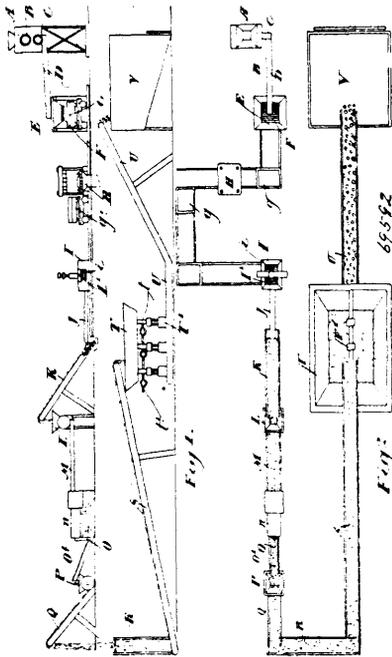
**No. 69,592. Process of Treating and Drying Peat.**

(Procédé pour traiter et sécher la tourbe.)

William James Reginald Sims, Kirkfield, Alfred Lawrence Davis, Peterborough, both of Ontario, Canada, 5th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—1st. The method herein described of treating and drying crude peat consisting first in mechanically removing the roots and foreign matter from the peat and at the same time disintegrating such peat, then spreading the peat in its disintegrated state over a flat surface, then compressing such spreaded peat into a flat cake, so as to reduce the moisture, then breaking or disintegrating the peat again, then applying a regulating device, so as to feed a determinate amount, then carrying such disintegrated peat in a supported stream through a slightly heated zone, so as to further reduce the moisture, then dumping and further disintegrating the peat to remove the lumps, then carrying such further reduced peat in a stream

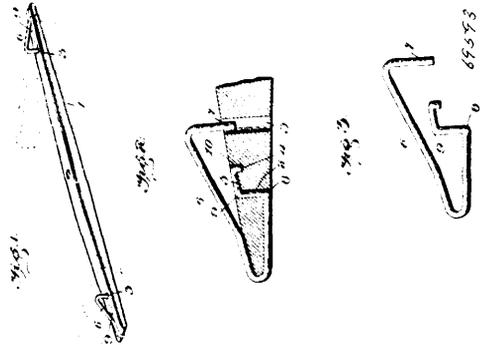
into and through an intensely heated zone, then running such disintegrated peat out in a supported stream, then disintegrating



again so as to remove further lumps, then further conveying said peat in a supported stream and then dumping the now completely pulverized and heated peat through space whereby practically all the particles are exposed to the action of the air, so as to cause a steam to arise from the particles and pulverized peat to be further reduced in temperature prior to compressing, as and for the purpose specified. 2nd. The method herein described of treating and drying crude peat consisting first in mechanically removing the roots and foreign matter from the peat, then conveying it to a suitable device by which it is spread in a loose layer or layers upon a receiving slab or table, then mechanically carrying such table to a press by which the layer or layers are compressed into a flat cake or cakes, then mechanically conveying such cakes to a disintegrator provided with a regulating device by which the cakes are broken up or disintegrated, then mechanically carrying or conveying such disintegrated mass exposed to a more or less degree of heat to a further disintegrator by which the mass is still further and more uniformly reduced, then mechanically conveying such mass to a suitable dryer heated to a high degree of temperature and through which such mass is mechanically impelled, then mechanically conveying the heated mass of peat to a disintegrator by which the peat is further and more uniformly reduced, then mechanically conveying the peat to a sufficient height, then dumping it in its pulverized state, so that in passing through the air the temperature and moisture is reduced prior to compressing, as and for the purpose specified. 3rd. In the method herein set forth first mechanically extracting the roots and foreign matter from, and simultaneously disintegrating the crude peat, then mechanically conveying and spreading the disintegrated peat, prior to compressing as and for the purpose specified. 4th. In the method described, the final dumping of the pulverized peat in its heated state at a sufficient height, so that the passage through the air causes steam to be emitted whereby the temperature and moisture are reduced, as and for the purpose specified. 5th. In the process herein described spreading the peat upon a flat surface after disintegration, then compressing it to remove the moisture and form flat cakes, then dumping and disintegrating the flat cakes and applying a regulating device whereby the amount of disintegrated peat fed may be regulated for further treatment, as and for the purpose specified. 6th. In the process described and prior to final compressing injecting a jet of steam into the material as it passes from the feed spout into the compressing machine, as and for the purpose specified. 7th. The method herein described of treating and drying crude peat consisting first in mechanically removing the roots and foreign matter from the peat and at the same time disintegrating such peat, then spreading the peat in its disintegrated state over a flat surface, then compressing such spread peat into a flat cake, so as to reduce the moisture, then breaking or disintegrating the peat again, then applying a regulating device, so as to feed a determinate amount, then carrying such disintegrated peat in a supported stream through a slightly heated zone, so as to further reduce the moisture, then dumping and further disintegrating the peat to remove the lumps, then carrying such further reduced peat in a stream through an intensely

heated zone, then running such disintegrated peat out in a supported stream, then disintegrating again so as to remove further lumps, then further conveying said peat in a supported stream and then dumping the now completely pulverized and heated peat through space whereby practically all the particles are exposed to the action of the air so as to cause a steam to arise from the particles and pulverized peat to be further reduced in temperature, then finally injecting a spray of steam into the pulverized peat prior to compressing, as set forth.

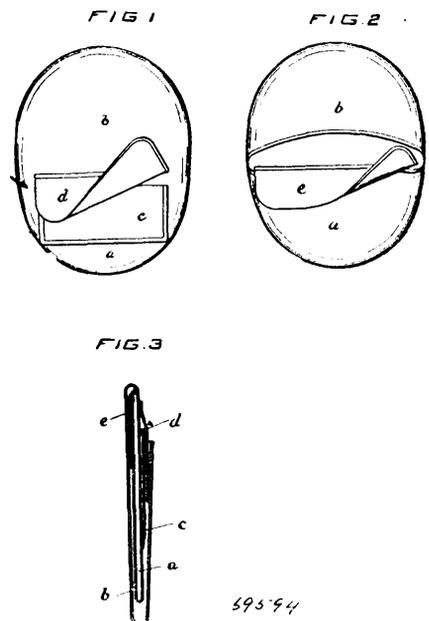
No. 69,593. Trace Fastener. (*Attache de traits.*)



Henderson P. Childress, Memphis, Tennessee, U.S.A., 5th December, 1900; 6 years. (Filed 17th August, 1900.)

Claim.—1st. The combination with a whiffletree provided with a keeper socket adjacent to one end, of a trace fastener composed of a single piece of metal bent around the end of the whiffletree and having an angular extremity forming a keeper end designed for reception in the keeper socket, and having its opposite end passed through the whiffletree and bent back into a recess located between the keeper socket and the extremity of the whiffletree. 2nd. The combination with a whiffletree provided with a keeper socket, an opening intermediate of the socket and the end of the whiffletree, a recess intermediate of the opening and socket, and a channel in the face of the whiffletree and extending from the opening to the recess, of a trace fastener bent around the end of the whiffletree and provided with an angular keeper end passed into the keeper socket from above, the opposite end of said trace fastener being passed through the opening in the whiffletree and bent into the channel, and having its extremity bent into the recess, whereby the trace fastener is secured upon the whiffletree without the employment of separate retaining devices.

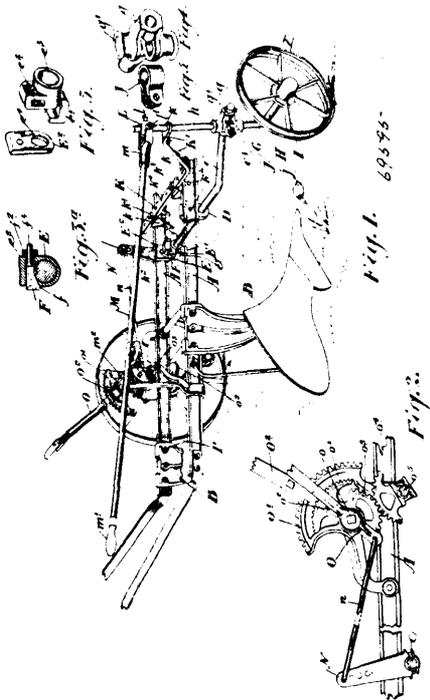
No. 69,594. Tobacco Pouch. (*Sac à tabac.*)



The Cosmic Utility Company, assignee of Henry Jevors, all of New York City, New York, U.S.A., 5th December, 1900; 6 years. (Filed 4th April, 1900.)

*Claim.*—1st. As a new article of manufacture, an infolding tobacco pouch having a pocket formed on the surface of same by a single strip of material secured to such surface, and a flap forming a cover for such pocket secured above the same, substantially as described. 2nd. As a new article of manufacture, an infolding tobacco pouch having a section to contain the tobacco adapted to be turned into and closed by a corresponding section, and a flap above the first named section, substantially as described. 3rd. As a new article of manufacture, an infolding tobacco pouch having a section to contain the tobacco adapted to be turned into and closed by a corresponding section, a flap for the first named section, a pocket formed on the surface of such section by a single strip of material secured to such surface, and a flap for such pocket secured above the same, substantially as described.

**No. 69,595. Gang Plough. (Charruc-buttoir.)**

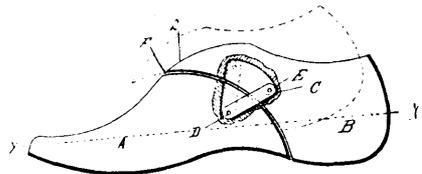


The Cockshutt Plow Company, assignee of George Wedlake, all of Brantford, Ontario, Canada, 5th December, 1900; 6 years. (Filed 22nd November, 1900.)

*Claim.*—1st. The combination with the furrow wheel journalled on the end of a bent axle having a vertical portion suitably vertically journalled and connected to the frame of the plough, of a steering pole connected to the upper end of the vertical portion of the furrow wheel axle and extending rearwardly into proximity with the ploughman, as and for the purpose specified. 2nd. The combination with the furrow wheel journalled on the end of a bent axle having a vertical portion suitably vertically journalled and connected to the frame of the plough, of a steering pole connected to the upper end of the vertical portion of the furrow wheel axle and extending rearwardly into proximity with the ploughman and a notched rack secured to the frame and designed to support and hold in position the steering rod, as and for the purpose specified. 3rd. The combination with the furrow wheel journalled on the end of a bent axle having a vertical portion suitably vertically journalled and connected to the frame of the plough, of a collar provided with trunnions suitably secured to the upper end of the axle and a steering pole provided with a front forked end pivoted on the trunnions, such steering pole extending rearwardly to a point convenient to the ploughman as and for the purpose specified. 4th. The combination with the furrow wheel and axle thereof having a vertical portion, of a crank bar suitably journalled and extending across the frame, a suitable connection from such crank bar to the vertical portion of the axle of the furrow wheel, and a supplemental bar adjustly supported crosswise of the frame and having the end extending to the vertical axle, which extends through it as and for the purpose specified. 5th. The combination with the furrow wheel and axle thereof having a vertical portion and the upper bar extending crosswise of the frame and forming a support for the upper end of the vertical axle, of the crank bar suitably journalled on one of the side bars of the frame at one end and having the crank end suitably connected to the lower part of the vertical portion of the crank wheel axle and the opposite straight and extending through a suitable supporting bracket on the opposite side bar and means for

turning the crank bar in its journal bearing, as and for the purpose specified. 6th. The combination with the furrow wheel and axle thereof having a vertical portion and the upper bar extending crosswise of the frame and forming a support for the upper end of the vertical axle, of the crank bar suitably journalled on one end of the side bars of the frame at one end and having the crank end suitably connected to the lower part of the vertical portion of the crank wheel axle, the bracket comprising the two portions, one secured to the side bar and the other portion having a lip extending underneath the portion secured to the side bar, such brackets being designed to receive the opposite end of the crank bar to that on which the crank is situated and the inner portion being provided with a recess and a tapered key fitting such recess and provided with a threaded end and nut designed to bring it into frictional contact with the crank bar, as and for the purpose specified. 7th. The combination with the furrow wheel and axle thereof having a vertical portion and a suitable support connected to the frame for the upper part of the vertical portion, of the crank bar journalled in suitable bearings attached to the side bars of the frame having a crank end, the bracket on the vertical portion of the furrow wheel axle provided with a vertical hole through which such vertical portion extends and a horizontal hole to one side of it through which the crank extends, a holdfast collar located in the recesses between the upper and lower portions of the bracket on the vertical portion of the furrow wheel axle and means for swinging the crank bar, as and for the purpose specified. 8th. The combination with the furrow wheel and axle thereof having a vertical portion suitably supported and connected to the frame, of a crank bar suitably connected to the lower part of the vertical portion of the furrow wheel axle and having bearings in the side bars of the frame, the arm on the crank bar and the connecting rod and lever for operating the same, as and for the purpose specified. 9th. The combination with the furrow wheel and axle thereof having a vertical portion suitably supported and connected to the frame, of a crank bar suitably connected to the lower part of the vertical portion of the furrow wheel axle and having bearings in the side bars of the frame, the arm on the crank bar and the connecting rod and lever for operating the same, the quadrant designed to co-act with the lever, the main lever and quadrant, such latter lever being connected to the aforesaid quadrant, the supplemental quadrant forming part of the same casting as the quadrant of the first mentioned lever, the land wheel crank axle and land wheel and the quadrant on the land wheel axle meshing with the quadrant forming part of the casting aforesaid, as and for the purpose specified.

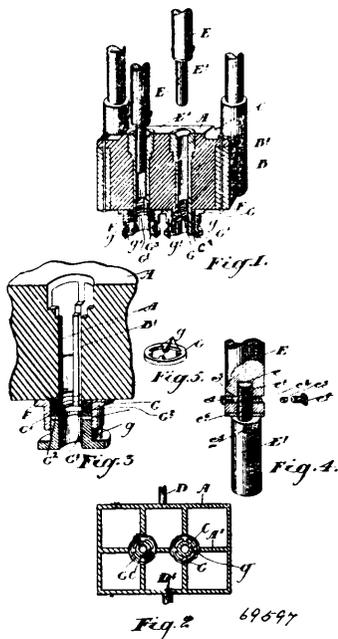
**No. 69,596. Last. (Forme.)**



Michael Mitchell, Frank D. Marshall and John Wells, all of Portland, Maine, U.S.A., 5th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—1st. In a divided last, a fore part, a heel part, said parts being divided on a curved line, the arc of a true circle, the line of division beginning at a point in front of the rise of the instep and continuing therefrom to the base of the last, substantially as and for the purposes set forth. 2nd. In a last divided on a curved line, the line of division beginning at a point in front of the rise of the instep and continuing therefrom to the base of the last and a tongue pivotally mounted in fore and heel parts respectively whereby said heel portion is allowed to move over said fore part shortening, at the moment movement begins, the base line of the last, substantially as and for the purposes set forth. 3rd. In a last divided on a curved line, a fore part, a heel part, the line of division beginning at a point in front of the rise of the instep and continuing therefrom to the base of the last, a tongue pivotally mounted in the fore and heel parts respectively, the pivot in the fore part being placed at a point above the center of the fore part, the pivot in the heel part being above the pivot in the fore part, substantially as and for the purposes set forth. 4th. In a divided last, a fore part, a heel part, the line of division between said parts beginning at a point in front of the rise of the instep position extending therefrom in a curved line to the base of the last, a tongue pivotally mounted in the fore and heel parts respectively, the pivot in the fore part being on one of the radii of the curved line dividing the fore and heel parts, the pivot in the heel part, when the said fore and heel parts are in their normal positions, being without and below said radial line when continued into the heel part, substantially as and for the purposes set forth.

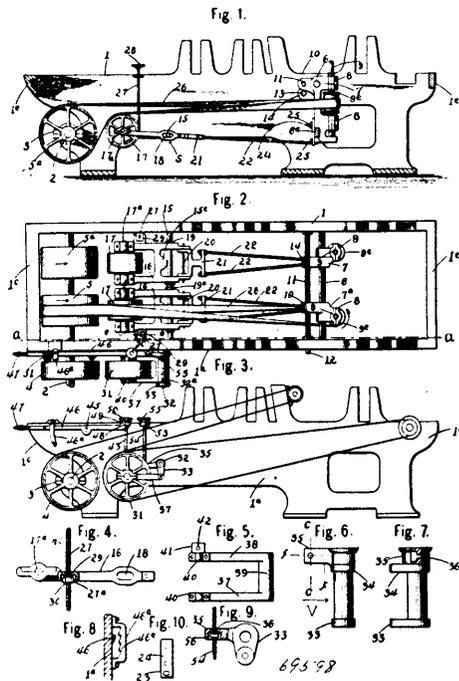
**No. 69,597. Peat Compressing Machine.**  
(Machine à presser la tourbe.)



Frederick Henning, Toronto, W. J. R. Sims, Kirkfield and A. L. Davis, Peterborough, all in Ontario, Canada, 5th December, 1900; 6 years. (Filed 21st November, 1900.)

*Claim.*—1st. In a peat compressing machine, the combination with the lower portion of the plunger, of a detachable compressing portion, means for connecting the latter portion to the former, and a lengthening means for increasing the stroke of the compressing portion, as and for the purpose specified. 2nd. The combination with the lower portion of the plunger having a threaded orifice, of the compressing portion provided with a reduced threaded stem designed to fit into the threaded orifice in the lower portion of the plunger and means for preventing the rotation of the compressing portion as and for the purpose specified. 3rd. The combination with the lower portion of the plunger having a threaded orifice of the compressing portion provided with a reduced threaded stem designed to fit into the threaded orifice in the lower portion of the plunger, a soft metal plug fitting into the laterally threaded holes in the lower portion of the plunger and set screws designed to hold such plugs against the threaded stem of the compressing portion, as and for the purpose specified. 4th. The combination with the lower portion of the plunger having a threaded orifice of the compressing portion provided with a reduced threaded stem designed to fit into the threaded orifice in the lower portion of the plunger, means for preventing the rotation of the compressing portion and wrench receiving holes located in the upper portion of the compressing portion, as and for the purpose specified. 5th. In a peat compressing machine, the combination with the lower portion of the plunger, of a detachable compressing portion and means for connecting the latter portion to the former and a flat ring designed to be placed between the lower portion of the plunger and the compressing portion, as and for the purpose specified. 6th. In a device of the class described, the combination with the die block having converging walls and the dies extending therethrough at the point where the walls converge of the stuffing box and the water jacket extension rings fitting therein up against the die block and having inwardly extending lugs and spaces between communicating with the water jacket and a suitable gland and means for holding the parts together, as and for the purpose specified. 7th. In a device of the class described, the combination with the die block having converging walls and the dies extending therethrough at the point where the walls converge of the stuffing box and the water jacket extension rings fitting therein up against the die block and having inwardly extending lugs and spaces between communicating with the water jacket and a suitable gland and packing and threaded bolts extending into corresponding holes in the stuffing box and through the flange of the gland and provided with nuts at its lower end, as and for the purpose specified. 8th. The combination with the die block and die extending therethrough, of the extension water jacket rings and means for closing the bottom of the same and holding them in place, as and for the purpose specified.

**No. 69,598. Planing Machine.** (Machine à raboter.)

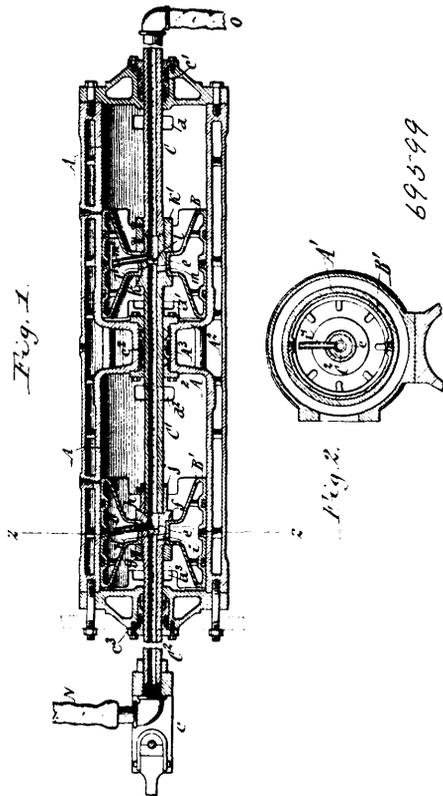


Edward Holmes and Britain Holmes, assignees of Edwin F. Beugler, all of Buffalo, New York, U.S.A., 5th December, 1900; 6 years. (Filed 12th December, 1897.)

*Claim.*—1st. In a planing machine, the combination with a matcher head and matcher head belt, of a tightening pulley located on a substantially horizontal support and capable of a lateral swinging movement thereon, means connecting said tightening pulley frame with the matcher head frame and means for moving the matcher head back and forth across the machine, whereby a movement of the matcher head to one side or the other will adjust the tightening pulley and driving belt and keep it in operative position on the driving pulley at any point to which said matcher head may be adjusted. 2nd. In a planing machine, the combination with a matcher head and matcher head belt, of a vertically adjustable and laterally movable frame carrying a tightening pulley and mounted on a support on the machine, a screw bar and means for operating it, for adjusting said frame and tightening pulley vertically, means connecting said frame with the matcher head frame, and means for moving the matcher head across the machine and thereby operatively adjusting the tightening pulley and driving belt to any position the matcher head may be moved. 3rd. In a planing machine, the combination with a matcher head and matcher head belt, of a vertically adjustable and laterally movable supporting frame, a tightening pulley mounted in suitable bearings thereon, means for adjusting said frame and tightening pulley vertically, a cross bar for supporting said frame and upon which it is capable of a horizontal swinging movement, a longitudinal bar extending from a pivotal connection at the front end of the tightening pulley frame so as to be capable of a swinging up or down movement, and having its opposite end in engagement with the matcher head frame, and means for moving the matcher head back and forth across the machine, thereby operating the tightening pulley and keeping the matcher head belt in operative positions at any point to which the matcher head may be adjusted. 4th. In a planing machine, the combination with the driving pulley and belt, of two downwardly extending arms connected together by a cross bar and mounted so as to swing on a short shaft extending from the side of the machine, and an arm extending from one of said arms in a substantially horizontal direction, means for adjusting the end of said arm upward or downward and thereby moving the outer ends of the depending arms forward or back in a substantially horizontal direction, two arms connected together by a cross bar and pivoted between the two depending arms, a tightening pulley mounted thereon, and means for adjusting the said arms and tightening pulley vertically, for the purpose described. 5th. In a planing machine, the combination with the machine frame, the matcher head adjustably mounted therein, the driving pulley and the matcher head belt, of an adjustable tightening pulley and mechanism controlled by the matcher head for adjusting the tightening pulley to correspond to the adjustment of the matcher head and thereby align the pulley with the belt. 6th. In a planing machine, the combination with the machine frame, the matcher heads adjustably mounted therein, the driving pulley on the matcher head belt, of a tightening pulley

and means for adjusting the tightening pulley to correspond with the adjustment of the matcher head. 7th. In a planing machine, the combination with the machine frame, the matcher head adjustably mounted therein, the driving pulley and the matcher head belt, of a tightening pulley and means for adjusting the tightening pulley simultaneously with the corresponding adjustment of the matcher head. 8th. In a planing machine, the combination with the machine frame, the matcher head adjustably mounted therein, the driving pulley and the matcher head belt, of a tightening pulley, means for adjusting the tightening pulley to vary the tension of the belt and means for adjusting the tightening pulley to correspond with the adjustment of the matcher head. 9th. In a planing machine, the combination with the machine frame, the matcher head adjustably mounted therein, the driving pulley and the matcher head belt, of a tightening pulley, adjusting mechanism for moving the tightening pulley to correspond with the adjustment of the matcher head and independent adjustment for adjusting the tightening pulley to vary the tension of the belt. 10th. In a planing machine, the combination with the machine frame, a substantially vertical shaft and a substantially horizontal shaft journaled in said frame, a matcher head adjustably mounted on the substantially vertical shaft, a driving pulley mounted on the substantially horizontal shaft, and a matcher head belt, of a tightening pulley and means for adjusting the tightening pulley to correspond with the adjustment of the matcher head. 11th. In a planing machine, the combination with a matcher head and matcher head belt, of a tightening pulley mounted on a support and capable of lateral twisting movement thereon, an operative connection between said tightening pulley frame and the matcher head frame and means for moving the matcher head back and forth across the machine.

**No. 69,599. Cooling Means for Gas Engines.**  
(Moyen de refroidir pour machines à gaz.)

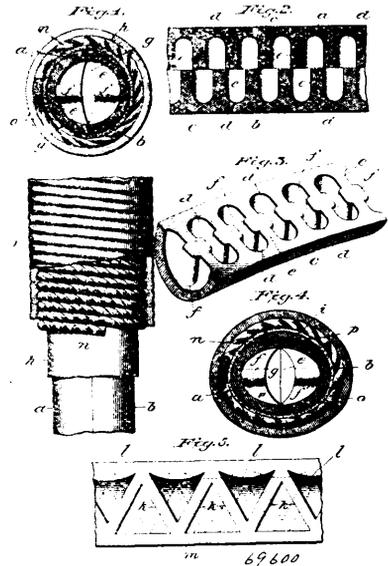


John Walter Raymond, Oil City, Pennsylvania, U.S.A., 5th December, 1900; 6 years. (Filed 16th October, 1899.)

**Claim.**—1st. The combination with the cylinder, of a hollow piston having its sides connected by a hollow hub and provided with inlet and outlet openings which are arranged in opposite ends of the bore of the hub, a hollow piston rod extending entirely through said hub and provided with inlet and outlet openings which coincide with the inlet and outlet openings of the hub, and a partition arranged in the piston rod between the inlet and outlet openings thereof substantially as set forth. 2nd. The combination with the cylinder, of a hollow piston having its sides connected by a hollow hub and having inlet and outlet openings which extend from opposite ends of the bore of the hub into the space within the piston, a hollow piston rod passing through said hub and provided with inlet and outlet openings which coincide with the inlet and outlet openings

of the hub, a partition bearing against an internal shoulder arranged in the bore of the piston rod between its inlet and outlet openings, a shoulder formed on the piston rod and bearing against one side of the piston, and a collar arranged on the piston rod and bearing against the opposite side of the piston, substantially as set forth. 3rd. The combination with the cylinder, of a hollow piston having its sides connected by a hollow hub and provided with inlet and outlet openings in said hub, a hollow piston rod section passing through said hub and through a stuffing box in one end of said cylinder and provided with inlet and outlet openings which coincide with the corresponding openings in said hub, another hollow piston rod section which passes through a stuffing box in the other end of said cylinder and connects with the first-mentioned piston rod section, and a partition arranged in the bore of the first-mentioned piston rod section, between the inlet and outlet openings thereof, substantially as set forth.

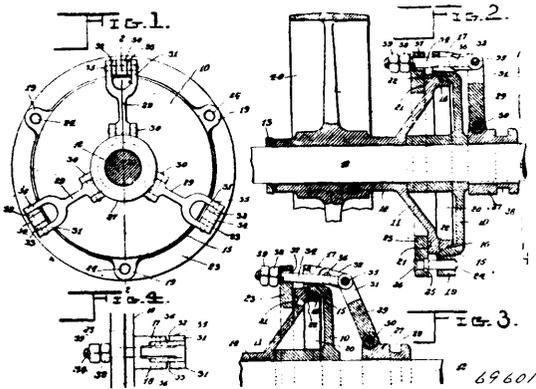
**No. 69,600. Cellular Tire.** (Bandage Cellulaire.)



William Fessenden Beasley, Plymouth, North Carolina, U.S.A., 5th December, 1900; 6 years. (Filed 20th July, 1900.)

**Claim.**—1st. The hereinbefore described method of manufacturing cellular rubber tires for vehicles, consisting in forming the tire in two sections, divided in the plane of revolution of the tire, each section being molded from the raw rubber directly into an annular form, and vulcanizing the abutting faces of the two sections together while still in the moulds in which they were formed, to form the complete tire, whereby all parts of the tire are under equal tension, all substantially as set forth. 2nd. A tire comprising a plurality of separate sections, having faces abutting in the plane of revolution of the tire, each section being provided with recesses in its abutting face separated by transverse supporting walls, the circumferential portions of the said sections being connected together, and the transverse walls of the sections being unconnected, and a casing surrounding the said sections and supporting them against undue separation, all substantially as set forth. 3rd. A tire comprising a plurality of separate sections having faces abutting in the plane of revolution of the tire, each section being provided with recesses in its abutting faces separated by transverse supporting walls the circumferential portions of the said sections being connected together, and the transverse walls of the said sections being unconnected but registering with and supporting them against undue separation, all substantially as set forth. 4th. A resilient tire composed of a hollow annulus enclosing a series of transverse supporting walls, the walls extending from the rim side to the tread side of the annulus, each of the corresponding ends of each wall abutting upon the corresponding end of one of the adjoining walls, all substantially as set forth. 5th. A tire composed of two sections divided in the plane of revolution of the tire, each section being provided with transverse supporting walls, the end of each wall of each section abutting upon the corresponding end of an adjoining wall of the same section, all substantially as set forth. 6th. A cellular tire composed of two main sections divided in the plane of revolution of the tire and a tread section breaking joint with the two main sections thereof and uniting the two sections, all substantially as set forth. 7th. The combination in a tire of a resilient section, a winding therefor, composed of rope, and a tread section laid upon the rope winding and conforming to the outline of the winding, whereby a rigid tread is produced, all substantially as set forth.

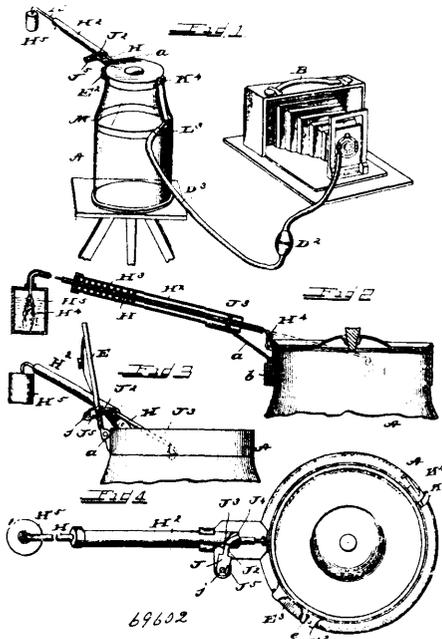
No. 69,601. Friction Clutch. (Embrayage à friction.)



François-Xavier Drolet, St. Roche, Quebec, Canada, 5th December, 1900; 6 years. (Filed 31st August, 1900.)

**Claim.**—1st. In a clutch, the combination with a driving member, a driven member, a loosely mounted ring and a shiftable collar, of group of short straight links arranged in pairs and with each pair connected pivotally to one clutch member, a series of draw bolts each loosely connected to the other clutch member, and a series of lever arms pivoted to the collar, each lever arm being pivoted by a common pin or bolt to one of the draw bolts and to a pair of the short links, the latter affording a shiftable fulcrum connection between each lever arm and one clutch member, substantially as described. 2nd. A clutch, comprising a member having integral bracket lugs, another member in oppo-ning relation to the first member, a ring loosely mounted on the second member, groups of short straight links pivoted in pairs to the bracket lugs and with the links of each pair in lateral spaced relation one to the other, draw bolts passing loosely through the ring and the bracket lugs and disposed between the links of the pairs, each draw bolt having a nut adapted to impinge the ring, and said draw bolt capable of a limited loose movement relative to said ring, a shiftable collar, and lever arms pivoted to the collar and each having a pivotal connection at a common point with one pair of links and with the other-wise free end of the draw bolt, substantially as described.

No. 69,602. Means for Producing Artificial Light in Photography. (Moyen de production de lumière artificielle dans la photographie.)

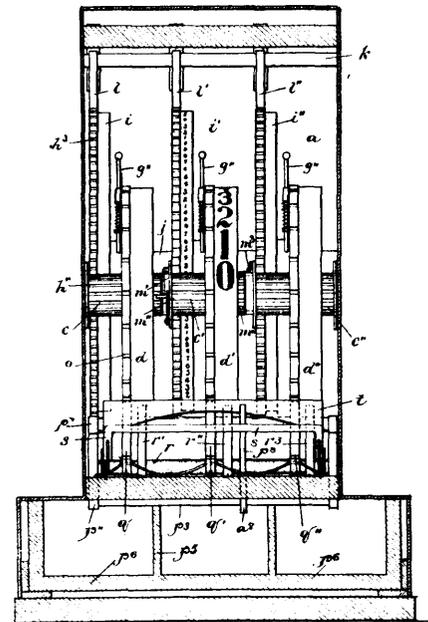


Arthur H. Spurr and William V. McQuaid, Des Moines, Iowa, U.S.A., 5th December, 1900; 6 years. (Filed 7th December, 1899.)

**Claim.**—1st. Means for subjecting the sensitive plate of a photographic apparatus to the action of artificial light consisting in a

diaphanous gas containing reservoir having a suitable gas therein capable of illumination, and means for opening the reservoir to permit ignition of the gas as the sensitive plate is exposed. 2nd. A device for exposing the sensitive plate of a photographic apparatus and also produce an artificial light, comprising a pneumatic device connected with and operating the shutter, a diaphanous gas reservoir normally sealed, and pneumatically operated means for opening the reservoir, together with an ignition device which is operated to ignite the gas of the reservoir as the shutter is operated to expose the plate. 3rd. An apparatus for exposing the sensitive plate of a photographic apparatus and also produce an artificial light at or about the same time as the said exposure, consisting of a pneumatic generating member for generating a pneumatic pressure, a diaphanous reservoir containing an illuminant gas, means for operating the gas reservoir, and pneumatic connections between said means and the pneumatic generating member, and also between said member and the shutter, together with an ignition device operated when the reservoir is uncovered whereby the sensitive plate is exposed and the gas ignited from one and the same point of manual operation. 4th. In a photographic apparatus, a diaphanous gas reservoir, an illuminant gas therein, a cover pivoted thereon, a yielding pressure device tending to open the cover, a holding trigger for the cover, a pneumatic member for generating an air pressure to operate the trigger and release the cover, an ignition device which is brought into a position to ignite the gas in the reservoir when the cover is released, and a camera shutter, together with pneumatic connections between the shutter and the pneumatic member. 5th. In a photographic apparatus, a device for producing artificial light, consisting of a diaphanous gas reservoir, a movable cover therefor, an ignition device, the igniting flame of which is near the reservoir, said ignition device comprising in construction a holding trigger, a flame carrying member withheld by said trigger, means whereby said trigger is released when the gas reservoir is opened, and a yielding pressure device for advancing the flame carrier. 6th. In a photographic apparatus, a device for producing artificial light, consisting in a diaphanous gas reservoir, a movable cover therefor, an ignition device, the igniting flame of which is near the reservoir, said ignition device comprising in construction a holding trigger, a flame carrying member withheld by said trigger, means whereby said trigger is released when the gas reservoir is opened, a yielding pressure device for advancing the flame carrier, and a camera shutter, together with a lock for the cover, and a pneumatic device for concurrently operating said lock to release the cover and also actuate the shutter. 7th. In a photographic illuminating device, the combination with the shutter, of a camera, of a plurality of diaphanous reservoirs containing an illuminating gas, a pneumatic device for operating the shutter to expose the plate, a trigger for each of the covers of said reservoirs, a connecting member between said pneumatic device and the triggers, and means for connecting any one or more of said triggers to the connecting member, together with an ignition device for each reservoir.

No. 69,603. Cash Register. (Registre à monnaie.)

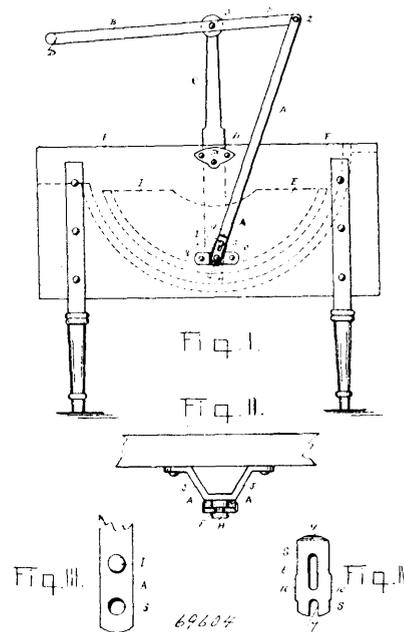


Joseph M. Mackin and Clarke R. Morrison, both of Palmerston, Ontario, Canada, 5th December, 1900; 6 years. (Filed 21st August, 1900.)

*Claim.*—1st. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each indicating wheel to cause its rotation, substantially as specified. 2nd. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each indicating wheel to cause its rotation, and a detent dog for each registering wheel, substantially as specified. 3rd. A cash register embracing in its construction a case, a shaft journaled in the case, a series of ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated edge to engage the ratchet teeth, registering wheels meshing with the teeth of the ratchet wheels, a lever connected to each indicating wheel and means for locking the indicating wheels in their indicated position until after the cash drawer has been closed and reopened, substantially as specified. 4th. A cash register embracing in its construction a case, a shaft journaled in the case, a series of ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated dogs to engage the ratchet teeth, registering wheels meshing with the teeth of the ratchet wheels, pivoted detent dogs engaging the teeth of the registering wheels, a lever attached to each indicating wheel, a front for the case concentric to the indicating wheels, grooves in the front through which project the levers, stops for the indicating wheels, detent dogs to engage the stops of the indicating wheels, an oscillating shaft for the detent dogs, a lifting bar for the shaft and a cash drawer having inclined ways to raise or lower the lifting bar, substantially as specified. 5th. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels, a lever for each indicating wheel to cause its rotation, a movable locking bar to engage the indicating wheels and prevent their operation after the cash drawer has been used, substantially as specified. 6th. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each indicating wheel to cause its rotation, a vertically movable shaft located below the indicating wheels, dogs loosely mounted upon the shaft opposed to the indicating wheels and adapted to engage the same when the shaft is elevated, downwardly directed arms for the movable shaft, a lifting bar connected to the downwardly directed arms, a cash drawer having rearwardly extending partitions, and rearwardly inclined recesses formed in the front end of the partitions in which is located the lifting bar when in its normal position, substantially as specified. 7th. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each indicating wheel to cause its rotation, a vertically movable shaft located below the indicating wheels, dogs loosely mounted upon the shaft opposed to the indicating wheels and adapted to engage the same when the shaft is elevated, downwardly directed arms for the movable shaft, a lifting bar connected to the downwardly directed arms, a cash drawer having rearwardly extending partitions, and rearwardly inclined recesses formed in the front end of the partitions in which is located the lifting bar when in its normal position, a stationary shaft in rear of the movable shaft, trip dogs loosely mounted on the stationary shaft, the rear ends of which are adapted to engage the cash drawer, and the front ends of which are adapted to be engaged by the counter balance connected to the indicating wheels, substantially as specified. 8th. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely mounted upon the shaft, indicating wheels loosely mounted upon the ratchet wheels provided with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each indicating wheel to cause its rotation, a vertically movable shaft located below the indicating wheels, dogs loosely mounted upon the shaft opposed to the indicating wheels and adapted to engage the same when the shaft is elevated, downwardly directed arms for the movable shaft, a lifting bar connected to the downwardly directed arms, a cash drawer having rearwardly extending partitions, and rearwardly inclined recesses formed in the front end of the partitions in which is located the lifting bar when in its normal position, a stationary shaft in rear of the movable shaft, trip dogs loosely mounted on the stationary shaft, the rear ends of which

are adapted to engage the cash drawer, and the front ends of which are adapted to be engaged by the counter balance connected to the indicating wheels, forwardly directed arms mounted on the stationary shaft the rear ends of which engage the back of the cash drawer and the front ends of which project below the indicating wheels, a lifting bar carried by the front end of the arms and a push rod to depress the lifting bar and raise the rear ends of the arms, substantially as specified. 9th. A cash register embracing in its construction a case, a shaft journaled in the case, ratchet wheels loosely provided, with spring actuated detent dogs to engage the teeth of the ratchet wheels, registering wheels loosely mounted upon a shaft meshing with the teeth of the ratchet wheels and a lever for each of the indicating wheels to cause its rotation, a vertically movable shaft located below the indicating wheels, dogs loosely mounted upon the shaft opposed to the indicating wheels and adapted to engage the same when the shaft is elevated, downwardly directed arms for the movable shaft, a lifting bar connected to the downwardly directed arms, a cash drawer having rearwardly extending partitions, and rearwardly inclined recesses formed in the front end of the partitions in which is located the lifting bar when in its normal position, a stationary shaft in rear of the movable shaft, trip dogs mounted on the stationary shaft, the rear ends of which are adapted to engage the cash drawer, and the front ends of which are adapted to be engaged by the counter balance connected to the indicating wheels, forwardly directed arms mounted on the stationary shaft the rear ends of which engage the back of the cash drawer and the front ends of which project below the indicating wheels, a lifting bar carried by the front end of the arms, a push rod to depress the lifting bar and raise the rear end of the arms, and a trip dog to engage the locking bar when released after the cash drawer is opened, substantially as specified.

**No. 69,604. Washing Machine. (Machine à laver.)**

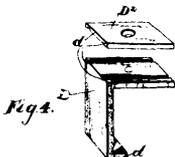
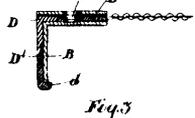
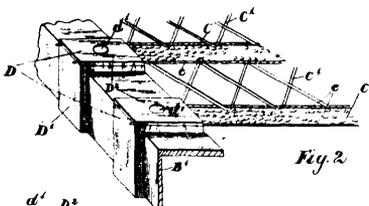
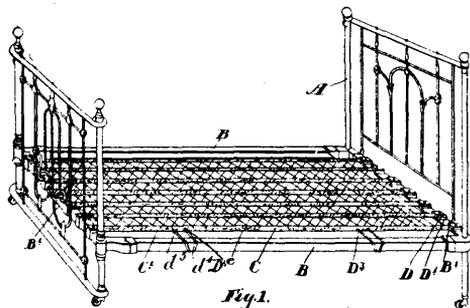


George B. Dowsell, Hamilton, Ontario, Canada, 5th December, 1900; 6 years. (Filed 22nd November, 1900.)

*Claim.*—1st. In a washing machine, brackets secured to the sides of the lower and central part of the machine, a pivotal stud with annular groove projecting from said brackets, side arms pivotally connected to said studs, and capable of operating thereon, a projecting pin with head on said arms, and above said pivotal connection, the upper end of said side arms fulcrumed to operating side levers of the machine, a slide lock on said arms, a slot in said lock to slide on said projecting pin, said pin head to retain said lock to the arms, a lifting lip on the upper end of the lock, a slot at the lower end of the lock to fit on the annular groove of said stud and between the shoulders formed by said groove and side flanges on the lock to guide and to retain the same in proper side position when operated upon to adjust the side arms to position and to detach the same, substantially as described and set forth. 2nd. In a washing machine, brackets rigidly secured to the sides of the machine, projecting pivotal studs on said brackets, an annular groove in said studs, side arms with lower aperture to fit on said studs, a rigid projecting pin with head on said arms and above said aperture, a slide lock on the lower part of said arms, an end slot in said lock to fit into said groove, a head on said stud formed by the groove to retain the lock in position, side guide flanges on the lock to engage the sides of the arms, a slot in said lock, immediately above said end slot, to allow

the lock to slide on said projecting pin of the arms, the head of said pin to retain the lock to the arms, upper projecting lifting lips on the locks, to lift the lock and release the arms from the pivotal brackets, and means for operating the side arms, substantially as described and set forth.

**No. 69,605. Wire Mattress.** (*Sommier de fil de fer.*)



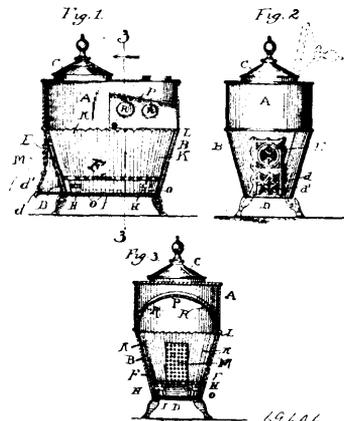
69605

William Henry Smith and Martin Love, both of Toronto, Ontario, Canada, 5th December, 1900; 6 years. (Filed 22nd November, 1900.)

*Claim.*—1st. A mattress comprising the inter-woven longitudinal coils forming strips and having edge wires inserted through the outside coils of the strips and means for connecting the strips together laterally and clamps in which the ends of the strips are secured, such clamps being designed to be passed over the end bars of the bedstead, as and for the purpose specified. 2nd. A mattress comprising the inter-woven longitudinal coils forming strips and having edge wires inserted through the outside coils of the strips and the inter-lacing wires connecting such outside wires and clamps in which the ends of the strips are secured, such clamps being designed to be passed over the end bars of the bedstead, as and for the purpose specified. 3rd. The combination with the inter-woven longitudinal coils forming strips and having edge wires inserted through the outside coils of the strips, of the clamps comprising the L-shaped bottom portion having the under extending rib designed to pass underneath the bottom edge of the end bar, and the top plate of the clamp designed to fit over the horizontal part of the L-shaped portion and the opposing longitudinal grooves made in the clamp designed to receive the side wires of the strips and means for clamping the two portions together upon the end of the coil strip, as and for the purpose specified. 4th. The combination with the inter-woven longitudinal coils forming strips and having edge wires inserted through the outside coils of the strips, of the clamps comprising the L-shaped bottom portion having the under extending rib designed to pass underneath the bottom edge of the end bar, and the top plate of the clamp designed to fit over the horizontal part of the L-shaped portion and the opposing longitudinal grooves made in the clamp designed to receive the side wires of the strips and a rivet passing through the horizontal portion of the L-shaped piece, the end of the coil strip and the top plate or portion, as and for the purpose specified. 5th. The combination with the coiled wire strips having bounding side wires extending through the outside of the coils of each strip and the clamps for fastening the ends of such strips to the sides of the bedstead and means for connecting the strips together laterally, of the side clamps having a turned in edge at the bottom extending underneath the side bar and a hooked upper portion to grasp the outer edge wire of the outside strips of the mattress, as and for the purpose specified. 6th. A mattress comprising the intermediate longitudinal coils forming strips and having edge wires inserted through the outside coils of the strips and a fastening device connected to the end bars and through which the edge wires extend in such a manner as to allow of longitudinal movement, as and for the purpose specified. 7th. The combination with the coiled wire strips having bounding side wires extending through the outside of

the coils of each strip and the clamps for fastening the ends of such strips to the sides of the bedstead and means for connecting the strips together laterally, of devices connecting the sides of the mattress to the side bars of the frame, as and for the purpose specified.

**No. 69,606. Heating Stove.** (*Poêle de chauffage.*)



69606

Lincoln Howard, St. Joseph, Missouri, U.S.A., 5th December, 1900; 6 years. (Filed 21st November, 1900.)

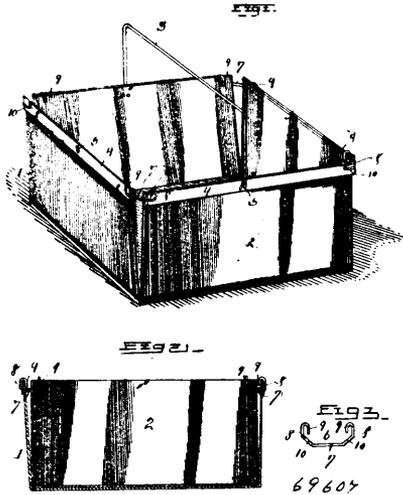
*Claim.*—1st. A heating stove comprising in combination an inverted frusto conical combustion chamber, a partition or lining within said combustion chamber and spaced therefrom to form a heating chamber, said partition having openings at its top adjacent to the wall of the combustion chamber and openings at its bottom adjacent to the floor of the combustion chamber, substantially as described. 2nd. A heating stove comprising in combination a combustion chamber, a heating drum supported thereon and having a flue connection at one end thereof, a perforated check damper spanning the portion of the drum adjacent to the flue connection and secured to the base of the drum, substantially as described. 3rd. A heating stove comprising in combination an inverted frusto conical combustion chamber, a corrugated floor set in the base thereof, said corrugations forming air spaces, between the floor and the casing beneath, substantially as described and for the purpose specified. 4th. A heating stove comprising in combination an inverted conical combustion chamber, a vertically corrugated partition having a flanged top and located within said combustion chamber and spaced therefrom to form a heating chamber, substantially as described and for the purpose set forth. 5th. In a heating stove, the combination with an inverted frusto conical combustion chamber, of a corrugated floor whose corrugations constitute air spaces between said floor and the bottom casing, and a vertically corrugated partition supported by said floor and within said combustion chamber and spaced therefrom to form a heating chamber, substantially as described. 6th. A heating stove comprising in combination an inverted conical casing, inclosing a combustion chamber, a corrugated floor, said corrugations forming air spaces between said floor and the base casing of the stove, a vertically corrugated partition within said chamber supported by said corrugated floor, said partition being provided with openings at its top adjacent to the wall of the combustion chamber and at its bottom adjacent to said corrugated floor, together with the necessary flue and draft vents, substantially as described. 7th. A heating stove comprising in combination an inverted conical combustion chamber, a vertically corrugated partition within said combustion chamber spaced therefrom to form a heating chamber and having inlets adjacent to the floor and provided with a flanged top the furrows of the corrugations therein contacting with the casing the receding ridges forming openings in the top of said heating chamber, the perforations in said partition and the damper set horizontally opposite said perforations, substantially as described. 8th. In a heating stove the combination of an inverted conical combustion chamber a vertically corrugated partition having a flanged top and located within said combustion chamber and spaced therefrom to form a heating chamber, the damper in the front of said stove and the perforations in said partition opposite thereto, substantially as described.

**No. 69,607. Fruit Basket.** (*Panier à fruit.*)

George Miller, Holstein, Michigan, U.S.A., 5th December, 1900; 6 years. (Filed 21st November, 1900.)

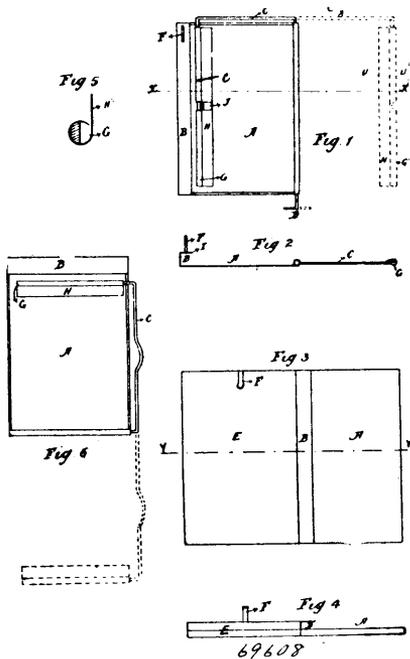
*Claim.*—1st. In a fruit basket of the character set forth, the combination of straight lengths of material adapted to have their extremities turned up to form surrounding sides, the opposite end edges of the said lengths being doubled over equally from one side to the other and in an outward direction staples inserted through the central portion of the said doubled over edges and arranged at an angle thereto, and a wire bail having its extremities removably fitted on the doubled over edges of two of the sides at points imme-

diately below the points of the staples, the angular position of the staples preventing away of the doubled over portion of the two



sides to which the bail extremities are connected. 2nd. As an improved article of manufacture, a clip for a fruit basket or analogous device, having a retaining member merging into opposite inwardly extending deflections continuous with vertical arms provided with instanding terminal hooks which have a downward direction. 3rd. In a fruit basket of the character set forth, the combination of the straight lengths of material adapted to have their extremities turned up to form surrounding sides with intervening open corner spaces, and clips removable fitted over the upper edge portion of the said sides across the corners and each consisting of a retaining member merging into opposite inwardly extending deflections continuous with vertical arms provided with instanding terminal hooks which have a downward direction to embrace the upward edges of the sides, the retaining member extending across the corner below the said upper edges.

No. 69,608. **Cheque Book.** (*Livre de chèques.*)

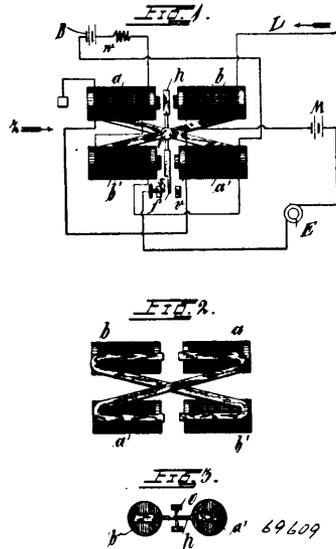


Cyrille Lévêque, Toronto, Ontario, Canada, 6th December, 1900; 6 years. (Filed 24th March, 1900.)

*Résumé.*—1er. L'enveloppe G fixe et formant partie du cadre C combinée avec le tube demi-cylindrique mobile a son intérieur lequel est pourvu d'un appendice J, le tout tel que montré sur les dessins et pour les fins sus-mentionnées. 2me. La combinaison de la planchette A munie de A la cannelure B avec la double plan

chette E munie du crochet F, le tout tel que montré sur les dessins et pour le but spécifié.

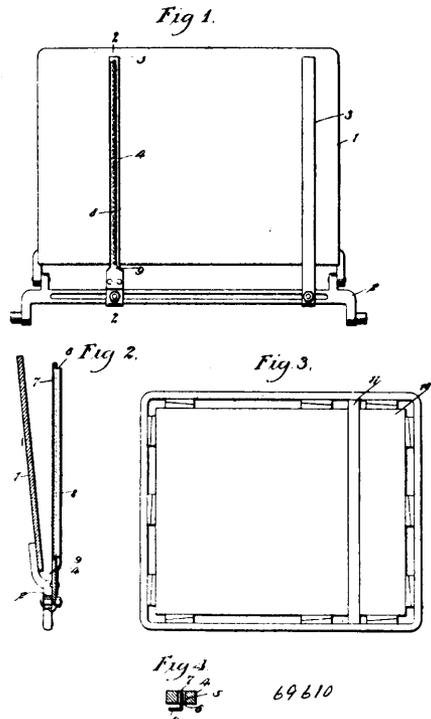
No. 69,609. **Electric Relay.** (*Relais électrique.*)



Dr. Luigi Cerebotani, Munich, Bavaria, Germany, 6th December, 1900; 6 years. (Filed 25th June, 1900.)

*Claim.*—A polarised relay consisting of two magnet pairs  $a a'$ ,  $b b'$ , the cores of which cross each other, having a common armature  $h$  oscillating on a fulcrum between suitable contact pieces, said magnet pairs being contained in the line circuit and one pair also in a local battery circuit, in the manner substantially as described.

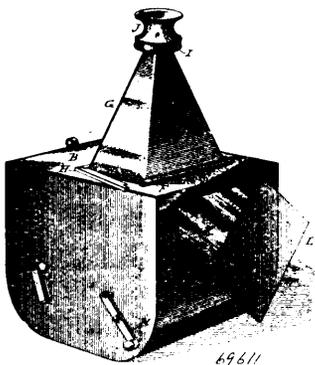
No. 69,610. **Perforator.** (*Perforateur.*)



James F. McNamara, Far Rockaway, Queens, New York, U.S.A., 6th December, 1900; 6 years. (Filed 6th April, 1900.)

*Claim.*—In a printing press, a longitudinally slotted tympan, and a perforating plate movable in said slot and having an integral spring extension at one end and secured to the tympan, substantially as specified.

**No. 69,611. Apparatus for developing Photographic Films.** (*Appareil pour développer les pellicules photographiques.*)



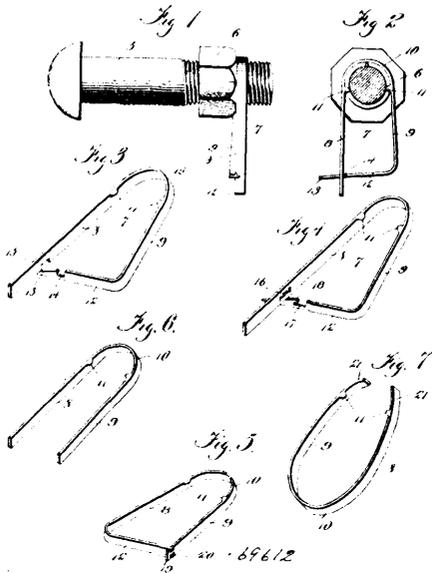
Arthur McCurdy, Washington, District of Columbia, U.S.A., 6th December, 1900; 6 years. (Filed 24th October, 1899.)

**Claim.**—1st. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, and a flexible open apron or support mounted wholly within said receptacle and adapted to receive and hold a flexible photographic film. 2nd. In a portable apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, and a flexible apron or support mounted wholly therein and adapted to receive and support a flexible photographic film. 3rd. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted wholly therein and adapted to receive and hold a flexible photographic film, and means for permitting the necessary re-agents used in the process of development to circulate in and about the apron and around the film supported thereon. 4th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, an apron or support mounted therein means for winding said apron or support about itself, and means for holding a flexible photographic film upon said support with its sensitized face out of contact with itself and said support. 5th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means mounted within said box for winding the film about itself, and means for reversing the direction of movement of the film and winding it about itself in the opposite direction. 6th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted therein, means for winding said apron about itself, means for holding a film thereon with its sensitized face out of contact with itself and the apron, and means for winding said apron and the film in the reverse direction, substantially as described. 7th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted therein, means for winding said apron about itself, and means for holding a cartridge or film down in close contact with the apron, substantially as and for the purpose described. 8th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted therein, means winding said apron about itself, mean for carrying a cartridge and holding it down in close contact with the apron as the apron is wound up with the film thereon, and a rotatable support for the cartridge spool, substantially as described. 9th. In an apparatus for developing photographic films, the combination of a suitable box or casing closed against actinic rays, a flexible apron mounted therein means for winding said apron about itself in both directions a spring actuated follower serving to hold a cartridge down in close contact with the apron, and a rotatable support for the cartridge spool. 10th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a shaft journaled therein, a flexible apron, means for detachably connecting one end of said apron to said shaft, and rotary devices also mounted within said box and connected to the other end of the apron, substantially as and for the purpose described. 11th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a shaft rotatably mounted therein, a flexible apron also mounted therein, a flexible apron also mounted within said receptacle and detachably connected at one end to said shaft, means for locking said shaft and apron together, rotary devices also mounted in the receptacle and connected to the opposite end of the apron, and a spool support carried by said rotary devices. 12th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a shaft journaled therein, a flexible apron mounted within said box and detachably connected to said shaft, means for

locking the shaft and apron together, rotary devices also mounted within the box and connected to the opposite end of the apron, a spool support carried by said rotary devices, and a spring actuated device also mounted within the casing and adapted to hold the spool down upon the apron as said apron is wound around the shaft, substantially as described. 13th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a slotted shaft rotatably mounted therein, discs or heads mounted upon said shaft, means for locking one of said discs to the shaft, a flexible apron connected to said discs, rotary devices also mounted within said box and connected to the opposite end of said flexible apron, spool supports carried by said rotary devices, and a spring actuated follower mounted within the box and adapted to hold the spool and film in close contact with the flexible apron as it is wound about the shaft. 14th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a slotted shaft rotatably mounted therein, discs mounted upon said shaft, means for locking one of said discs to the shaft, a flexible apron connected to said discs, discs W, Y, rotatably mounted in the sides of said box or receptacle, connections between said discs and one end of the apron, a cross bar connecting said discs, and a spring clasp mounted upon said cross bar. 15th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a slotted shaft rotatably mounted therein, discs carried upon said shaft, means for locking one of said discs to said shaft, a flexible apron connected at one end to said discs, discs W and Y rotatably mounted in the side of said box in rear of the shaft, connections between said discs and one end of the apron, spring retaining devices carried by said discs, and a spring actuated follower for holding a cartridge or film in close contact with the apron as it is wound about the discs carried by the shaft. 16th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle provided with a removable cover, a tube G adapted to be mounted over an opening therein, an eye piece carried at the upper end of the tube and provided with a suitable actinic proof material, and an actinic proof window formed in the forward face of the box. 17th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, means mounted within said box for holding a film, a draw off provided at the lower side of the box, a vent tube extending from the interior of the box to the outer face thereof, and inspection openings formed in the walls of the box, substantially as described. 18th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted therein, means for winding said apron about itself, and means for supporting two films side by side upon said apron and holding them in such position, substantially as described. 19th. In an apparatus for developing photographic films, the combination of a suitable box or receptacle closed against actinic rays, a flexible apron mounted therein, means mounted within the box for removing and winding up the light proof covering from a photographic film, and means for winding up the apron and with drawing the film from its spool onto said apron, substantially as described. 20th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means contained within said box for holding a flexible photographic film in an extended position therein, and means for subjecting the entire film at one end the same time to the necessary re-agents for its development. 21st. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means contained within said box for holding a flexible film in separated layers, and means for subjecting the entire film at one and the same time to the necessary reagents for its development. 22nd. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means contained within said box for holding a flexible film in an extended position in a series of separated layers, and means for subjecting the entire film at one and the same time to the necessary re-agents for its development. 23rd. In a portable apparatus for developing flexible photographic films, the combination of a box or receptacle closed against actinic rays, means for unrolling wholly within said closed receptacle a flexible photographic film or cartridge placed therein, and means for submitting the film to the necessary reagents for its development. 24th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means for withdrawing wholly within said receptacle the protecting covering from a flexible photographic film, or cartridge placed within the box and unwinding the film, and means for submitting the film to the necessary reagents for its development. 25th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, an apron or support provided with raised edges mounted therein, means actuated from without the box for winding said apron or support about itself within said box, and means also actuated from without the box for winding the apron support in a reserve direction, substantially as described. 26th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, and a flexible apron or support mounted therein and provided with raised edges, adapted and designed to receive and

support a flexible photographic film. 27th. In a portable developing apparatus for flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means contained therein for supporting a flexible photographic film, and means for admitting the necessary re-agents for the development of the film and permitting the escape of air from the box, substantially as described, whereby the film and the re-agents employed are practically out of contact with the atmosphere. 28th. In a portable developing apparatus for flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, means for supporting a flexible photographic film, and means for admitting the necessary re-agents for the development of the film and permitting the escape of air from said box or receptacle, and means for supporting and moving the flexible film through the re-agents within said closed receptacle. 30th. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against actinic rays, and having an inspection opening formed therein, and means substantially such as described contained within said box for supporting and holding a flexible photographic film. 31st. In a portable apparatus for developing flexible photographic films, the combination of a suitable box or receptacle closed against admission of actinic rays, and means actuated from without the box for exposing a flexible photographic film placed therein to the action of re-agents for its development, substantially as described.

**No. 69,612. Nut Lock. (Arrêt-écrou.)**

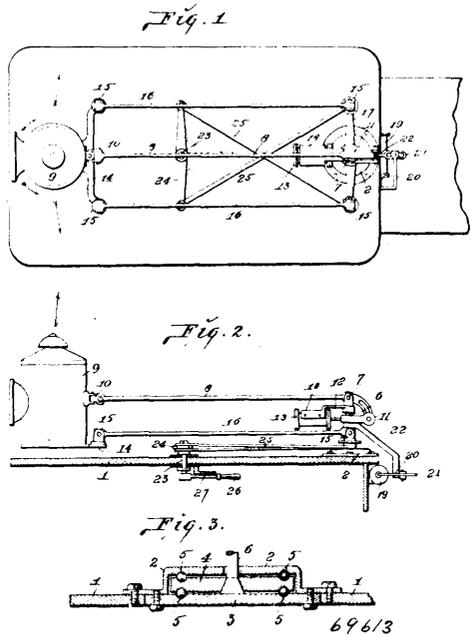


Robert Pinkerton McNutt, Pugwash, Nova Scotia, Canada, 6th December, 1900; 6 years. (Filed 16th November, 1900.)

*Claim.*—1st. A nut lock comprising a spring metal retainer having the members united by a bight or loop and provided with inwardly extending spurs, whereby the bight may snugly hug a bolt and the spurs are adapted to have interlocking engagement with a bolt thread, as set forth. 2nd. A nut lock comprising a retainer bent from a single length of metal to produce the yieldable members which are united by a bight or loop, said members being provided with inwardly extending spurs which are arranged practically in the plane of an edge of the members and are adapted to have interlocking engagement with a bolt thread, as set forth. 3rd. A nut lock comprising a retainer having the members united by a bight and provided with inwardly extending spurs, one member having an arm which extends toward the other member and is constructed to have interlocking engagement therewith, as set forth. 4th. A nut lock comprising a retainer bent from a single length of metal to form the yieldable members which are united at one end by a bight and provided with the inwardly extending spurs, one of said retainer members having an inwardly extending notched arm and the other retainer member constructed for interlocking engagement with said arm, as set forth. 5th. The combination with a bolt, and a nut, of an elastic retainer comprising the members united by a curved bight which closely hugs the bolt at a point adjacent to the nut, said members provided with spurs which are interlocked with a bolt thread and the members being furthermore locked one with the other, for the purpose described, substantially as set forth.

**No. 69,613. Night Signal for Railway Trains.**

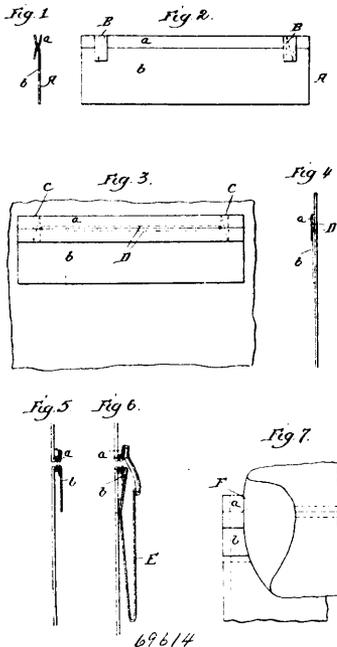
(Signal de nuits pour trains de chemin de fer.)



Edwin B. Pope, Shrewsbury Park, Missouri, U.S.A., 6th December, 1900; 6 years. (Filed 8th October, 1900.)

*Claim.*—1st. A railway signal comprising a signal lamp, and means co-operatively connected thereto for bodily moving or projecting the same laterally to a point adjacent to the side of the car, whereby the light rays may be visible from the rear or front or either side of the train, substantially as set forth. 2nd. A railway signal, comprising a lamp from which rays of light are adapted to issue, and means attached thereto for raising and lowering the same and bodily moving the lamp to either side of the train, whereby the light is visible from a point directly in rear on either side of the train, substantially as described. 3rd. A railway signal, comprising a lamp, means for raising, lowering and bodily moving the same to either side of the train, whereby the light issuing from the lamp is visible from the point directly in the rear or on either side of the train, and suitable mechanism for operating said lamp independently of the first-named movements, as and for the purpose described. 4th. A railway signal, comprising a movable post, a lever hinged to the upper end of the same, a universal connection for attaching one end of said lever to said lamp, means co-operating with the short end of the said lever, whereby the long end thereof is elevated, parallel connecting bars having one of their ends attached to said lamp below the said lever by universal connections, a movable bar located about said post, to the ends of which the opposite ends of the said parallel bars are attached by universal connections, and means for turning said post, as and for the purpose described. 5th. A railway signal comprising a lamp, parallel bars, one end of each of which is secured to the lamp, a pivoted transverse bar to which the opposite ends of the parallel bars are secured, whereby the lamp is bodily moved to either side of the train, a lever, one end of which is attached to said lamp, and means for operating said lever, whereby the lamp is raised and lowered, substantially as described. 6th. A railway signal, comprising a cap secured to the roof of the locomotive, a plate secured to the same, a disc located between said cap and plate and mounted upon balls, a post secured to said plate and freely passing through the cap, a fork forming the upper end of said post, a lever hinged to said fork, the long end of which is attached to a suitable lamp by universal connections, the short arm of said lever extending downwardly, means attached to said short arm for elevating the opposite end of the lever, a transverse bar movable upon said post, parallel bars, one end of which is attached to the end of the said bars, and having their opposite ends movably attached to the lamp on either side of the lever, an arm, one end of which is secured to said post, means co-operating with the lower end of said arm for turning said post, a shaft journaled in the roof of the cab of the locomotive, a lever secured to the upper end of the same, a hand lever fixed to the lower end of said shaft, suitable mechanism for holding the said shaft in any position, cross bars, one end of each of which is movably attached to the ends of the last-named lever, and having their opposite ends movably attached to the transverse bars to which the parallel bars are attached, as and for the purpose described.

**No. 69,614. Pocket for Garments. (Poche pour vêtements.)**



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Reinhold Bartell, Philadelphia, Pennsylvania, U.S.A., 6th December, 1900; 6 years. (Filed 26th October, 1900.)

*Claim.*—1st. The method of forming a reinforced opening for a pocket, consisting in securing a reinforce form in two sections upon the outer face of the garment by lines of stitching F and G which are deflected at their ends toward each other, severing the sections of the reinforce throughout a portion of their length, and at the same time cutting the pocket opening in the garment, turning the reinforce outside in, drawing the goods lengthwise of the pocket opening so as to bring the edges of the inturned portion of the opening together, as specified. 2nd. The method of forming bar takes in pocket openings for strengthening the same without adding material, consisting in folding the goods, stitching the same along the fold, refolding the goods and again stitching along the edge of the second fold, and finally pressing the goods into shape, as specified. 3rd. In combination with a garment and a pocket opening formed therein, a pocket strip, a facing secured thereto, its edges being inclosed within folds in the pocket strip, a pleat formed in the pocket strip, and an elastic band secured to said plait and the garment in such manner as to relieve the lower edge of the pocket opening from undue strain, as specified. 4th. In a pocket for garments, the herein described reinforcing strip which consists of a folded section of fabric abutted against another folder section of fabric, the fold line of each section facing the fold line of the opposing section, and secured together on such fold line by through and through stitches, as set forth. 5h. The herein described pocket for garments, the same comprising pocket having an opening with its edges turned back on the inside, reinforce strips sewed to the said edges above and below the pocket opening and means whereby the edges of the pocket opening are normally maintained in contact, substantially as described.

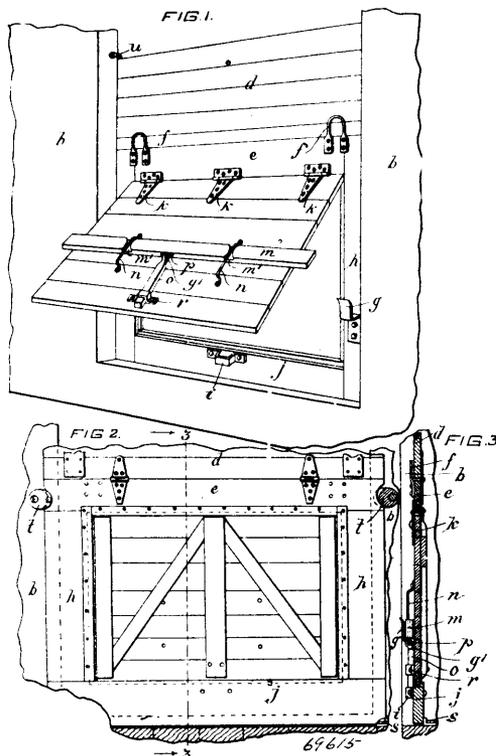
**No. 69,615. Grain Door for Cars.**

(Porte à grain pour chars.)

John Robson Taylor, Coteau Landing, Quebec, Canada, 6th December, 1900; 6 years. (Filed 5th November, 1900.)

*Claim.*—1st. A grain door comprising a main portion and a flap and a vertically movable horizontal cross bar carried by said flap and projecting beyond the sides thereof, and means carried by the main portion of the door for engaging said ends of the cross bar when in its lowermost position, substantially as described and for the purpose set forth. 2nd. A grain door comprising a main portion in the form of an open frame, a flap for closing said open frame, a vertically movable horizontal cross bar, a pair of elongated staples for retaining said cross bar movably upon the flap, a pair of cleats mounted upon said main portion one on each side of said flap, substantially as described, and for the purpose set forth. 3rd. A grain door comprising a main portion in the form of an open frame, a flap for closing said open frame, a vertically movable horizontal cross bar, a pair of elongated staples for retaining said cross bar movably upon the flap, a pair of cleats mounted upon said main portion one on each side of said flap, a vertical bolt connected to and movable with said cross bar, and a strap upon the main door portion

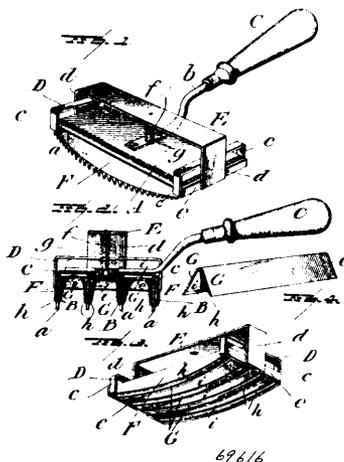
to receive the lower end of said bolt, substantially as described, and for the purpose set forth. 4th. The combination with a grain door



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for cars of a pair of eccentrics carried by the car body one on each side of the grain door, substantially as described, and for the purpose set forth. 5th. The combination with a grain door for cars of a pair of eccentrics carried by the car body one on each side of the grain door, and a pair of corner plates, substantially as described and for the purpose set forth.

**No. 69,616. Curry Comb. (Etrille.)**



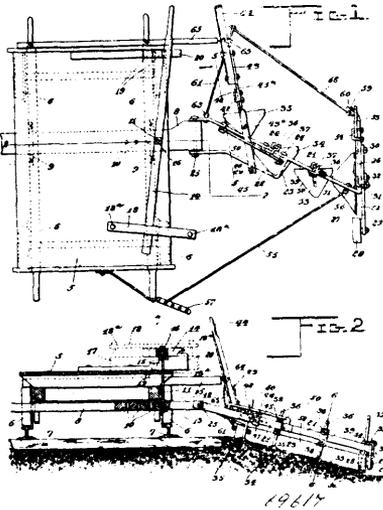
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George Damon Beldin, Marengo, Illinois, U.S.A., 6th December, 1900; 6 years. (Filed 15th November, 1900.)

*Claim.*—1st. A curry comb provided with a plurality of knife blades having sharp cutting edges to cut and liberate the tangled hair from between the toothed plates, said plates being relatively movable thereto, substantially as and for the purpose set forth. 2nd. A curry comb having a plurality of toothed plates and a plurality of parallel knife blades having sharp cutting edges to cut and release the tangled hair from between the toothed plates, said plates being movable with relation to the blades, substantially as and for the purpose specified. 3rd. A curry comb provided with a suitable frame, a plurality of knife blades connected thereto, suitable toothed

plates movable relative to the knife blades and a suitable spring located between the frame and back of the comb, substantially as and for the purpose described.

**No. 69,617. Weed Cutting and Ballast Dressing Apparatus.** (*Secroir et appareil à aligner le ballast.*)



Victor Berford, Tara, Ontario, Canada, 6th December, 1900; 6 years. (Filed 15th November, 1900.)

*Claim.*—1st. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame foldably connected thereto, and one or more operating devices mounted on said carrying frame, as and for the purposes set forth. 2nd. In an apparatus of the class described, the combination with a wheeled frame, of a carrier mounted thereon for vertical adjustment, means for vertically adjusting said carrier to pre-determined positions, a carrying frame attached to the carrier and extending outwardly from the wheeled frame, and one or more operating devices mounted on the carrier frame, substantially as described. 3rd. In an apparatus of the class described, the combination with a wheeled frame, of a carrier connected to the wheeled frame for adjustment in a horizontal plane thereon, a carrying frame connected with said carrier to be extended therewith beyond the wheeled frame, as desired, and operating devices mounted on the carrying frame, substantially as and for the purposes described. 4th. In an apparatus of the class described, the combination with a wheeled frame, of a carrier, a carrying frame arranged at an angle to, and connected with said carrier, and a gang of weed cutters attached to the carrying frame in staggered order, substantially as described. 5th. In an apparatus of the class described, the combination with a wheeled frame, and a carrier mounted thereon, of an inclined carrier frame having hinged connection with said carrier, a ground roller on said hinged frame, and one or more operating devices mounted on the carrying frame, substantially as described. 6th. In an apparatus of the class described, the combination with a wheeled frame, of a carrier connected to said frame for adjustment in either a vertical or a horizontal plane, a carrying frame hinged to said carrier for adjustment therewith and equipped with a ground wheel, and one or more operating devices mounted on or connected with said carrying frame substantially as described. 7th. In an apparatus of the class described, the combination with the wheeled frame, and a carrier mounted thereon, of a carrying frame connected with and disposed at an angle to said carrier, and a gang of weeding hoes attached to the carrying frame in staggered order, each weeding hoe having a shank which is clamped in place for adjustment relatively to the carrying frame, substantially as described. 8th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected thereto, a gang of weeding hoes, certain of which are mounted on said carrying frame, and means substantially as described, whereby the innermost hoe of the gang may be shifted at will relatively to the wheeled frame, as and for the purposes set forth. 9th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected therewith, an adjustable arm connected to the carrying frame and carrying a weeding hoe, means for shifting said arm and the hoe thereon at will, and other weeding hoes mounted on the carrying frame and occupying a staggered relation to one another and to the shiftable weeding hoe described, as and for the purposes described. 10th. In an apparatus of the class described, the combination with a wheeled frame, of a carrier mounted thereon, means whereby the carrier may be adjusted in vertical or horizontal planes, a carrying frame having a hinged connection with the carrier, and a gang of weeding blades disposed in staggered order on the carrying frame and arranged for one blade to overlay the path of a preceding blade, each blade being carried by a shank which is

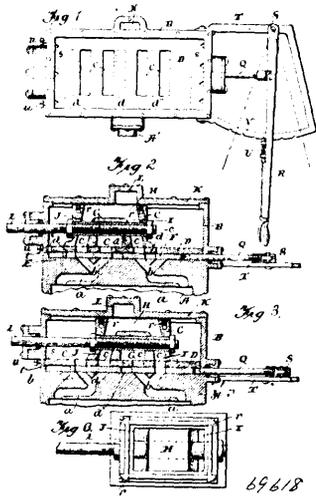
adjustably mounted on the frame, or a part thereof, substantially as set forth. 11th. In an apparatus of the class described, the combination with a wheeled frame, and a carrying frame, of an adjustable arm pivoted on said carrying frame and having a lever connected thereto, and a gang of weeding hoes one of which is clamped on the pivoted arm, and the other hoe or hoes clamped to the carrying frame, substantially as set forth. 12th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame provided with a hinge, bolt or plate, an arm pivoted to said bolt or plate and extending rearwardly from the frame, a guide bar attached to the frame and embracing said arm, a lever fastened to the arm, and a gang of hoes, certain of which are attached to the frame and with the innermost hoe attached to the pivoted arm, substantially as described. 13th. In an apparatus of the class described, the combination with a wheeled frame, and a carrier thereon, of a frame connected with the carrier and extending outwardly therefrom, a bar connected adjustably to the outer end of said frame and supporting a ground wheel, a stay rod attached to said outwardly extending frame and to the wheeled frame, and one or more operating devices mounted on said outwardly extending frame, as and for the purposes described. 14th. In an apparatus of the class described, the combination with a wheeled frame, and a carrying frame extending outwardly therefrom, of a sod-linecutter mounted on the outer portion of said carrying frame, as and for the purposes described. 15th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame extending outwardly therefrom, a sod linecutter angular in cross section and provided with an upstanding shank, and means for clamping said shank adjustably to a part of the carrying frame, as and for the purposes described. 16th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected therewith and provided with a rearwardly extending arm, an angular sod line cutter arranged for its vertical member to lie substantially parallel with said frame arm, and means whereby the sod line cutter is mounted on said arm of the frame, as set forth. 17th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected therewith, and an inclined dresser-bar or rake connected with said carrying frame, as set forth. 18th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected therewith and provided with a ground wheel, a dresser bar or rake arranged at one side of the carrying frame and disposed in a rearwardly and inwardly inclined position with relation to the wheeled frame, and means for connecting the dresser bar or rake to the carrying frame, substantially as described. 19th. In an apparatus of the class described, the combination with a wheeled frame, of a carrying frame connected therewith, a dresser bar or rake arranged at an angle to the wheeled frame and having its outer end connected to the carrying frame, and a stay rod attached to the inner portion of the dresser bar or rake, substantially as described. 20th. In an apparatus of the class described, the combination with a wheeled frame, of a carrier beam, keepers for maintaining said carrier beam in position beneath the wheeled frame, a lever mounted on the wheeled frame and having a rod connected with the carrier beam, means for supporting the lever at predetermined positions and adjusting the carrier beam vertically, an outwardly extending frame connected with the carrier beam, and one or more operating devices mounted on said last named frame, substantially as described. 21th. In an apparatus of the class described, the combination with a wheeled frame, of a lever connected thereto, a carrier beam having a series of perforations, a rod connected to the lever and adjustably attached to the carrier beam, an outwardly extending frame connected to the carrier beam, and one or more operating devices on said outwardly extending frame, substantially as described.

**No. 69,618. Reversing Valve.** (*Souape de renversement.*)

Daniel J. Hoisington, John W. Kessinger, and Alfred J. Cress, all of Crescent, Oklahoma, U.S.A., and Daniel S. Perkins, and Charles P. Wilkie, both of Bowman, Oklahoma, aforesaid, 6th December, 1900; 6 years. (Filed 11th October, 1900.)

*Claim.*—1st. A reversing valve comprising a steam chest having a stationary plate therein provided with exhaust and inlet ports, a reversing plate situated therebelow and having passageways adapted to register with the said passageways of the stationary plate, a power cylinder having ports in communication with the said reversing plate passageways, a valve situated within the steam chest and having its bottom provided with inlet and exhaust ports, and the steam chest having inlet and exhaust passageways in communication respectively and independently with the said exhaust and inlet passageways of the said valve, substantially as described. 2nd. A reversing valve comprising a steam chest having a stationary plate therein provided with inlet and exhaust ports, a power cylinder situated adjacent thereto and having ports in communication with opposite ends thereof, a reversing plate situated between the stationary plate and the said power cylinder ports and having passageways adapted to register with the said ports and with the said passageways in the stationary plate, a valve situated in the steam chest and movable upon the said stationary plate, the said valve having a centrally transversely arranged inlet port in communication with the interior of the steam chest, and with end exhaust passageways, the said steam chest having a laterally extending exhaust passageway in communication with the said exhaust

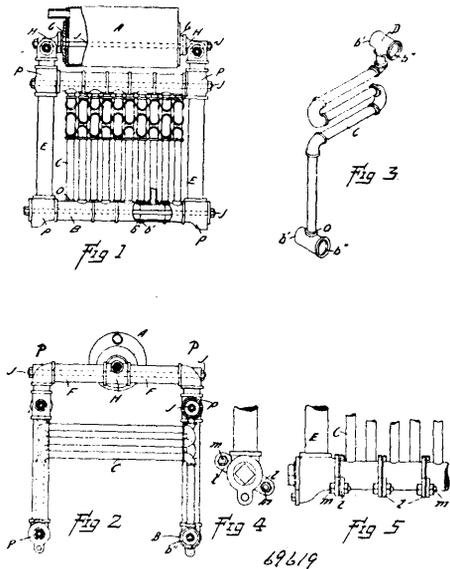
ports of the valve and separate from the communication of the inlet port of the said valve, substantially as described. 3rd. A reversing



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valve comprising a stem chest having a stationary plate therein provided with inlet and exhaust passageways, a power cylinder adjacent thereto having ports in communication respectively with opposite ends of the said cylinder, a reversing plate situated and movable between the said stationary plate and the power cylinder ports, the reversing plate having passageways adapted to register with the said ports and with the passageways in the stationary plate, a valve within the steam chest having its sides out of contact with the sides of the steam chest, the said valve having a transverse inlet port with open ends in communication with the space between the sides of the valve and the sides of the said chest, the top of the steam chest having a laterally projecting exhaust port, and the said valve having at opposite ends exhaust ports having their lower ends adapted to register with the openings of the stationary plate and their upper ends in communication with the exhaust ports of the top of the steam chest, substantially as described. 4th. A reversing valve comprising a steam chest having a stationary plate therein provided with inlet and exhaust ports, a power cylinder having ports in communication with opposite ends thereof, a reversing valve movable between the stationary plate and the said power cylinder ports and having passageways adapted to control the said ports of the power cylinder and the passageways in the stationary plate, a valve within the said steam chest, the valve having a centrally arranged inlet passageways having open ends and an open bottom, the open bottom adapted to register with the said passageways of the stationary plate, the said valve having also end exhaust ports with open lower ends and a horizontal recess or chamber in its upper side with which the upper ends of the exhaust ports communicate, the top of the said chest having a laterally extending exhaust passageway in communication with the recess in the said valve, the said laterally extending exhaust port of the top of the steam chest having an outlet opening at one side of the steam chest, substantially as described. 5th. A steam engine valve comprising a steam chest, the bottom of the steam chest having inlet and exhaust ports in communication with opposite ends of the power cylinder, a valve within the steam chest having exhaust passageways with upper and lower ends, the top of the steam chest having a laterally extending exhaust passageway with its outer end projecting beyond the side of the steam chest, the side of the steam chest having a downwardly extending passageway in communication with the projecting end of the said laterally projecting passageway of the top of the steam chest, substantially as described. 6th. A valve for reversing mechanisms having a recess in its top, a transverse inlet port below the said recessed top, the said transverse port having open ends and an open bottom, and vertically arranged exhaust ports situated at opposite sides of the said transverse inlet port, the ends of the exhaust ports being open and communicating respectively with the recessed top and the working cylinder ports, substantially as described. 7th. A reversing valve comprising a steam chest, a stationary plate situated therein and having inlet and exhaust ports, a working cylinder having ports communicating with its opposite ends, a shifting plate situated between the stationary plate and the said working cylinder ports, the reversing plate having passageways, a valve situated above and resting upon the stationary plate, the stationary plate having steam passageways to permit the steam to pass therebelow independent of the said inlet and exhaust ports thereof, substantially as described.

No. 69,619. Pipe Boiler. (Chaudière à tubes.)



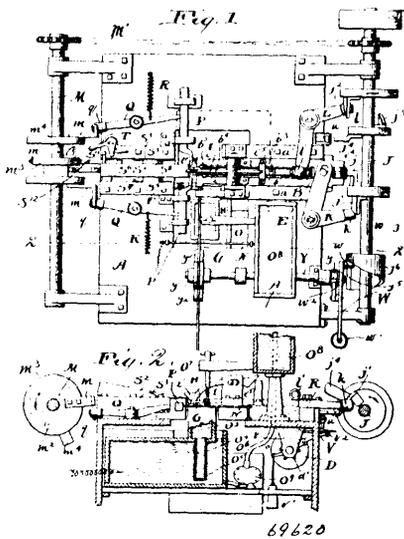
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Charles D. Casad and John Stauber, both of Seattle, Washington, U.S.A., 6th December, 1900; 6 years. (Filed 6th November, 1900.)

Claim.—1st. In a pipe boiler, the combination with supporting down flow pipes, of water drums and a steam separating drums connected to and supported by the said down flow pipes, and each comprising a series of pipe sections having interfitting ends, means for securing the pipe sections of each drum together, and coil pipes connecting such pipe sections in pairs, so that each pair of pipe sections with the connecting coil pipe is independently removable. 2nd. In a pipe boiler, the combination with supporting down flow pipes, of water drums and steam separating drums, connected to and supported by the said down flow tubes, and each comprising a series of pipe sections having interfitting ends, stay bolts for securing the pipe sections of each drum together, coil pipes connected to the respective pipe sections, a steam drum, pipes connected to the steam separating drums and to the drum by detachably seated connections, and stay bolts for holding such detachably seated connections together, so as to allow separation of the parts.

No. 69,620. Chain Making Machine.

(Machine à faire les chaînes.)



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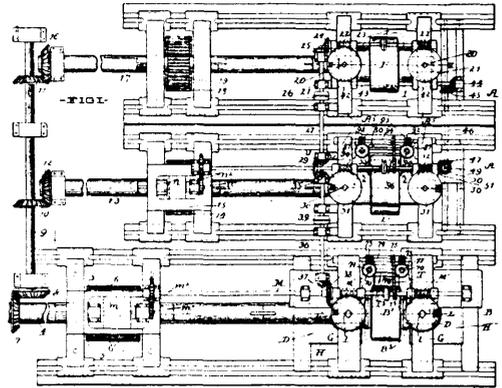
Daniel Roche, Albert Scheuer, and John A. Saunders, all of Cleveland, Ohio, U.S.A., 6th December, 1900; 6 years. (Filed 15th December, 1899.)

Claim.—1st. In a chain making machine, the combination with mechanism for bending stock into a loop, and mechanism for welding the ends of said loop, of mechanism for varying the distance

between the loop and the welding tools, and means for heating the ends of the loop, while it is comparatively distant from the welding tools between the bending and welding operations, substantially as described. 2nd. In a chain making machine, mechanism for passing a bar of metal through a link, mechanism for bending it into a loop in this position, mechanism for bending the ends of the loop together mechanism for moving the loop away from the welding mechanism, means for then heating the ends of the loop to a welding heat, and mechanism for then bringing the heated loop to the welding mechanism, in combination with such welding mechanism, substantially as described. 3rd. In a chain making machine, the combination of mechanism for holding a link, means for heating a bar, mechanism for moving the heated bar into the link, mechanism for bending said bar into a loop, mechanism for completing the loop into a new link, and mechanism which comes into action just preceding the completing mechanism, and is adapted to separate the loop and such completing mechanism and again return them, and means for heating such newly formed loop while it is thus separated from the completing mechanism, substantially as described. 4th. In a chain making machine, in combination, means for supporting a chain, means for moving material for a new link into the last completed link, mechanism for bending such material into a loop, mechanism for bending the ends of the loop upon each other, mechanism for squeezing them together, and means for heating the ends of the loop during the operation and just preceding their being squeezed together, substantially as described. 5th. The combination with mechanism for forming a loop of metal in the end of a chain, mechanism for welding together the ends of said loop, a liquid electric forge, and mechanism for dipping the ends of the loop into the liquid between the forming and welding operations, substantially as described. 6th. The combination with a liquid electric forge, of a trough adapted to carry a chain with a partly formed link, means for giving said trough a movement to and from said forge, whereby said partly formed link is heated, and means for welding the partly formed link, substantially as described. 7th. In a chain making machine, in combination, a trough adapted to hold a portion of the chain, means for establishing a loop for a new link in the end link of the trough mechanism for moving the trough out of its normal position, an electric forge into which the loop passes in such movement whereby the loop becomes heated, and mechanism for welding the loop, substantially as described. 8th. In a chain making machine, in combination, a pivoted trough, a liquid electric forge beneath the same, said trough being adapted to carry a chain and a new link being formed and swing it downward to said forge whereby the new link becomes heated, substantially as described. 9th. In a chain making machine, in combination, a trough adapted to carry a portion of the chain, a bevelled block *b*<sup>5</sup> near one end thereof, and a mechanism for drawing the chain along the trough whereby the bevelled block turns the link at that and about its axis, substantially as described. 10th. In a chain making machine, in combination, a trough *B* adapted to carry a portion of a chain, a bevelled block *b*<sup>5</sup> near one end thereof, and spring arm *b*<sup>4</sup> adapted to bear on one side of a link being made whereby as the link is withdrawn it is turned about its axis approximately 90 degrees, substantially as described. 11th. In a chain making machine, in combination, a pivoted trough adapted to carry a chain, a lever adapted to bear on said trough and hold it in normal position, mechanism for actuating said lever to move it away from the trough whereby the trough moves into another position substantially as described. 12th. In a chain making machine, the combination of a pivoted trough adapted to carry a portion of the chain, mechanism for feeding the material for a new link into a link in said trough, a pair of formers, means for causing said formers to bend the new material into a loop, and heating means so located that the pivoted trough may swing the link being formed thereto, substantially as described. 13th. The combination, in a machine for making chain, of a pivoted trough, adapted to carry a portion of the chain, a liquid electric forge, means for causing said trough to move to and from said forge, means for moving material for a new link into a link in said trough, an inside former, a pair of outside formers adapted to bend the new material against the inside former into a loop, and means for welding together the ends of the loop substantially as described. 14th. In a chain making machine, the combination of a trough adapted to carry a portion of the chain, mechanism for feeding the material for a new link into a link in said trough, a bifurcated slide lying on opposite sides of the trough, rigid formers carried on said slide, and means for forcing said slide forward whereby the formers bend the new material into a loop, substantially as described. 15th. The combination, with means for holding a link being formed in the end of a chain, of a liquid electric forge, mechanism for moving said liquid into said forge, and a pair of pivoted jaws, and mechanism for advancing the same until they stand on opposite sides of the new link, and for then bringing them together to weld said link, substantially as described. 16th. In a chain making machine, the combination of means for holding the chain already made, a pair of formers adapted to bend a rod extending through the last link in the chain into a loop shape, an inside former adapted to stand within such loop, a pair of lateral formers adapted to bend the ends of the loop together to make a link shape, and a pair of jaws adapted to pinch together said ends, there being means for heating said ends to a welding heat substantially as described. 17th. The combination, in a chain

making machine, of two liquid electric forges, one adapted to give more intense heat than the other, mechanism for feeding the material heated by the less intense forge into a link of a chain, mechanism for bending said material into a link form, mechanism for bending said material into a link form, mechanism for bringing it into the other forge to heat its ends to a welding heat, and a mechanism for squeezing said ends together to weld them, substantially as described. 18th. In a chain making machine, in combination, mechanism for feeding forward stock, a rod with which said stock engages, a tank containing a liquid, said rod and liquid forming the terminals of a liquid electrical forge whereby said stock is heated, means for cutting of said stock, and means for forming a link out of said cut off portion, substantially as described.

**No. 69,621. Rolling Mill. (Laminoir.)**



The American Universal Mill Co., assignee of Henry Grey, all of London, England, 6th December, 1900; 6 years. (Filed 2nd December, 1899.)

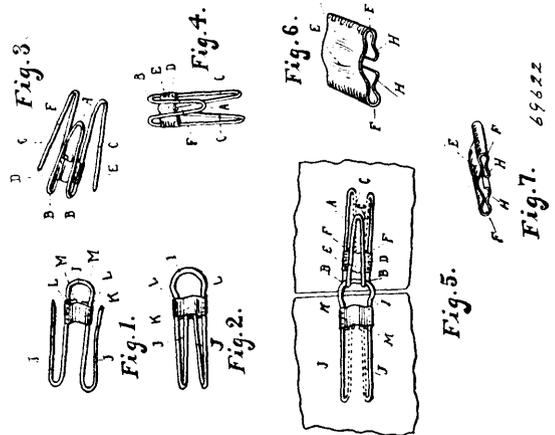
*Claim.*—1st. In a rolling mill of the character indicated, two flange edge rolling rolls arranged to operate upon opposite flange edges, respectively, screws and engaging nuts instrumental in shifting one of the said rolls, worm wheels operatively mounted upon the said screws in such a manner that the screws can move endwise independently of the wheels, a worm shaft having worms engaging the said wheels, screws and engaging nuts instrumental in shifting the other roll, worm wheels operatively mounted upon the last mentioned screws in such a manner that the screws can move endwise independently of the wheels, a worm shaft having worms engaging the last mentioned worm wheels, a shaft operatively connected with both said worm shafts, and a clutch arranged in the line of the last mentioned shaft, and adapted to establish and interrupt continuity in the shaft. 2nd. In a rolling mill of the character indicated, a flange edge rolling roll arranged to operate upon the flange edges at one side of the web and shiftable toward and from the work, a roll arranged opposite the said flange rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, another flange edge rolling roll arranged to operate upon the flange edges at the other side of the web and shiftable toward and from the work, and another roll arranged opposite the last mentioned flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll. 3rd. In a rolling mill of the character indicated, a flange edge rolling roll arranged to operate upon the flange edges at one side of the web and shiftable toward and from the work, a roll arranged opposite the said flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, another flange edge rolling roll arranged to operate upon the flange edges at the other side of the web and shiftable toward and from the work, and another roll arranged opposite the last mentioned flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, and mechanism whereby both of the flange edge rolling rolls are shiftable simultaneously in opposite directions, respectively. 4th. In a rolling mill of the character indicated, two flange edge rolling rolls arranged to operate upon opposite flange edges, respectively, and arranged a suitable distance apart laterally of each other, and shiftable toward and from the work's path, a roll arranged opposite one of the said flange edge rolling rolls, another roll arranged opposite the other flange edge rolling roll, and mechanism whereby both of the flange edge rolling rolls are shiftable simultaneously and equally in opposite directions, respectively. 5th. In a rolling mill of the character indicated, two vertically shiftable flange edge rolling rolls arranged, respectively, above and below the work's path in position to operate upon the edges of the flanges of the work, and arranged, furthermore, a distance apart laterally of each other, a roll arranged opposite one of the said flange edge rolling rolls in position to afford bearing for the web of the work, and another roll arranged opposite the other flange edge rolling roll in position to afford bearing for the work's web. 6th. In a rolling mill of the character indicated, two vertically shiftable flange edge rolling rolls arranged at the upper side

and lower side, respectively, of the work's path in position to operate upon the edges of the flanges, and arranged, furthermore, a distance apart laterally of each other, a roll arranged below the top flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, and a vertically shiftable roll arranged above the bottom flange edge rolling roll in position to afford bearing for the work during the operation of the last mentioned flange edge rolling roll. 7th. In a rolling mill of the character indicated, a vertically shiftable top flange edge rolling roll arranged at the upper side of the work's path, means acting to elevate the said roll, mechanism for lowering the said roll against the action of the roll elevating means, a roll arranged below the aforesaid flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, another vertically shiftable flange edge rolling roll arranged at the under side of the work's path, mechanism for elevating the last mentioned flange edge rolling roll, a vertically shiftable roll arranged above the last mentioned flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, means acting to elevate the shiftable bearing forming roll, and mechanism for lowering the last mentioned roll against the action of the roll elevating means. 8th. In a rolling mill of the character indicated, a vertically shiftable flange edge rolling roll arranged at the upper side of the work's path, means acting to elevate the said roll, mechanism for lowering the said roll against the action of the roll elevating means, a roll arranged below the aforesaid flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, another vertically shiftable flange edge rolling roll arranged at the under side of the work's path, mechanism for elevating the last mentioned flange edge rolling roll, a vertically shiftable roll arranged above the last mentioned flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, means acting to elevate the shiftable bearing forming roll, and mechanism for lowering the last mentioned roll against the action of the roll elevating means, and means for establishing and interrupting operative connection between the aforesaid roll lowering mechanism. 9th. In a rolling mill of the character indicated, a vertically shiftable top flange edge rolling roll arranged at the upper side of the work's path, means acting to elevate the said roll, mechanism for lowering the said roll against the action of the roll elevating means, a roll arranged below the aforesaid flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, another vertically shiftable flange edge rolling roll arranged at the under side of the work's path, mechanism for elevating the last mentioned flange edge rolling roll, a vertically shiftable roll arranged above the last mentioned flange edge rolling roll in position to afford bearing for the work during the operation of the said flange edge rolling roll, means acting to elevate the shiftable bearing forming roll, mechanism for lowering the last mentioned roll against the action of the roll elevating means, a shaft operatively connected with the aforesaid roll lowering mechanism, a clutch for interrupting and establishing continuity in the said shaft, another shaft operatively connected with the mechanism for lowering the top flange edge rolling roll and with the aforesaid mechanism instrumental in raising the bottom flange edge rolling roll, and a clutch for interrupting and establishing continuity in the last mentioned shaft. 11th. In a rolling mill of the character indicated, the combination with a roll system comprising a vertically shiftable top roll arranged to operate upon the upper side of the web and adjacent inner flange sides, a bottom roll arranged to operate upon the lower side of the web and adjacent inner flange sides, two laterally shiftable side rolls arranged to operate upon the flanges' outer sides, of another roll system arranged in suitable proximity to the first mentioned roll system and comprising the following, a vertically shiftable top roll arranged to operate upon the upwardly presented flange edges, a bearing forming bottom roll opposite the said top flange edge rolling roll, a vertically shiftable bottom flange edge rolling roll, arranged to operate upon the downwardly presented flange edges, and a vertically shiftable bearing forming top roll arranged opposite the last mentioned flange edge rolling roll, substantially as set forth. 12th. In a rolling mill of the character indicated, the combination with a roll system comprising a vertically shiftable horizontal roll and another horizontal roll arranged to operate upon opposite sides, respectively, of the web and upon the

inner sides of the flanges, and upright side rolls arranged to operate upon the outer sides of the flanges, of another roll system comprising the following: Two vertically shiftable flange edge rolling rolls arranged a suitable distance apart laterally of each other and at elevations corresponding, or approximately corresponding, with the elevations of the different web reducing rolls, respectively, two bearing forming rolls arranged opposite the different flange edge rolling rolls, respectively, and that bearing-forming roll whose elevation corresponds, or approximately corresponds, with the elevation of the aforesaid shiftable web reducing roll being shiftable vertically, and mechanism or apparatus whereby is attainable the simultaneous shifting of the shiftable bearing forming roll and the flange edge rolling roll whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable web reducing roll and shiftable bearing forming roll, substantially as and for the purpose set forth. 13th. In a rolling-mill of the character, indicated, the combination of a roll system comprising a vertically shiftable horizontal roll and another horizontal roll arranged to operate upon opposite sides, respectively, of the web and upon the inner sides of the flanges, and other rolls arranged to operate upon the outer sides of the flanges, another roll system comprising two vertically shiftable flange edge rolling rolls arranged a suitable distance apart laterally of each other and at elevations corresponding, or approximately corresponding, with the elevations of the different web reducing rolls respectively, and two bearing-forming rolls arranged opposite the different flange edge rolling rolls, respectively, and the bearing forming roll whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable web reducing roll being shiftable vertically, and mechanism or apparatus whereby is attained, first, the simultaneous shifting of the shiftable web reducing roll, the shiftable bearing forming roll, and the flange edge rolling roll whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable bearing forming roll, and, secondly, the simultaneous shifting of the flange edge rolling rolls, independently of the shiftable web reducing roll and the shiftable bearing forming roll, substantially as and for the purpose set forth. 14th. In a rolling mill of the character indicated, the combination of a roll system comprising a vertically shiftable horizontal roll and another horizontal roll arranged to operate upon opposite sides, respectively, of the web, and upon the inner sides of the flanges, and other rolls arranged to operate upon the outer sides of the flanges, another roll system comprising two vertically shiftable flange edge rolling rolls, arranged a suitable distance apart laterally of each other and at elevations corresponding, or approximately corresponding, with the elevations of the different web reducing rolls, respectively, and two bearing forming rolls arranged opposite the different flange edge rolling rolls, respectively, and the bearing forming rolls whose elevations correspond, or approximately correspond, with the elevation of the shiftable web reducing roll being shiftable vertically, and mechanism or apparatus whereby is attainable, first, the simultaneous shifting of the vertical web reducing roll, the shiftable bearing forming roll, and the flange edge rolling roll whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable bearing forming roll, and the shifting of the two last mentioned rolls, is correspondingly faster than the shifting of the shiftable web reducing roll, and, secondly, the simultaneously shifting of the flange edge rolling rolls, independently of the shiftable bearing forming roll, substantially as and for the purpose set forth. 15th. In a rolling-mill of the character indicated, the combination of a roll system comprising vertically shiftable horizontal roll and another horizontal roll arranged to operate upon opposite sides, respectively, of the web and upon the inner sides of the flanges, and other rolls arranged to operate upon the outer sides of the flanges, another roll system comprising two vertically shiftable flange edge rolling rolls arranged a suitable distance apart and laterally of each other and at elevations corresponding or approximately corresponding, with the elevations of the different web reducing rolls, respectively, and two bearing forming rolls arranged opposite the different flange edge rolling rolls, respectively, and the bearing forming rolls whose elevations correspond, or approximately correspond, with the elevation of the aforesaid shiftable web reducing roll being shiftable vertically, and mechanism or apparatus whereby is attainable, first, the simultaneous shifting of the shiftable web reducing roll, the shiftable bearing forming roll and the flange edge rolling roll, whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable bearing forming roll, and the shifting of the two last-mentioned rolls twice as rapidly as the shifting of the shiftable web-reducing roll, and, secondly, the simultaneous shifting of the flange edge rolling rolls independently of the shiftable bearing forming roll, substantially as and for the purpose set forth. 16th. In a rolling mill of the character indicated, the combination of a roll system comprising a vertically shiftable horizontal roll and another horizontal roll arranged to operate upon opposite sides respectively, of the web and upon the inner sides of the flanges; and other rolls arranged to operate upon the outer sides of the flanges; another roll-system comprising two vertically shiftable flange edge rolling rolls arranged a suitable distance apart laterally of each other and at elevations corresponding, or approximately corresponding, with the elevation of the different web reducing rolls, respectively, and two bearing-forming rolls arranged opposite the different flange edge rolling rolls, respectively, and the bearing forming roll whose elevation corresponds, or approximately corresponds, with the elevation of

the shiftable web reducing roll being shiftable vertically, mechanism instrumental in shifting the shiftable web-reducing roll and comprising a suitably driven shaft; mechanism instrumental in shifting the flange edge rolling roll whose elevation corresponds, or approximately corresponds, with the elevation of the shiftable web reducing roll and comprising a shaft operatively connected with the first-mentioned shaft and provided with a clutch capable of establishing and interrupting continuity in the clutch shaft; shifting mechanism instrumental in shifting the shiftable bearing forming roll and comprising a shaft operatively connected with the shifting mechanism of the last mentioned flange edge rolling roll and provided with a clutch capable of forming a part of and arranged to establish and interrupt continuity in the shaft, shifting mechanism instrumental in shifting the remaining flange edge rolling roll and comprising a shaft operatively connected with the shifting mechanism of the other flange edge rolling roll and provided with a clutch arranged to interrupt and establish continuity in the shaft. 17th. In a rolling mill of the character indicated, the combination of a roll system comprising a vertically shiftable top roll arranged to operate upon one side of the web and upon the adjacent inner sides of the flanges, a bottom roll arranged to operate upon the other side of the web and adjacent inner sides of the flanges, and two side rolls arranged to operate upon the flanges' outer sides, another roll system comprising a vertically shiftable top flange edge rolling roll, a bearing forming roll arranged opposite the said flange edge rolling roll, a vertically shiftable bottom flange edge rolling roll and a vertically shiftable top bearing affording roll opposite the last mentioned flange edge rolling roll, and mechanism or apparatus whereby is attainable, first, the shifting of all of the top rolls simultaneously, and, secondly, the shifting of the flange edge rolling rolls simultaneously but independently of the remaining rolls, substantially as and for the purpose set forth. 18th. In a rolling mill of the character indicated, the combination of a roll system comprising a vertically shiftable top roll arranged to operate upon one side of the web and upon the adjacent inner sides of the flanges, a bottom roll arranged to operate upon the other side of the web and adjacent inner sides of the flanges, and two side rolls arranged to operate upon the flanges' outer sides, another roll system comprising a vertically shiftable top flange edge rolling roll, a bearing-forming roll arranged opposite the said flange edge rolling roll, a vertically shiftable bottom flange edge rolling roll, a vertically shiftable top bearing forming roll opposite the last mentioned flange edge rolling roll, and mechanism or apparatus whereby is attainable, first, the shifting of all of the top rolls simultaneously and the shifting of the top flange edge rolling roll and the top bearing affording roll twice as rapidly as the top web reducing roll, and secondly, the shifting of the flange edge rolling rolls simultaneously and equally but independently of the remaining rolls, substantially as and for the purpose set forth. 19th. The combination with a shiftable reducing roll, a vertically shiftable top guide, and mechanism instrumental in shifting the aforesaid roll and comprising a suitably rotated shaft, of such an exclusively mechanical operative connection between the said guide and the aforesaid shaft that the guide is elevated or lowered according as the shaft is rotated in the one direction or the other and is lowered when the shaft is rotated in the direction required to shift the aforesaid roll inwardly. 20th. In a rolling mill of the character indicated, the combination with a shiftable reducing roll, a vertically shiftable top guide, and mechanism instrumental in shifting the roll and comprising a suitably rotated shaft, of screws turnably attached to the guide, stationary nuts engaging the screws, worm wheels operatively connected with the shaft in such a manner as to accommodate endwise movement of the screws independently of the wheels, suitably supported worms meshing with the wheels and operatively connected with the aforesaid shaft, and the arrangement of parts being such that the guide is shifted inwardly or outwardly according as the roll is shifted inwardly or outwardly. 21st. In a rolling mill of the character indicated, the combination with a vertically shiftable top reducing roll, two housings arranged at opposite ends, respectively, of the said roll, means acting to hold the roll elevated, and mechanism for lowering the roll and comprising a suitably rotated shaft, of a top guide arranged to prevent upward displacement of the work and shiftable vertically, upright screws turnably attached to the guide, nuts engaging the screws and formed upon or rigid with the housings, worm wheels upon the screws, such an operative connection between the wheels and the screws as will accommodate an endwise shifting of the screws independently of the wheels without interrupting the said operative connection, suitably supported worms engaging the said wheels and operatively connected with the aforesaid shaft, and the arrangement of the parts being such that the guide is shifted shifted simultaneously with the shifting of the roll and in a corresponding direction upon the rotation of the aforesaid shaft. 22nd. In a rolling mill of the character indicated, the combination with two vertically shiftable flange edge rolling rolls arranged a suitable distance a part laterally and at the upper side and lower side, respectively, of the work's path, a bearing forming roll below the top flange edge rolling roll, and a vertically shiftable bearing forming roll above the lower flange edge rolling roll, of the mechanism instrumental in shifting one of the said shiftable rolls, a vertical top guide arranged between the top bearing forming roll and the top flange edge rolling roll, and mechanism instrumental in shifting the said guide and operatively connected with the aforesaid roll shifting mechanism.

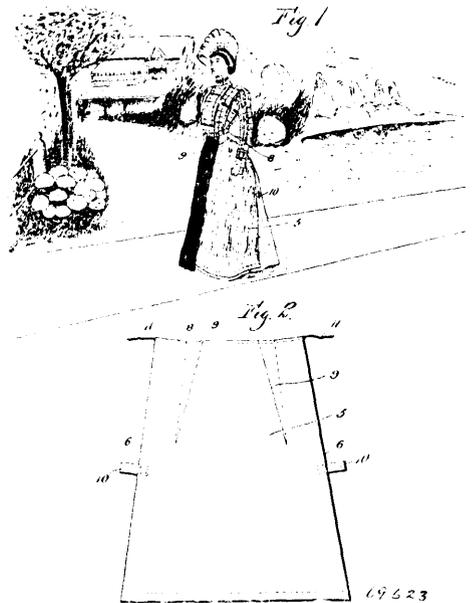
**No. 69,622. Garment Fastening and Supporting Device.**  
(Attache de vêtement et appareil de support.)



Mabel Florence Loving, St. Joseph, Missouri, U.S.A., 10th December, 1900; 6 years. (Filed 24th November, 1900.)

*Claim.*—1st. In a garment fastening and supporting device, a metal strip, the ends thereof turned under and then towards each other, the tubular turns thereof, the holders formed by curving the ends thereof and the convexity across the middle thereof, all substantially as described and for the purpose specified. 2nd. The combination with a garment fastening and supporting device, of a clasp turned under near its ends, forming tubes or grips to receive the wires of a hook or eye, the inwardly extended ends thereof adapted to hold the pointed ends of said wires, and the convexity across the middle of said clasp adapted to fit up under the hook loop and prevent the unhooking of the device, substantially as described. 3rd. The combination in a metal clasp adapted to engage with a garment fastening hook of the duplicate grips near the ends thereof, which ends are adapted to receive the wires of the hook, the duplicate ends thereof curved and extended toward each other forming holders to receive and protect the pointed ends of the wires, and the convexity adapted to fit up under the hook loop, substantially as described. 4th. The combination with a spring wire hook and eye made of spring wire, of the metal clasps, the tubular sides thereof, the inwardly extended curved ends of said clasps adapted to receive and hold the pointed wire ends of said hook and eye, and the convexity on the middle of the hook clasp adapted to fit up on a line, substantially horizontal with and between the loop wire of the hook, substantially as described.

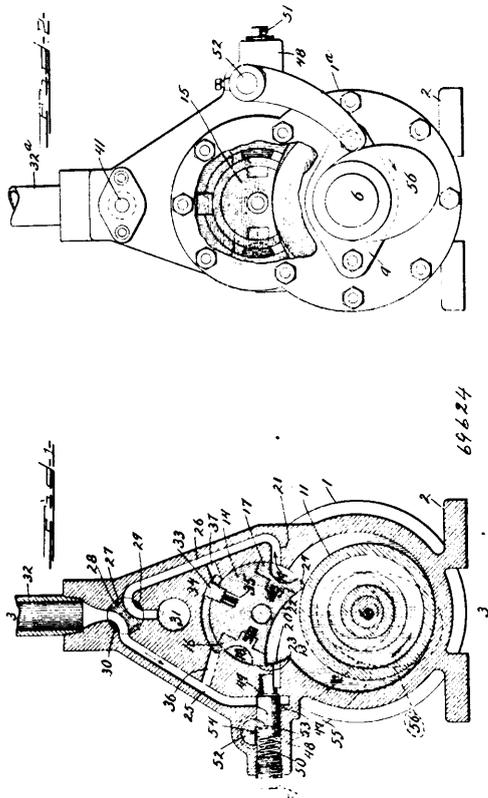
**No. 69,623. Garment. (Vêtement.)**



Patrick Doyle, Halifax, Nova Scotia, Canada, 10th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—As a new article of manufacture, the improved article of wearing apparel, substantially such as described, comprising a piece of fabric having a minimum degree of pliability, and wider at its bottom edge than at its top edge, means for securing the top edge portion of the garment around the waist, and the fastening tabs secured to opposite side portions of the garment between the top and bottom edges thereof, and extending outwardly from the side edges of the same, as set forth.

**No. 69,624. Rotary Engine. (Machine rotatoire.)**

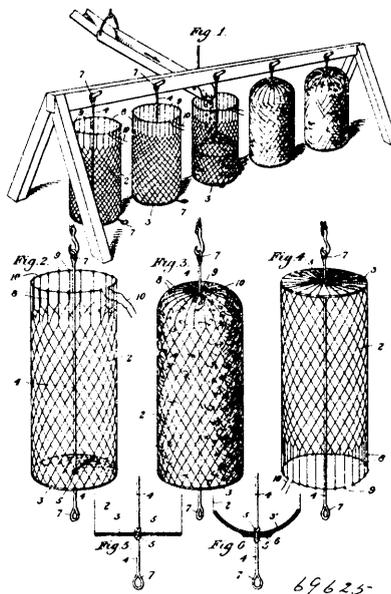


Louis Charles Krummel, Chicago, Illinois, U.S.A., 10th December 1900; 6 years. (Filed 19th November, 1900.)

*Claim.*—1st. A rotary engine having its supply port provided with a valve seat, a socket, a sliding valve plug in said socket adapted to fit said seat, a transverse rocker shaft having tooth and notch connection with said plug, an arm on said shaft, a cam for oscillating said arm for withdrawing said plug and a spring for returning said plug, substantially as set forth. 2nd. In a rotary engine, the combination of a piston, a combined rocking abutment and valve, a casing having ports leading to opposite sides of said valve and controlled thereby, a wing or piston on said valve continually exposed on opposite sides to the pressure of both of said ports and means for alternately connecting said ports with the exhaust and supply and thereby rocking or shifting said valve and abutment and reversing the engine by one movement, substantially as set forth. 3rd. In a rotary engine, the combination of a piston, a combined rocking abutment and valve having a wing, a casing having ports leading to opposite sides of said valve and controlled thereby and branch passages from said ports opening against opposite sides of said wing and means for connecting either of said ports with the supply and the other with the exhaust, whereby the pressure in the port connected with the supply will automatically rock said abutment and valve and reverse the engine, substantially as set forth. 4th. In a rotary engine, the combination of a piston, a combined rocking abutment and valve having two projecting edges, either of which is adapted to contact with the periphery of said piston, a wing on said valve, a casing having two ports leading to opposite sides of said valve and controlled thereby and each of said ports having a branch passage opening against opposite sides of said wing and means for directing pressure into either of said ports and connecting the other

one with the exhaust, substantially as set forth. 6th. In a rotary engine, the combination of a casing having a cylinder, a pressure inlet and an exhaust, a throttle valve chamber connected with said inlet and exhaust, an abutment valve chamber, and two passages leading from opposite sides of the latter chamber to opposite sides of the former chamber, a throttle valve in said first chamber having two ways, both of which are adapted to connect either one of said passages with said inlet and the other with said exhaust, a free, combined rocking abutment and valve located in said second valve cavities permanently connected with said passages respectively, and adapted to alternately connect them with the cylinder as the abutment rocks, and a revolving piston, in said cylinder, with which said abutment engages, whereby the turning of the throttle valve automatically changes the position of the abutment and reverses the engine through the intermediary of the steam pressure, substantially as set forth.

**No. 69,625. Bag. (Sac.)**

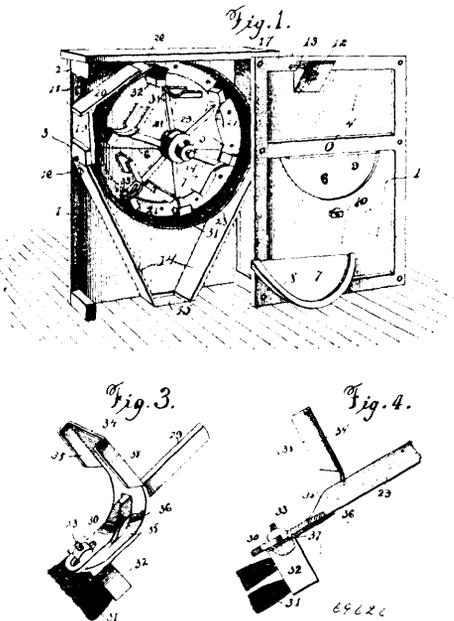


John S. Scully, Pittsburg, Pennsylvania, U.S.A., 10th December, 1900; 6 years. (Filed 21st November, 1900.)

*Claim.*—1st. A bag for transporting coal, &c., comprising a central sustaining member projecting above the upper portion of the body of the bag, and a surrounding body portion having its bottom secured to said central member and extending upwardly and provided with means at its upper end whereby it may be gathered in and secured closely around the central sustaining member to form a top which will prevent exit of the contents of the bag at such point during transportation. 2nd. A bag for transporting coal, &c., comprising a central sustaining member projecting above the upper portion of the body of the bag, and a surrounding body portion formed of flexible material having its bottom secured to said central member and extending upwardly and provided with means at its upper end whereby it may be gathered in and secured closely around the central sustaining member to form a top which will prevent exit of the contents of the bag at such point during transportation. 3rd. A bag for transporting coal, &c., comprising a central sustaining member projecting above the upper portion of the body of the bag and having a loop at its upper end, and a surrounding body portion having its bottom secured to said central sustaining member and extending upwardly and provided with means at its upper end whereby it may be gathered in and closely secured around the central sustaining member to form a top which will prevent exit of the contents of the bag at such point during transportation. 4th. A bag for transporting coal, &c., comprising a central sustaining member projecting above the top of the body of the bag and having a loop at its upper end, a surrounding body portion having its bottom secured to said central sustaining member and extending upwardly and provided with means for securing it at the top around the central member to prevent exit of the contents of the bag at such point during transportation, and means at the bottom of the bag whereby it may be sustained in an inverted position. 5th. A bag for transporting coal comprising a central sustaining member projecting above the top of the body of the bag and having a loop at its upper end, a surrounding body portion having its bottom secured to said central sustaining member and extending upwardly and provided with means for securing it at the top and around the central sustaining member to prevent exit of the contents of the bag at such point during transportation, and a member extending downwardly from

the bottom of the bag and provided with a loop. 6th. A bag for transporting coal, &c., having a circular base, an upwardly extending cylindrical body portion of wire netting secured to the base, a central sustaining member secured to the base at the centre, extending downwardly from the base and upwardly above the top of the bag and provided at each end with a loop, and means for securing together the body portion at the top closely around the central sustaining member to prevent exit of the contents of the bag at such point during transportation. 7th. A bag for transporting coal, &c., comprising a central sustaining member projecting above the top of the body of the bag and having a loop at its upper end, a surrounding body portion having its bottom secured to said central sustaining member and extending upwardly and provided with a series of loops or eyes at its end, a cord or wire passing through said loops whereby the top of the body portion may be gathered in and secured around the central sustaining member to prevent exit of the contents of the bag at such point during transportation, and a member extending downwardly from the bottom of the bag and provided with a loop.

**No. 69,626. Bran Duster and Grain Scourer.**  
(*Nettoyeur de grain.*)



George R. Davidson, Lenox, Michigan, U.S.A., 10th December, 1900; 6 years. (Filed 19th November, 1900.)

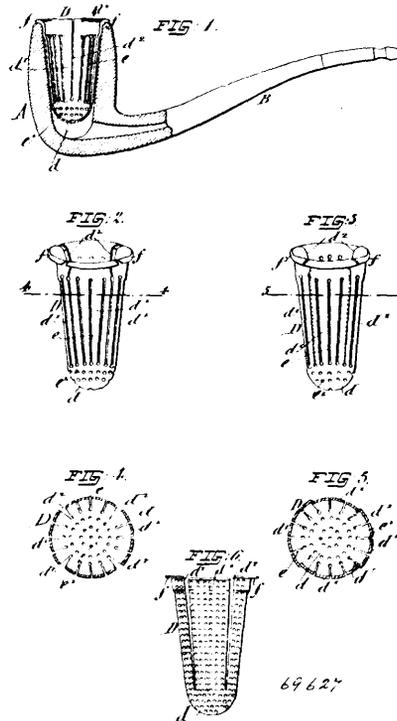
*Claim.*—1st. In a bran duster and grain scourer, the combination of a fixed cylindrical screen, a removable element therein having brushes engaging the interior of the screen, and centrifugal cups carried by the revolvable element, said cups having spring supports, substantially as described. 2nd. The combination of a screen, a shaft, radial arms, brushes, centrifugal cups provided with arms, and means whereby said radial arms, the arms of the cups and the brushes are clamped together in the order named, substantially as described. 3rd. A revolvable element for a bran duster and grain scourer having radial arms, in combination with centrifugal cups, each having a supporting arm provided with an opening through which the outer end of one of said radial arms is inserted and provided further with an adjusting opening, and a brush having a bolt projecting from one side of its head and secured in an opening in the radial arm, and in said adjusting opening in the supporting arm of the cup, substantially as described. 4th. In combination with a screen and a revolvable element having a radial arm, a cup provided with an integral spring arm having an opening through which an arm of the revolvable element may be inserted and provided further with an adjusting opening, and releasable means passing through said arms for clamping them together and permitting their relative adjustment, substantially as described.

**No. 69,627. Bowl for Tobacco Pipes.**  
(*Bol pour pipes à tabac.*)

John Porter Beatty, Newark, New Jersey, U.S.A., 10th December, 1900; 6 years. (Filed 9th April, 1900.)

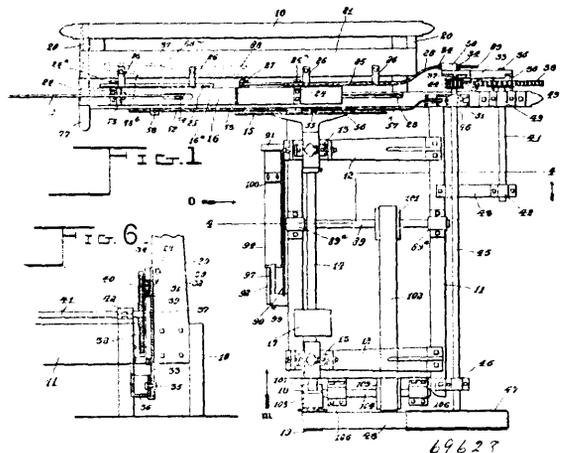
*Claim.*—1st. A bowl attachment for tobacco pipes, consisting of an interstitial thimble-shaped basket or lining constructed with adjustable retainers forming the walls of the basket or lining, and conformable to the interior walls of various sizes of pipe bowls, said retainers being arranged near together and at all times practically

continuous around the circumference of the basket or lining, substantially as set forth. 2nd. A bowl attachment for tobacco pipes,



consisting of an interstitial basket, having slots providing spring retainers, said slots being narrow so as not to materially interrupt the practical continuity of the basket, substantially as set forth. 3rd. A bowl attachment for tobacco pipes, consisting of an interstitial basket, constructed with contractible overlapping retainers, substantially as set forth. 4th. The combination with a tobacco pipe, of a lining for the bowl, constructed with relatively movable interstitial petaliform retainers, slightly separated normally and adapted to self adjust themselves and to, at all times, practically conform to and cover the interior of bowls of different sizes, substantially as set forth.

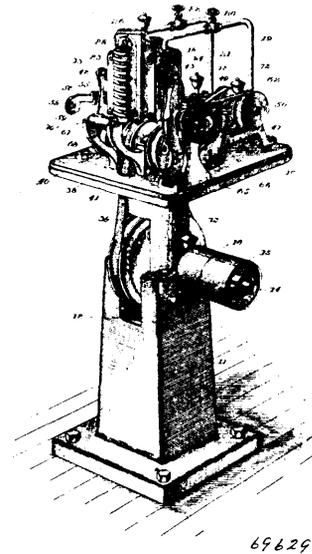
**No. 69,628. Shingle Sawing Machine.**  
(*Machine à scier le bardeau.*)



Michael Israel Montreuil, Plessisville, Quebec, Canada, 10th December, 1900; 6 years. (Filed 20th November, 1900.)

*Claim.*—1st. A shingle sawing machine comprising two arbours arranged in planes substantially at right angles one to the other and

each carrying a saw, a log carriage in operative relation to one saw, means for reciprocating said carriage, means for rotating both saw arbours, and manually controlled means for presenting the work in operative relation to the other saw, substantially as described. 2nd. A shingle sawing machine comprising two arbours driven from a common source of power and each carrying a saw, a reciprocatory carriage in operative relation to one saw, and work feed mechanism for presenting the work in operative relation to the other saw, substantially as described. 3rd. A shingle sawing machine comprising a frame having members disposed at right angles one to the other, independent saw arbours mounted on the frame and having saws to work at different angles, a log carriage mounted upon one member of the frame in operative relation to one saw, mechanism for driving both saw arbours and for reciprocating said log carriage, and means for presenting work to the other saw, substantially as described. 4th. A shingle sawing machine comprising a frame, two saw arbours mounted thereon and each having a saw, a reciprocatory carriage mounted to travel in operative relation to one saw, a carriage driving shaft, and a vibratory arm connected with said log carriage and having operative connection with the carriage driving shaft, substantially as described. 5th. In a shingle sawing machine, the combination with a saw arbour and a reciprocatory carriage, of a carriage driving shaft, a gear element driven by said shaft and having an eccentric stud, and a vibratory arm linked to said carriage and operatively connected by the stud to said gear element, substantially as described. 6th. In a shingle sawing machine, the combination with a saw arbour and a reciprocatory log carriage, of a vibratory arm linked to said carriage and provided with a longitudinal guideway, a slide fitted in said guideway, a gear element having a stud connected with said slide, and means for rotating the gear element, substantially as described. 7th. In a shingle sawing machine, the combination with a saw arbour, and a reciprocatory log carriage, of a variable speed driving mechanism having operative connection with said carriage and including means, substantially as described, whereby the carriage may be advanced slowly toward the saw and returned with an accelerated motion, as set forth. 8th. In a shingle sawing machine, the combination with a saw arbour, and a reciprocatory log carriage, of a gear element provided with an eccentric stud, a vibratory arm having its axis of vibration below the axis of rotation of said gear element, and said arm connected operatively with the eccentric stud, and means for connecting the vibratory arm with said log carriage, substantially as described. 9th. In a shingle sawing machine, the combination with a saw arbour and a reciprocatory log carriage, of a vibratory arm, and a rod between and said log carriage and the arm and having adjustable connection with one of said elements, substantially as described. 10th. In a shingle sawing machine, the combination with a saw arbour, and a reciprocatory log carriage, of a shaft having a gear element, a vibratory arm connected with said gear element and with said log carriage, and a carriage driving shaft geared to the first-named shaft, one of said shafts being movable to throw the two shafts out of engagement, substantially as described. 11th. In a shingle sawing machine, the combination with a saw arbour and a reciprocatory log carriage, of a shaft carrying a gear element, a vibratory arm in operative relation to the gear element and connected with said log carriage, a carriage driving shaft geared to the first-named shaft, and means for shifting the carriage driving shaft out of operative relation to the gear element, substantially as described. 12th. In a shingle sawing machine, the combination with a saw arbour and a reciprocatory log carriage, of a shaft having a gear element, a train of operative connection from said gear element to said log carriage, a carriage driving shaft geared to the first-named shaft and slidably mounted for disengagement therefrom, a counterpoised shipping lever, an intermediate lever connected with the shipping lever and with a slidable bearing of the carriage driving shaft, and means for locking the shipping lever in adjusted position, substantially as described. 13th. A shingle sawing machine comprising an angular frame, a main saw arbour provided with a saw, another saw arbour disposed at right angles to the first-named arbour and likewise provided with a saw, a log carriage on one part of the frame and in operative relation to one saw, a carriage driving mechanism driven by a train of gear connections from the main saw arbour, and a countershaft also geared to the main saw arbour and to the second saw arbour, substantially as described. 14th. In a shingle sawing machine, the combination with a trimming saw, of a vibratory guide bar normally held by the energy of a suitable retractor in an inclined position adjacent to the working edge of said saw, substantially as described. 15th. In a shingle sawing machine, the combination with a trimming saw, of a vibratory guide bar, a retractor arranged to hold said guide bar in a raised position adjacent to the edge of said saw, and means for limiting the vibratory movement of said guide bar, substantially as described. 16th. In a shingle sawing machine, the combination with a trimming saw, of a vibratory guide bar hinged to a suitable support and provided with a shingle rest, and means engaging with the guide bar to hold the same in operative position adjacent to the edge of said saw, substantially as described. 17th. In a shingle sawing machine, the combination with a trimming saw, of a fixed bracket, a guide bar hinged to said bracket and provided with a work rest, a cushion spring seated on the bracket and against said guide bar, and stop plates disposed in the path of the unconfined end of the guide bar to positively arrest the movement thereof in opposite directions, substantially as described.

**No. 69,629. Heel and Sole Burnishing Machine.***(Machine à brunir les talons et semelles de chaussures.)*

Henry Francis Rooney, and Mellen Bray, both of Randolph, Massachusetts, U.S.A., 10th December, 1900; 6 years. (Filed 5th November, 1900.)

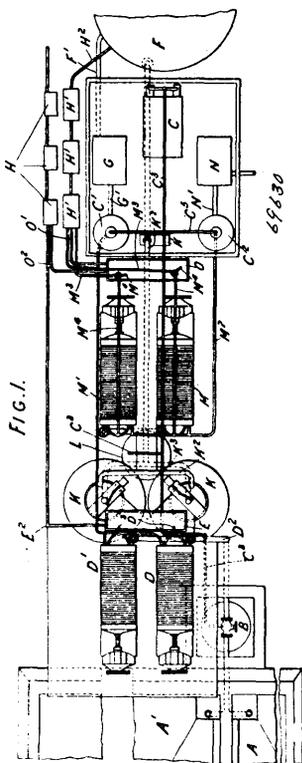
*Claim.*—1st. A machine of the character specified, comprising in its construction a supporting frame, a reciprocatory tool holder mounted on said frame and provided with a transverse groove, a bar secured in said groove, a crank and pitman connected with each end of said bar, and a burnishing tool removably secured to said tool holder. 2nd. A machine of the character specified, comprising in its construction a supporting frame, a stationary heating chamber mounted on said frame, a reciprocatory tool holding plate slidably mounted upon said heating chamber, a burnishing tool removably secured to said holding plate, and means for imparting a rapid reciprocating movement to the said tool holder. 3rd. A machine of the character specified, comprising in its construction a supporting frame, a stationary heating chamber mounted on said frame, a reciprocatory tool holding plate slidably mounted upon said heating chamber and having a loop or strap 29, a burnishing tool having a tongue 29 at its lower end adapted to engage the said loop or strap, means for removably securing the upper end of the tool to the said plate, and means for imparting a rapid reciprocating movement to the said tool holder. 4th. A machine of the character specified, comprising in its construction a supporting frame, a steam chamber carried thereby, steam pipes connecting with said chamber, a tool holding plate carried by said chamber and adapted to slide thereon, a burnishing tool removably secured to said tool holder, and mechanism connected with the main driving shaft for imparting a reciprocating movement to said tool holder and tool. 5th. A machine of the character specified, comprising in its construction a main frame, a supporting bracket mounted thereon, a steam chamber carried thereby, steam pipes connecting with said chamber, guideways secured to the face of said steam chamber, a tool holder adapted to slide in said guideways, a burnishing tool removably secured to said holder, and connecting mechanism with the driving shaft for imparting a rapid reciprocating movement to the tool holder. 6th. A machine of the character specified, comprising in its construction a supporting frame, a heating chamber mounted thereon, guideways secured on the front of said chamber and having slots, a tool holding plate adapted to slide in said guideways, a burnishing tool carried by said holder, a transverse bar fitted in a recess in said tool holder and having its ends extending through the slots in the said guideways, a driving shaft located beneath said tool holder, and pitman connections between the said shaft and the ends of the transverse bar for imparting a reciprocating movement to the tool holder.

**No. 69,630. Process of Extracting Metals.***(Procédé pour extraire les métaux.)*

S. H. Johnson & Company, Stratford, Essex, assignee of Henry Livingstone Sulman, 66 Gracechurch St., London, all of England, 10th December, 1900; 6 years. (Filed 13th December, 1899.)

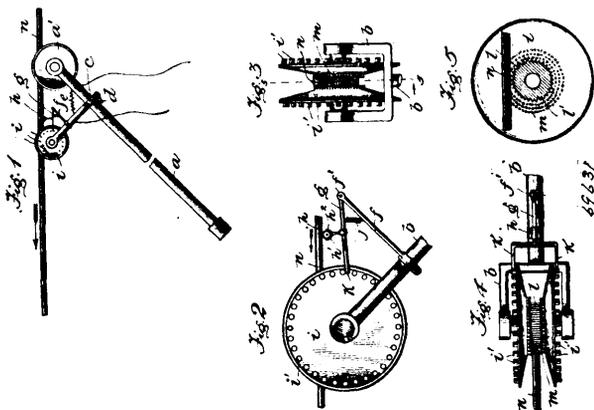
*Claim.*—1st. A process for the treatment of ores or slimes in which a solvent solution is used for displacing the residual water in pressed slime cakes for the purpose described. 2nd. A process for the treatment of ores or slimes in which a portion of the water is first removed by pressure and the remainder displaced by an equal volume of a solvent solution. 3rd. A process for the treatment of ores or slimes containing metal in which the residual water in pressed

cakes is displaced by a normal solvent solution in a filter press the material being then further mixed with an additional quantity of the solvent solution and again treated in a filter press wherein



the metal bearing solvent solution is removed and water substituted therefor, substantially as described. 4th. A process for the treatment of ores or slimes containing metals consisting in displacing the residual water in pressed cakes by a normal solvent solution in a filter press, treating the cakes with additional normal solvent in a mixing apparatus with or without aeration, expressing the metal bearing solution in a filter press, displacing the remaining portion of such solution water and returning the solution after the metal has been extracted from it to the main body of solvent solution, all the operations being performed so that an approximately constant volume of the normal solvent solution is maintained, substantially as described.

**No. 69,631. Machine for Removing Ice from Trolley Wires.** (*Machine pour enlever la glace des fils électriques.*)

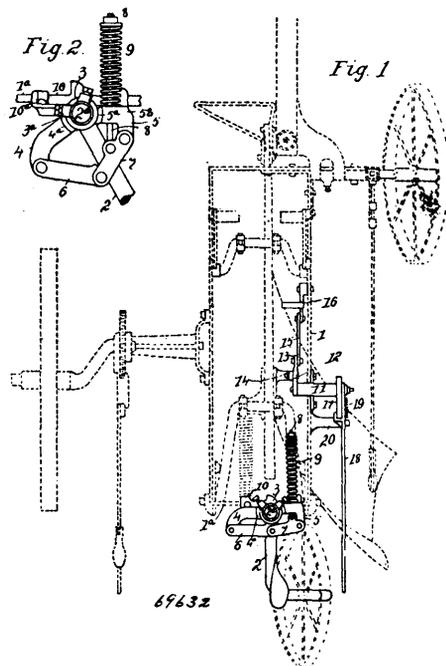


Ernest de Friez Manchee Toronto, Ontario, Canada, and John J. Shirkey, Chicago, Illinois, U.S.A., 10th December, 1900; 6 years. (Filed 18th July, 1900.)

*Claim.*—1st. The combination with a trolley wheel and its arm, of a spring actuated reciprocable arm on said trolley arm, a flanged spool on said reciprocable arm, axially parallel cutters on the body of said spool and cylindrical teeth projecting from the opposite

inner faces of said flanges, said teeth having points pass closely to the trolley wire, substantially as specified. 2nd. The combination with a trolley arm, of a reciprocable spring actuated arm provided with a fixed arm carrying a reciprocable arm, a ram to said latter reciprocable arm and mechanism to vibrate said arm, substantially as specified. 3rd. The combination with a trolley arm, of a vibratable arm, to said trolley arm, a rotatable cylindrical ram to said arm, substantially as specified. 4th. The combination with a trolley arm, of a vibratable arm, a bladed rotatable ram to said arm, means to support said arm and mechanism to vibrate said ram, substantially as specified.

**No. 69,632. Plough. (Charruc.)**

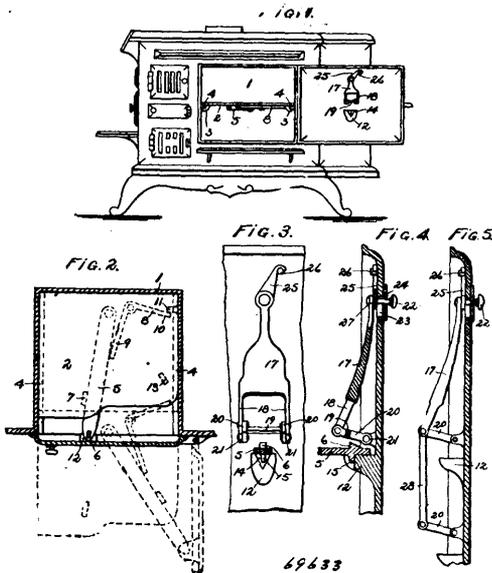


The Parlin and Orendorff Co., Canton, Illinois, assignee of William H. Parlin, Washington, and Edward M. Heylman, Canton aforesaid, 10th December, 1900; 6 years. (Filed 19th November, 1900.)

*Claim.*—1st. A caster wheel controller for ploughs, comprising a pair of arms pivoted independently on the vertical extension of the caster wheel shaft and extended in opposite directions, a toggle joint connecting the ends of the arms, projections on the axle shaft to bear against the arms, stops to hold the arms against swing in one direction and a spring to hold the toggle joint extended. 2nd. A caster wheel controller for ploughs comprising a pair of arms pivoted independently on the vertical extension of the caster wheel shaft, and extended in opposite directions, a toggle joint connecting the arms, a collar fixed on the shaft and having projections to engage the arms, stops to hold the arms from swinging away from the toggle joint, a rod connecting with one of the members and extended through one of the arms and a compression spring on the rod tending to hold the toggle joint extended. 3rd. A caster wheel controller for ploughs, comprising a pair of arms pivoted independently on the vertical extension of the caster wheel shaft, one of the arms being longer than the other, a toggle joint connecting the ends of the arms, projections on the shaft to bear against the arms, stops to hold the arms from swinging away from the toggle joint, and a spring acting through the short arm on the toggle joint to hold the toggle joint extended. 4th. A caster wheel controller for ploughs, comprising a pair of arms, pivoted independently on the vertical extension of the caster wheel shaft, one of the arms being longer than the other, a toggle joint composed of members of unequal length connecting the ends of the arms together, the longer member of the toggle being connected with the longer arm, projections on the shaft to bear against the arms, stops to the arms from swinging away from the toggle joint, and a spring acting on the shorter member of the toggle joint through the shorter arm and tending to hold the toggle joint extended. 5th. The combination with plough raising and sustaining mechanism, of a hand lever adapted to engage the plough raising mechanism and automatically releasable therefrom when the plough is raised. 6th. The combination with plough raising and sustaining mechanism, of a hand lever adapted to engage the plough raising mechanism and a spring to engage the lever when the plough is raised. 7th. The combination with plough raising and sustaining mechanism includ-

ing a notched rack, of a hand lever fulcrumed on the shaft of the rack by means of a longitudinal slot, a tooth on the lever to engage the notch of the rack and a spring to shift the lever on its fulcrum and draw the tooth out of the notch when the plough is raised. 8th. The combination with plough raising and sustaining mechanism, of a foot lever to release the plough, a hand lever to raise the plough and a spring to disengage the hand lever when the plough is raised.

**No. 69,633. Oven for Stoves and Ranges.**  
(Fournneau de poêles.)



Edmund C. Macartney and Pembroke D. Harton, both of Philadelphia, Pennsylvania, U.S.A., 10th December, 1900; 6 years. (Filed 19th November, 1900.)

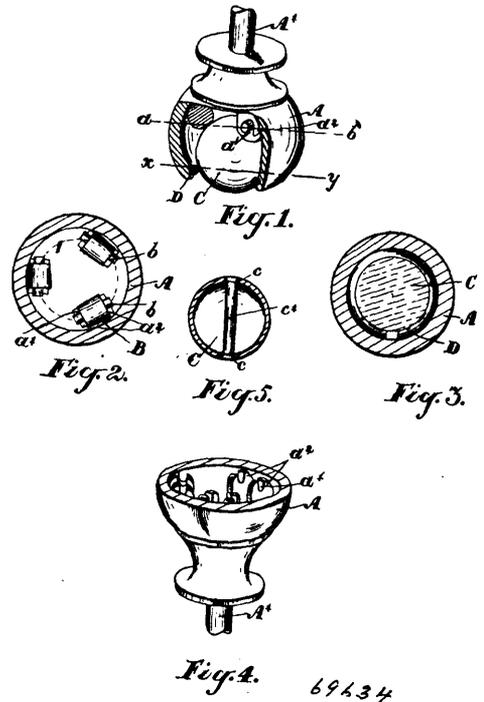
*Claim.*—1st. In an oven having ledges upon each side, a shelf resting upon the ledges, and formed with keepers to engage with the underside of the ledges, a bar pivotally secured upon the shelf having a projection upon its free end at the under side, a rest upon the oven door against which the projection abuts, and an upper face upon which the bar rests, a projection upon the upper side of the bar and a vertically movable catch upon the oven door engaging the projection and means for urging the free end of the bar into coincidence with the catch. 2nd. In an oven, a shelf, a pivoted bar projecting therefrom a catch upon the oven door comprising a vertically movable plate, a knob movable vertically within the door and connected with the plate a hook connected with the knob, a projection upon the door with which the hook engages when the knob is turned, and projection upon the bar with which the plate engages when the knob is turned in an opposite direction.

**No. 69,634. Caster. (Roulette.)**

Israel Kinney and the Gold Medal Furniture Manufacturing Company, all of Toronto, Ontario, Canada, 10th December, 1900; 6 years. (Filed 23rd November, 1900.)

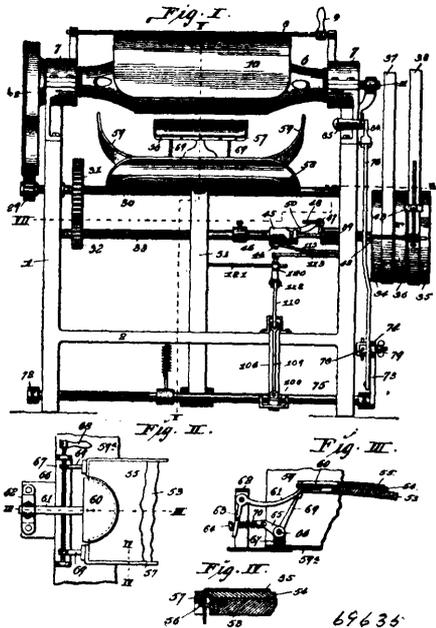
*Claim.*—1st. The combination with the shell having a lower orifice and annular edge and an internal groove located within such edge, and the ball, of a contractible divided ring designed to be sprung into the interior groove, so as to hold the caster ball in place, as and for the purpose specified. 2nd. The combination with the shell having a lower orifice and annular edge, and the ball, and the lower retaining device for the ball, of the depending lugs formed or cast in the shell and provided with notches and the rollers having pintles, which have bearings in said notches as and for the purpose specified. 3rd. The combination with the shell having a lower orifice and annular edge, and the ball, and the lower retaining device for the ball, of the depending lugs set at a greater or less angle to each other than a right angle and tapered rollers journaled in the lugs and arranged as shown and for the purpose specified. 4th. In a device of the class described, a ball comprising a hollow shell with two diametrically situated openings and a central pin extending through the openings and rivetted therein so as to be flush with the exterior of the shell as and for the purpose specified. 5th. The combination with the shell having a lower orifice, an annular

edge and a holding groove around such edge and the ball, of a divided ring designed to be sprung into the holding groove, so as to



reduce the size of the orifice through which the ball projects, as and for the purpose specified.

**No. 69,635. Ironing Machine. (Machine à repasser.)**

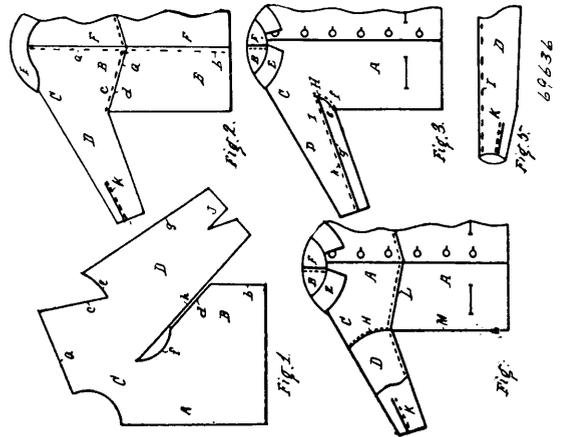


The Paragon Laundry and Machine Company, assignee of Charles Riesenweber, all of St. Louis, Missouri, U.S.A., 10th December, 1900; 6 years. (Filed 19th November, 1900.)

*Claim.*—1st. In an ironing machine, the combination of a revolving ironing table, a reciprocating ironing table, a rocker on which said

table is mounted, means for operating said rocker, links to which said rocker is pivotally connected, a swinging lever connected to one of said links, and a handle carried by said lever by which it may be moved to operate said links and raise and lower the ironing table, substantially as described. 2nd. In an ironing machine, the combination of a revolving ironing roll, a reciprocating ironing table, a rocker on which said table is mounted, links to which said rocker is pivotally connected, means for operating said rocker, a lever connected to one of said links, a notched guide in which said lever operates and a pivoted handle connected to said lever and arranged to engage said guide, substantially as described. 3rd. In an ironing machine, the combination of a revolving ironing roll, a reciprocating ironing table, a rocker on which said table is mounted, means for operating said rocker, an adjustment link to which said rocker is pivotally connected, and a lever adjustably connected to said link, substantially as described. 4th. In an ironing machine, the combination of a revolving ironing roll, a reciprocating ironing table, a rocker on which said table is mounted, means for operating said rocker, a pivoted adjustment link to which said rocker is pivotally connected, said link being provided with a slotted arm, a lever connected to said link, an adjustment bolt carried by said lever, and fitting in the slot in said arm, and a screw rod carried by said link fitted in said adjustment bolt, substantially as described. 5th. In an ironing machine, the combination of an ironing table having a recess for the neck-band of a shirt, a swinging support having a clamp-plate adapted to be moved into and out of the recess, a rock-shaft having arms adapted to be moved toward and from the table, means whereby the rock-shaft is mounted independently of the swinging of the swinging support, and means whereby the rock shaft is connected with the swinging support so that the movement of the rock shaft controls the movement of the swinging support, substantially as described. 6th. In an ironing machine, the combination of a table having a recess in one end thereof, a clamp-plate adapted to enter said recess, a pivoted bell crank by which said plate is carried, a rocking shaft, arms carried by said rocking shaft adapted to be thrown against the end of said table, a crank arm carried by said shaft, a stem carried by said crank arm fitting in said bell crank, and a spring on said stem bearing against said bell crank, substantially as described. 7th. In an ironing machine, the combination of a reciprocating ironing table, a rocker on which said table is carried, means for operating said rocker, a rack connected to said rocker, a driven pinion arranged to engage said rack, a toothed wheel located beside said pinion, said toothed wheel being provided with fewer teeth than said pinion, and a dog carried by said rack and adapted to engage the teeth of said toothed wheel, substantially as described. 8th. In an ironing machine, the combination of a reciprocating table, a rocker by which said table is carried, means for operating said rocker, a rack carried by said rocker, a box in which said rack operates, a driven pinion adapted to engage said rack, a toothed wheel located beside said pinion having fewer teeth than the pinion, a spring mounted on said box, and a dog carried by said rack adapted to travel onto said spring and to engage the teeth of said toothed wheel, substantially as described. 9th. In an ironing machine, the combination of a reciprocating ironing table, a rocker by which said table is carried, means for operating said rocker, a rack carried by said rocker, a box in which said rack operates, a spring supported plate in said box on which the rack bears, and a driven pinion adapted to engage said rack, substantially as described. 10th. In an ironing machine, the combination of a reciprocating ironing table, a rocker by which said table is carried, means for operating said rocker, pulleys, a belt shifter, a connecting rod having connection with said belt shifter, an adjustable arm carried by said rod and having a stepped arm, and a rod carried by said rocker adapted to strike against said arm and upright and to engage in the step of the arm of said upright, substantially as described. 11th. In an ironing machine, the combination of a reciprocating ironing table, a rocker by which said table is carried, pulleys, a belt shifter, a connecting rod having connection with said shifter, a foot lever and a treadle pivotally connected to said foot lever and having connection to said connecting rod, substantially as described. 12th. In an ironing machine, the combination of a reciprocating ironing table, a rocker by which said table is carried, pulleys, means for operating said rocker, a belt shifter, a connecting rod, a foot lever, a spring for sustaining said foot lever, a treadle pivotally connected to said foot lever, and having connection to said connecting rod, substantially as described. 13th. In an ironing machine, the combination of an ironing roll, a reciprocating ironing table, a rocker by which said table is carried, means for operating said rocker, a rod connected to said rocker and to the frame of the machine, a bumper on said rod, springs on said rod against which said bumper may strike and a connection between said bumper and said rocker, substantially as described. 14th. In an ironing machine, the combination of a reciprocating ironing table, a rocker by which said table is carried, means for operating said rocker, a rod connected to the lower end of said rocker and to the frame of the machine, springs on said rod, a bumper slidable on said rod, and a link connecting said bumper and said rocker, substantially as described. 15th. In an ironing machine, the combination of a reciprocating ironing table, means for moving said table, a revolving ironing roll, a driven shaft, a removable pinion on said shaft, a spur wheel carried by said roll, a plate movably mounted on said ironing roll, and a gear wheel carried by said plate arranged to mesh with said pinion and said spur wheel, substantially as described.

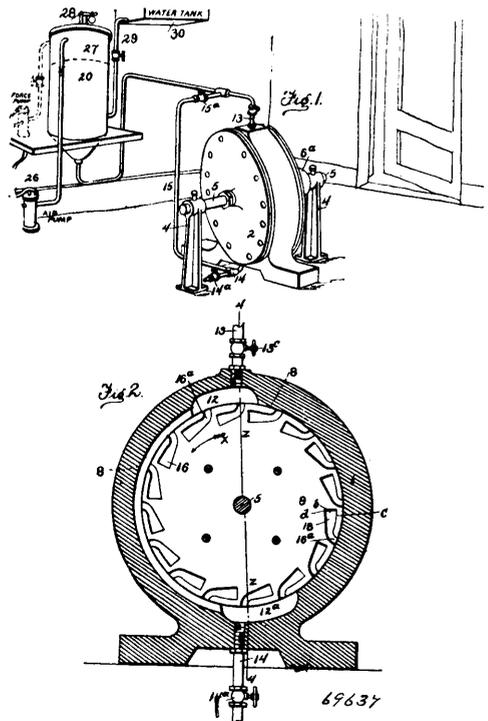
No. 69,636. Coat. (Habit.)



Jacob A. Sommers, assignee of Frederick G. Dodshon, both of Hamilton, Ohio, U.S.A., 10th December, 1900; 6 years. (Filed 2nd November, 1900.)

Claim.—As a new article of manufacture, a coat having its body formed with a vertical seam on each side and its sleeve seams, each a longitudinal seam, the vertical seams each extending in a straight line from the rear and of the scye seam to the bottom of the coat and the sleeve seams each extending from the forward end of the scye, the edges of the material forming the respective seams being of substantially the same length and also substantially straight except the scye seams, whereby the seams are smooth and are protected by the sleeves, substantially as set forth.

No. 69,637. Rotary Engine. (Machine rotatoire.)

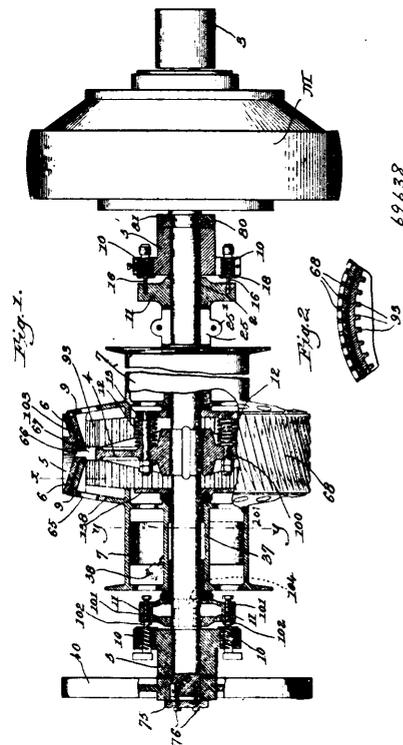


William H. Boyington, assignee William H. Preston, both of Valley Junction, Wisconsin, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

Claim.—1st. The hereinbefore described improvement in rotary engine, comprising in combination with the casing having an annular chamber provided with a valved inlet and a oppositely disposed valved outlet, a collecting space 12, formed in the annular wall of the chamber, into which the inlet discharges, said space 12, extending from the inlet in the direction of the piston rotation, a second collecting space 12', communicating with the valved outlet, said space extending in the direction of the forward movement of the piston, means for bringing the two spaces 12 and 12', into direct

communication with each other, a concentrically rotating piston within the casing, having its peripheral edge in close contact with the annular wall of the casing chamber, said piston having a series of peripheral pockets, the inlet ends of which are restricted in size, the body portion thereof enlarged and extended tangentially in the direction of rotation of the piston, all being arranged, substantially as shown and described. 2nd. In a rotary engine, the combination with the casing having an annular chamber provided with a valved inlet at the top and a valved outlet at the bottom, said chamber having a pocket extending from the inlet downward in the direction of the rotation of the piston, the outlet part of the chamber having a similar pocket extending along the up going side, the channel way 8<sup>a</sup>, for placing the two pockets in communication with each other, a concentric piston having pockets in the peripheral face thereof, said pockets having radially extending inlets and tangentially disposed collecting portions, the pockets of the down going side of the piston being in communication with each other and those of the up going side being closed off from each other and the chamber space, substantially as shown and for the purpose described.

**No. 69,638. Hoisting Apparatus. (Appareil de hissage.)**



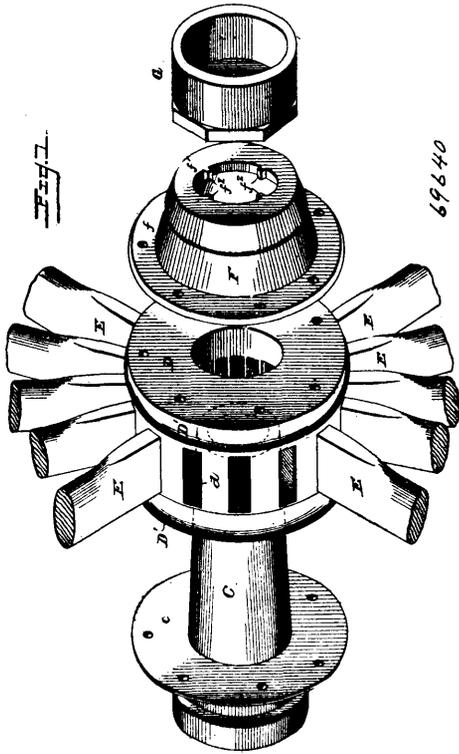
Rawson & Morrison Manufacturing Company, assignee Almon Evans Norris, all of Cambridge, Massachusetts, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

*Claim.*—1st. A hoisting apparatus including a shaft, a clutch member fixed thereon, a friction drum loose thereon and constituting a movable clutch member, and means to cause the engagement of said clutch members, said means comprising a non-rotating support or abutment adjacent said movable clutch member, a non-rotating collar on said shaft between said movable clutch member and said support or abutment, said collar being split or separable to permit its removal from said shaft to thereby allow movement of the movable clutch member on said shaft and separation of said clutch members, and a screw mounted in one of said parts outside the periphery of shaft, and means to rotate said screw and thereby move said collar lengthwise of said shaft and occasion the engagement of said clutch members. 2nd. A clutch mechanism for a hoisting apparatus comprising a shaft, fixed and movable clutch members mounted thereon, a fixed support or abutment, a non-rotating thrust collar on said shaft, a screw mounted in one of said two last named parts and operating to advance the collar, said screw being outside the periphery of the shaft, means to operate the screw, and adjusting devices co-operating with the screw to compensate for wear, the rotation of said screw operating to force the collar longitudinally of the shaft and thereby cause the engagement of the clutch members. 3rd. A clutch mechanism for hoisting apparatus comprising a shaft, fixed and movable clutch members mounted on said shaft, a non-rotating support or abutment adjacent said movable clutch members, a non-rotating collar concentric with said shaft and exterior thereto between said movable clutch member and said support or abutment, an operating screw

mounted in said support or abutment outside the periphery of said shaft and operating against said non-rotating collar, means to rotate said operating screw and thereby occasion the engagement of the clutch members, and adjusting devices to compensate for wear. 4th. A clutch mechanism for a hoisting apparatus comprising a shaft, fixed and movable clutch members mounted on said shaft, a non-rotating support or abutment adjacent said movable clutch member, a non-rotating collar concentric with said shaft and exterior thereto between said movable clutch member and said support or abutment, adjusting screws mounted in said collar, operating screws mounted in said support or abutment outside the periphery of said shaft and engaging said adjusting screws, and means to rotate said operating screws, and thereby move the collar lengthwise of the shaft and occasion the engagement of the clutch members. 5th. In a clutch mechanism for hoisting apparatus, a main shaft, fixed and movable clutch members mounted thereon, a fixed support or abutment, a split thrust collar on said shaft between the abutment and movable clutch member, a screw mounted in the abutment and operating to give a longitudinal movement to said thrust collar, said screw being outside the periphery of the shaft, and adjusting devices co-operating with these screws to compensate for wear. 6th. In a clutch mechanism for a hoisting apparatus, a main shaft, fixed and movable clutch members thereon, a fixed abutment, a thrust collar on said shaft between the movable clutch member and abutment, a screw in said abutment and outside of the periphery of the shaft, an operating lever connected to the screw, the arc of movement of said lever being limited, and adjusting devices co-operating with the screw to compensate for wear, the turning of the screw operating to give the thrust collar the requisite longitudinal movement to cause the engagement of the clutch members. 7th. In a clutch mechanism for hoisting apparatus, a main shaft, fixed and movable clutch members on said shaft, a fixed abutment, a thrust collar on the shaft between the abutment and movable clutch member, a plurality of screws mounted in said abutment, and operating against the thrust collar, operating levers connected to said screws, means to operate said levers in unison through a limited arc, and means to adjust said screws in the abutment to compensate for wear. 8th. In a hoisting apparatus, a main shaft, fixed and movable clutch members, a fixed abutment, a thrust collar between the abutment and movable clutch member, a thrust pin in said thrust collar, a screw in said abutment, one of said last named parts having a socket at one end in which a projection on the other part rests, and means to adjust the screw in the abutment to compensate for wear. 9th. In a hoisting apparatus, a main shaft, fixed and movable clutch members, a fixed abutment, a split thrust collar between the abutment and movable clutch member, a plurality of screws in said abutment and outside of the periphery of the shaft, thrust devices between the screws and the collar, operating levers for said screws, means to operate said levers in unison, and means to adjust said screws in the abutment to compensate for wear. 10th. In a clutch mechanism for a hoisting apparatus, a shaft, fixed and movable clutch members thereon, a non-rotating support or abutment adjacent said movable clutch member, a non-rotating collar concentric with said shaft and exterior thereto between the said movable clutch member and said support or abutment, adjusting screws mounted in said collar, operating screws fitted in bearings in said support or abutment outside the periphery of said shaft, said operating screws having sockets in their ends in which the ends of the adjusting screws operate, and means to rotate said operating screws to move said collar lengthwise of the shaft and cause the engagement of the clutch members. 11th. In a clutch mechanism for hoisting apparatus, a shaft, a clutch member fixed thereon, and having a friction clutch surface, a movable clutch member loose on said shaft and having a co-operating friction surface, means to cause the engagement or disengagement of said clutch surfaces, and means to establish a current of air over said clutch surfaces during the rotation of the drum. 12th. In a clutch mechanism for hoisting apparatus, a shaft, fixed and movable clutch members thereon, each of said clutch members being provided with a friction clutch surface, one of said members having a series of heat radiating ribs adjacent the friction clutch surface, whereby the heat generated by said clutch surfaces is rapidly radiated, and means to cause the engagement or disengagement of said clutch members. 13th. In a clutch mechanism for hoisting apparatus, a shaft, fixed and movable clutch members on said shaft, each of said clutch members being provided with a friction clutch surface, and one of said members having a series of apertures or ducts there through adjacent to the friction clutch surface, whereby during rotation of the clutch the air circulate through said apertures or ducts and dissipates by convection the heat generated by the clutch surfaces. 14th. In a hoisting apparatus, a shaft, a clutch member fixed thereon and provided with a friction clutch surface, and a series of heat radiating ribs adjacent said clutch surface, a drum loose thereon and provided with a co-operating friction clutch surface, said drum having a series of apertures adjacent to the friction clutch surfaces, and means to cause the engagement or disengagement of said clutch surfaces, the rotation of the drum drawing the air through the same and out through the apertures whereby the heat generated by clutch surfaces is dissipated by convection. 15th. In a hoisting apparatus, a shaft, a clutch member fixed thereon and provided with a friction clutch surface, and a series of inclined heat radiating ribs adjacent said surface, a drum loose on the



tenons, a central longitudinal bore, and metallic bands encircling it at its ends, said bands lying entirely outside the line of the spoke



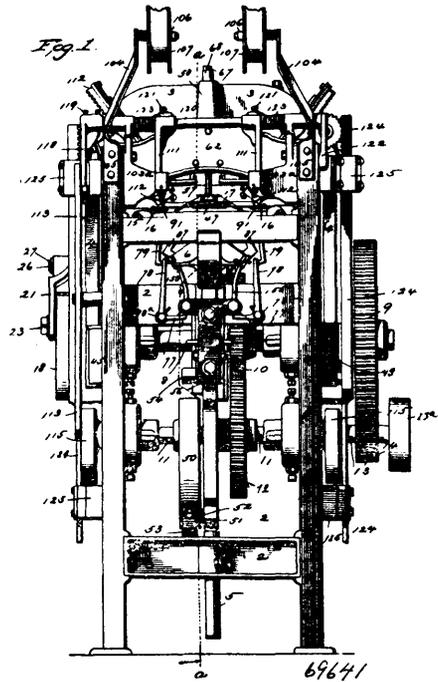
mortises. 2nd. The combination with a wooden center having radial mortises and flat ends lying in planes at right angles with the axis of the hub, of a metallic box provided with a collar fitting against one end of said centre, a metallic sleeve surrounding said box and having a flange fitting against the other end of the centre, means for clamping said parts together lengthwise, and spokes inserted into the mortises in said centre and sustained against lateral pressure by the wooden centre only. 3rd. A vehicle hub composed of a metallic box having a collar whose outer face lies in a plane at right angles with the axis of the box, a sleeve having a flange at one end loosely fitting said box and having its inner face lying in a plane at right angles with the axis of the box, a wooden centre provided with mortises for the spoke tenons and having flat ends at right angles with the axis of the hub and provided with encircling bands of metal lying entirely outside the line of the spoke mortises, and a point band screwed on the outer end of the box and adapted to impart an endwise clamping movement to the sleeve, said center lying between the collar and the flange with its ends in contact therewith substantially over their entire surface. 4th. As a new article of manufacture, a sleeve for a hub, having internal flanges at each end, and three or more inwardly projecting radial lugs on one of said flanges, whereby said sleeve can be centered on a hub box by dressing off the ends of said lugs. 5th. As a new article of manufacture, a sleeve for a hub, having internal flanges at each end at right angles with the axis of the sleeve, a flaring flange on one end of the sleeve, and radial ribs connecting said flaring flange with the end flange.

**No. 69,641. Machine for Manufacturing Veneer Dishes or Trays.** (*Machine pour la fabrication de plats en bois.*)

The American Mercantile Company, Dayton, Ohio, assignee of Norman E. Brown, St. Joseph, Michigan, U.S.A., 13th December, 1900; 6 years. (Filed 14th March, 1900.)

*Claim.*—1st. In a dish former, the combination with a shaft and means for actuating the same, a blank folder supported on a frame having a plurality of hinged folding wings, a dish form carried by a plunger which is provided at its opposite end with a roller, said dish former provided with staple clenching anvils, a slide bar slidably connected to the plunger, and a pair of bifurcated anvil engaging arms pivoted to said slide bar, cam having a loop secured thereto located on said shaft, a roller journaled on the plunger and engaging with said cam, and roller on said slide bar to be operated on by the loop on said cam, substantially as and for the purpose described. 2nd. In a dish former, the combination with means arranged in the path of the dish forming blank whereby the central end portions of the blank are bent inside of the overlapping corner end portions of a pair of dish forming dies one of which is yieldingly supported in a frame, hinged folding wings carried by one of said dies, and arms

extending from the frame and secured to said wings. 3rd. In a dish former, the combination with means arranged in the path of the



dish forming blank whereby the central end portions of the blank are bent inside of the overlapping corner end portions, of a pair of dish forming dies one of which is yieldingly supported in a frame, hinged folding wings carried by one of said dies, arms extending from the frame, and secured to said wings, and a yieldingly supported spring presser foot. 4th. Mechanism for forming veneer dishes and the like, consisting of vertically reciprocating plunger and slide and means, as described for actuating the same, a dish form mounted on said plunger and provided with staple clenching anvils, a blank folder supported on a frame and having a plurality of vertically operating hinged wings located above the dish form, pivoted arms adapted to hold said wings in downwardly projected position upon the dish form, and arms pivoted to said slide and arranged to contact with and control the staple clenching anvils, substantially as and for the purpose set forth. 5th. In a machine for making dishes or trays, the combination of a plunger supporting a dish form and mechanism for actuating said plunger, blank gripping arms pivoted on the frame of the machine, and spring held arms pivoted to the frame and adapted to engage and rock said blank gripping arms, with lugs integral with said plunger and adapted to engage with the spring held pivotal arms whereby the spring held pivotal arms and blank gripping arms are rocked, substantially as and for the purpose set forth. 6th. A blank bender and folder, consisting of a form or support for the blank, a presser foot for holding said blank thereon, vertically reciprocating device provided with wings arranged to fold or bend the sides of the blank over upon the form, a vertically reciprocating plunger supporting said form, said plunger provided with lugs, pivotal arms arranged to be engaged by said lugs, gripping arms pivoted to the frame and in contact with said pivotal arms, and means substantially as described for actuating the plunger and dish forming mechanism, substantially as and for the purpose set forth. 7th. In a dish forming machine, the combination of feed mechanism for feeding the blanks, a bed having guide ways and openings at the ends of such guide ways, a blank cutter, a waste discharge, consisting of a vertically slotted support, a slide, means as described for vertically reciprocating said slide, angle arms having pivotal bearing on said slide and having their upper ends arranged to project through such openings in the bed, a stop lug in the vertical path of said angle arms to distend said arms, and means for returning said arms to their normal or contracted position, substantially as and for the purpose set forth. 8th. In a waste discharge, consisting of a bed piece or table having stock guiding ways, the combination with a plate secured to said table and having vertically slotted depending portion with a transverse lug, a slide having vertically slidable connection with said plate, said slide plate provided with a stud having vertical slide bearing in said slotted plate and provided with a pair of inwardly extending angle arms, said arms having pivotal bearing on said stud, means for retracting said slide plate and stud and the angle arms, of mechanism intermediate the main driving shaft and said waste discharge for actuating said slide plate and arms, substantially as and for the purpose set forth. 9th. A staple former and driver, consisting of rigidly mounted shell or casing having a

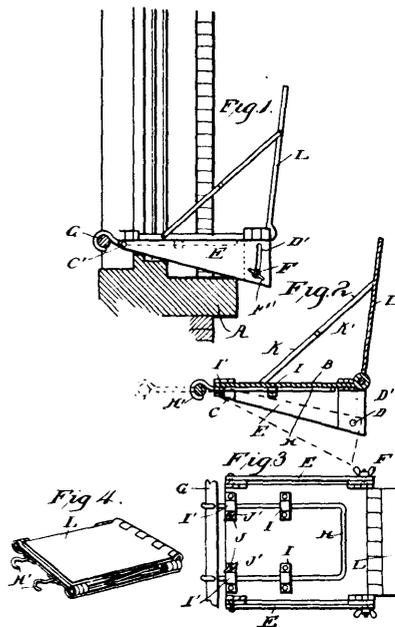
face plate provided with a bayonet slot therein, staple forming and driving slides arranged to act conjointly to a predetermined point, an arm pivoted to the staple driver slide and arranged to operate the staple former, a pin carried by such arm and projecting in said bayonet slot, and a spring controlled staple retainer, said staple driving slide provided with a toothed rack meshing with gearing, mechanism intermediate a drive shaft and said gearing whereby the gearing is rotated and the slides actuated, in combination with wire feeding mechanism arranged to feed a predetermined amount of wire to said staple forming slide, substantially as and for the purpose set forth. 10th. In a staple forming and driving mechanism, the combination of a shell or casing having a face plate having a bayonet slot therein, staple forming and driving slides, an arm pivoted to the staple driver, and arranged to operate the staple former, a pin carried by such arm and projecting in said bayonet slot, and a spring controlled staple retainer having a lug arranged to contact with the staple driving slide whereby said retainer is depressed out of the path of the slides and forced to release the staple, said staple driving slide provided with a toothed rack, meshing gearing, mechanism intermediate a drive shaft and said gearing whereby the gearing is rotated and the slides actuated, with means for returning the slides to their relative positions, substantially as and for the purpose set forth. 11th. In a dish former, a female die yieldingly supported in the frame, a male die, and a plunger carrying the same, staple forming mechanism, anvils pivoted in said male die, a slide connected to said plunger, and vertically extending arms pivoted to said slide and arranged to operate said anvils, substantially as set forth. 12th. In a dish forming machine, the combination with a pair of dies, of means arranged in the path of the dish forming blank in advance of the dies, whereby the central end portions of the dish forming blank are bent inside of the overlapping corner end portions, substantially as set forth. 13th. In a dish forming machine, the combination with a pair of dies, of a pair of arms pivotally arranged in the path of the dish forming blank, and means for tilting said arms, whereby the central end portions of the dish forming blanks are bent inside of the overlapping corner end portions, during the reciprocation of the die, substantially as shown and in the manner specified. 14th. A dish forming machine, the combination with a pair of dies, one of which is mounted on a vertically reciprocating plunger, of a pair of oscillating arms having grooved heads in the path of the dish forming blank, and mechanism intermediate said die carrying plunger and arms, whereby they are oscillate and the central end portions of the blank bent down and inside of the dish, at predetermined intervals, during the reciprocation of the die carrying plunger, substantially as shown and in the manner specified. 15th. A staple former and driver, consisting of rigidly mounted shell or casing having a face plate provided with a bayonet slot therein, staple forming and driving slides arranged to act conjointly to a predetermined point, an arm pivoted to the staple driver slide and arranged to operate the staple former, a pin or roller carried by such arm and projecting in said bayonet slot, whereby the conjoint action of the slides is discontinued, and staple retaining block, mechanism intermediate a drive shaft and said staple driving slide, in combination with wire feeding mechanism arranged to feed a predetermined amount of wire to said retaining block, substantially as and for the purpose set forth. 16th. A staple former and driver comprising a rigidly mounted shell or casing, staple forming and driving slides arranged to act conjointly to a predetermined point, staple retainer, in the path of said slides, and mechanism for operating said slides, and disengaging same at a predetermined point and retract the staple retainer from the path of the slides. 17th. Machine for forming veneer dishes and the like, comprising a pair of dies, means for actuating same, mechanism for feeding a predetermined quantity of veneer to cutting and scoring knives, and means arranged in the path of the dish forming blank, in advance of the dies, whereby the central end portions of the blank are bent inside of the overlapping corner end portions, and staple forming and driving mechanism arranged to form and drive the staple into the overlapping ends of the blank simultaneously with the co-action of the dies.

**No. 69,642. Window Chair.** (*Chaise de fenêtre.*)

Peter Carmant Campbell, Brooklyn, New York, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

*Claim.*—1st. In a window chair, the combination with the seat, of a frame slidably secured to the under side, means for securing the seat and frame in any adjustment, hooks at the inner end of the frame, and a rod engaged by said hooks and adapted to be secured across the window opening inside the room, substantially as described. 2nd. In a window chair, the combination with the seat, of supporting plates adjustably secured to the sides thereof, whereby the seat may be levelled up, substantially as described. 3rd. In a window chair, the combination with the seat, of supporting plates pivotally secured to the sides thereof at its front end, and adjustably secured thereto at its rear end, substantially as described. 4th. In a window chair, the combination with the seat, of flaps hinged to the sides thereof at its front and rear ends, and supporting plates pivotally secured to the front flaps, and adjustably secured to the rear flaps, substantially as described. 5th. In a window chair, the combination with the seat, of front and rear flaps hinged to its sides, supporting plates pivoted to the front flaps and provided with curved slots near their rear ends, bolts projecting from the rear

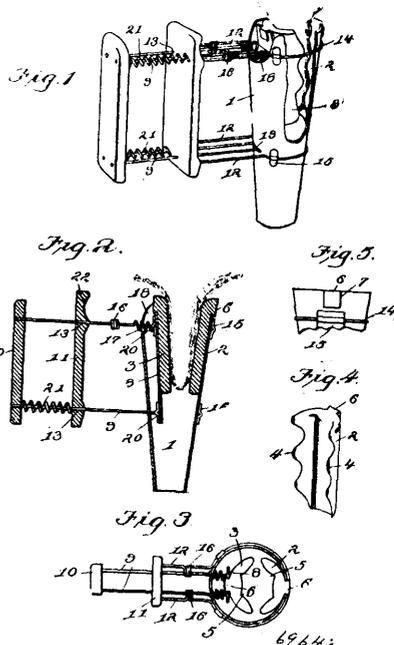
flaps through said slots, and securing nut, substantially as described. 6th. In a window chair, the combination with the seat,



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of supporting plates pivotally connected to the sides thereof to permit of their folding under the seat, and pivoted at their front ends to permit of their pivotal movement in planes at right angles to those of the folding movement, substantially as described. 7th. A window chair provided with a seat adjustable in length and folding adjustable side supporting plates, substantially as described. 8th. A window chair provided with a folding back, a seat adjustable in length, and folding side supporting plates adjusting to level up the seat, substantially as described.

**No. 69,643. Cow Milker.** (*Appareil à traire les vaches.*)



69643

Reuben D. Roth, Mummansburg, Pennsylvania, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

*Claim.*—1st. In a cow milker, the combination with a case, of two clamps therein, and means for forcing them together with a yielding pressure, substantially as described. 2nd. In a cow milker,

the combination with a case, of two curved clamps therein, the edges of which are provided with interlocking projections, and means for forcing one of said clamps toward the other one with a yielding pressure, substantially as described. 3rd. In a cow milker, the combination with a case, of two clamps therein, one of which is secured to the side of the case and the other one is movable, and two handles exteriorly of the case for causing the movable clamp to move towards the stationary one, substantially as described. 4th. In a cow milker, the combination with a case, of two clamps therein, the top of the case and of the plate being provided with a recess, of two clamps, the top of which is provided with a projection to fit within one of the recesses, and means exteriorly of the case for moving the plate and its clamp toward the other clamp, substantially as described. 5th. In a cow milker, the combination with a case, of a plate therein, two clamps, one of which is secured to the plate, two wire loops around the case, the end of one of which is provided with closed coils, a handle on the ends of said looped wires, wires secured to the plate, the intermediate portions of which project through the case and the handle, and the inner ends of a portion of which wires are each provided with a coil, a handle secured to the outer ends of the wires projecting outward from the plate, and springs on said wires between the handles, substantially as described.

**No. 69,644. Tobacco Pipe Cleaner.**

(Nettoyeur de pipe à tabac.)

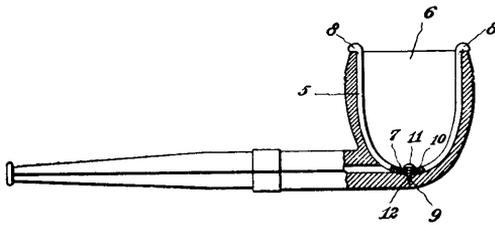
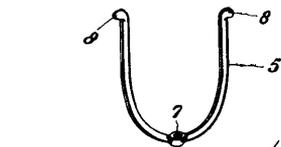


FIG. 2.



69644

William Herbert Smith, Burin, Newfoundland, 13th December, 1900; 6 years. (Filed 1st June, 1900.)

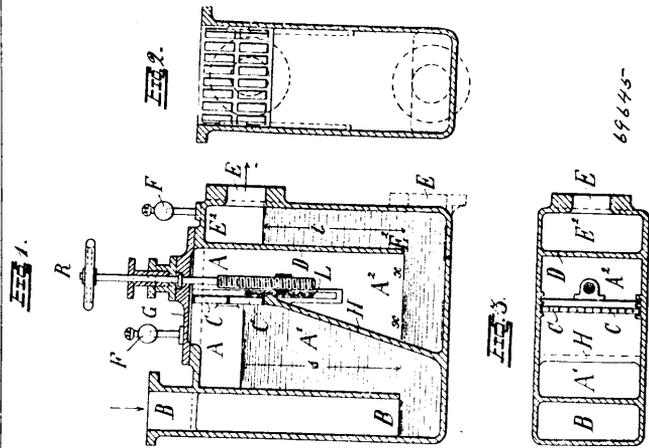
*Claim.*—1st. The combination with the bowl of a pipe, of a cleaner revolvably confined within said bowl and arranged to sweep close to the interior surface thereof, as and for the purpose specified. 2nd. The combination with the bowl of a pipe, of an elastic metallic cleaner closely conforming to the internal contour of the bowl, and means for pivotally and permanently confining said cleaner within said bowl, substantially as described. 3rd. The combination with the bowl of a pipe, of a cleaner conforming to the internal contour of the bowl, and provided with the exposed finger tips or knobs, and a pivot screw attached to the bottom of the bowl, having a smooth portion passed through the cleaner, and a head engaging with the top edge of the cleaner, substantially as described.

**No. 69,645. Sewage Box. (Boîte à égouts.)**

Ernest Körting, Körtingsdorf, near Hanover, Prussia, Germany, 13th December, 1900; 6 years. (Filed 27th August, 1900.)

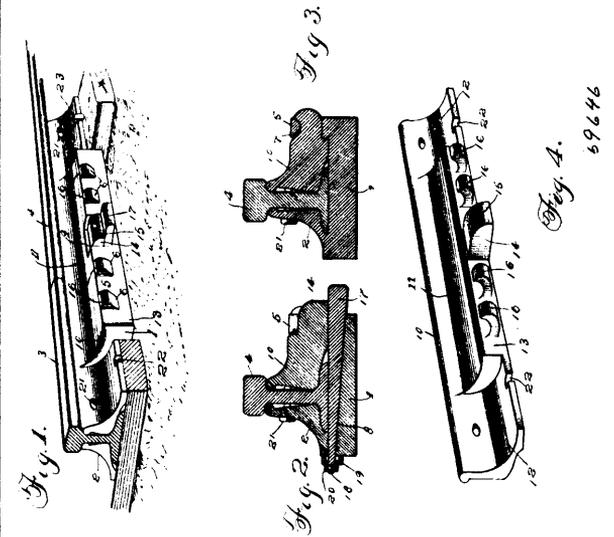
*Claim.*—1st. A sewage box for sewerage systems, comprising in combination a covered box, an inlet conduit (B) descending to near the bottom of said box, a wall (H) perforated above, dividing the box into two chambers, a slide regulating the area of said perforated part, air valves on the cover of the box, and an outlet passage (E<sup>1</sup>), all substantially as and for the purpose set forth. 2nd. A sewage box for sewerage systems, comprising in combination a covered box, an inlet conduit (B) descending to near the bottom of said box, a wall (H), perforated above, dividing the box into two chambers, a slide regulating the area of said perforated part, air valves on the

cover of the box, a partition (D) descending from the box cover dividing said second chamber and an outlet (E) communicating



with said third chambers, all substantially as and for the purposes set forth.

**No. 69,646. Rail Joint. (Joint de rails.)**

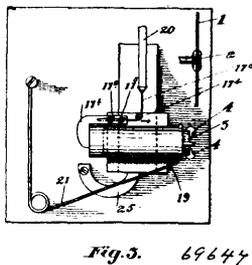
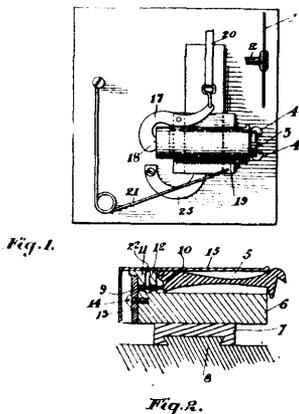


William F. Sellers, Gallitzin, Pennsylvania, U.S.A., 13th December, 1900; 6 years. (Filed 24th November, 1900.)

*Claim.*—1st. A rail joint comprising a chair, having a fixed longitudinal fish plate, which is hingedly connected to the chair and swings vertically toward and away from the fixed fish plate, and a wedge driven between the hinged fish plate and the chair and disposed transversely of the fish plate, said wedge forming a lock for the hinged fish plate. 2nd. A rail joint, comprising a chair, having a fixed fish plate at one longitudinal edge, and an opposite longitudinal rib, a removable fish plate to fit against the inner side of the rib, and a transverse wedge located between the fish plates and the chair. 3rd. A rail joint comprising a chair, having a fixed fish plate, an opposite upstanding longitudinal rib, an opposite fish plate having a detachable hinged connection with the rib and bearing against the inner side thereof, and a transverse key extending beneath the hinged fish plate for locking the same. 4th. A rail joint comprising a chair, having a fixed fish plate, an opposite longitudinal upstanding rib, an opposite fish plate having a detachable lug and slot hinged connection with the rib and bearing against the inner side thereof, and a transverse key extending beneath the hinged fish plate for locking the same. 5th. A rail joint, comprising a chair, having a fixed fish plate, and a transverse groove, an opposite hingedly connected fish plate, and a wedge-shaped key driven into the groove to lock the hinged fish plate. 6th. A rail joint comprising a chair, having a fixed longitudinal fish plate, an opposite longitudinal upstanding rib, and an intermediate transverse groove opening at one end through the rib and at the opposite end beneath the fish plate, an opposite fish plate, having a hinged connection with the rib and bearing against the inner face thereof, a wedge driven into the groove from the rib side of the chair, and a fastening device for the thinner end of the wedge. 7th. A rail joint comprising a chair, having a fixed fish plate, an opposite hingedly connected fish plate, a finger piece for rocking the latter fish plate, and means for

locking the same. 8th. A rail joint comprising a chair, having a fixed fish plate, and an opposite upstanding rib, a movable fish plate hingedly connected to the rib, and provided with an intermediate outwardly projecting finger piece projecting through a recess or opening in the rib, and means for locking the movable fish plate. 9th. A rail joint comprising a chair, having a fixed fish plate and an opposite upstanding rib, having a plurality of openings, a movable fish plate having a plurality of hook-shaped lugs hingedly engaging the openings of the rib, and means for locking the movable fish plate. 10th. A rail joint, comprising a chair, having an integral fish plate, an opposite integral upstanding rib provided with an intermediate notch or recess in its upper edge and opposite openings, and a transverse groove opening outwardly through the intermediate notch in the rib, a movable fish plate having an intermediate finger piece located within the intermediate notch, and opposite hook-shaped lugs hinged by engaging the openings in the rib, and a wedge-shaped key driven through the notch in the rib and into the groove in the chair to lock the movable fish plate.

**No. 69,647. Manufacture of Buttons.**  
(Fabrication de boutons)

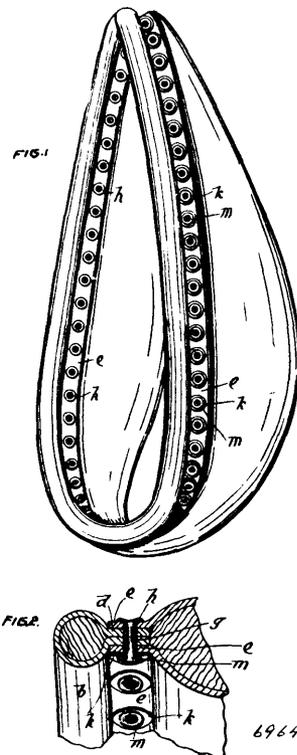


Dilman B. Shantz, Berlin, Ontario, Canada, 13th December, 1900; 6 years. (Filed 24th November, 1900.)

**Claim.**—1st. In combination the saw, a chuck comprising movable jaws, automatic means for closing the chuck jaws and means for bringing the saw and chuck together, said chuck being arranged with its axis parallel with that of the saw, as and for the purpose specified. 2nd. In combination with a saw, a chuck comprising movable jaws and automatically operating means for closing the chuck jaws as the saw and chuck are brought together, said chuck being arranged with its axis parallel with that of the saw, substantially as described. 3rd. In combination with a saw, a chuck comprising movable jaws, a sleeve for closing the jaws with means for automatically operating the sleeve as the chuck and saw are brought together, said sleeve and chuck being arranged with their axis parallel with that of the saw, substantially as described. 4th. In combination with a saw, a chuck having jaws movable transversely with respect to the axis of the saw, but with their pivots fixed with reference to the plane of the saw, means for closing the jaws of the chuck and connections for moving the chuck, said connections extending to and being connected with said means to act thereon to close the chuck jaws and move the chuck, substantially as described. 5th. In combination with a saw, a chuck having jaws movable transversely with respect to the axis of the saw but with their pivots fixed with reference to the plane of the saw, automatically operating means for closing the chuck jaws and operating means for bringing the chuck and saw into action without disturbing the parallelism of their axes, substantially as described. 6th. In combination, the chuck, means for closing the jaws of the chuck, and connections for moving the chuck, said connections extending to and being connected with said means to act thereon to close the chuck jaws and move the chuck, substantially as described. 7th

In combination, the chuck having jaws, the carriage for the chuck, the lever on the carriage, means operated thereby to close the chuck jaws and means for moving the chuck, said means being connected with said lever, substantially as described. 8th. In combination, the carriage, the chuck thereon having the jaws, the movable casing or sleeve for closing the jaws and the lever acting on the sleeve with means for operating the lever, substantially as described. 9th. In combination, the chuck having the jaws, the carrier for the chuck, means for moving the chuck, a sleeve movable in relation to the chuck for closing the jaws and means for operating the sleeve, said means being rendered effective when force is applied to move the chuck, substantially as described. 10th. In combination, the saw and chuck one of which is movable toward and from the other and jaws carried by the chuck, the movement of one of the parts causing the saw to act transversely across the face of the chuck, substantially as described. 11th. In combination, the saw, the chuck, head carrying chuck jaws and with its axis parallel with the axis of the saw, a sleeve movable longitudinally of the chuck head and means for operating the sleeve, substantially as described. 12th. In combination, the chuck head, the chuck jaws pivoted in recesses therein, the springs bearing against shoulders at the rear ends of the chuck jaws, said springs being contained in openings in the chuck head and a plate secured over the openings to hold the springs in place, substantially as described. 13th. In combination, the chuck head, the chuck jaws pivoted therein the two walls on the chuck head with a space between and an opening in one of the walls leading to the space for the passage of dust, the said chuck jaws being under pressure of springs located in said openings, substantially as described. 14th. In combination, the saw, the chuck head, one of said parts being movable toward and from the other, the jaws carried by the chuck and pivoted at one end and guiding means for maintaining these pivots at the same distance from the saw throughout the sawing operation, substantially as described. 15th. In combination, a chuck comprising movable jaws, a device for acting upon the material held by the chuck, said device and chuck being arranged with their axis parallel, and means for closing the chuck actuated by the same force which brings the chuck and said device together, substantially as described. 16th. In combination with a saw, a chuck comprising movable jaws and operating means for closing the chuck jaws as the saw and chuck are brought together, said chuck being arranged with its axis parallel with that of the saw, substantially as described.

**No. 69,648. Horse Collar.** (Collier de cheval.)

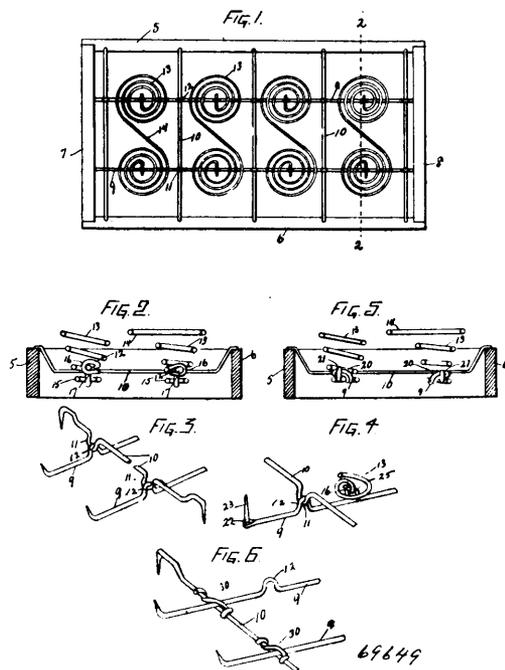


Henry Lawrence Gulline, Granby, Quebec, Canada, 13th December, 1900; 6 years. (Filed 24th November, 1900.)

**Claim**—1st. In a horse collar a series of eyelets for connecting the rim to the body of the collar. 2nd. In a horse collar a series of

eyelets for connecting the rim to the body of the collar, each of said eyelets consisting of a bush, *g*, having a flanged head *h* and a burr *k*, substantially as described, and for the purpose set forth.

**No. 69,649. Cushion Spring. (Coussinet à ressort.)**



William Henry Bates, Jackson, Michigan, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

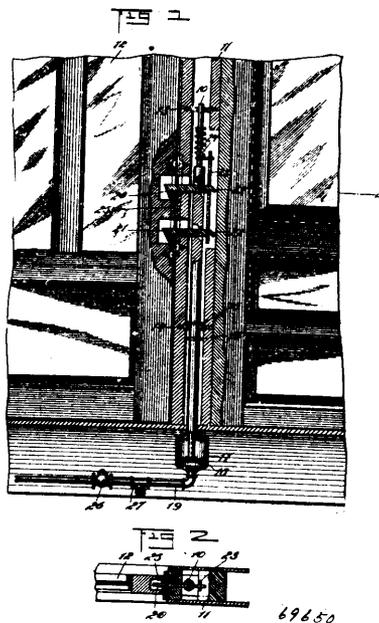
*Claim.*—1st. In a device of the class described, the combination with supporting wires or rods having deflected portions forming enclosures, of conical, convolute springs having hooks lying appreciably above their terminal convolutions and engaged with the deflected portions to hold the terminal convolutions against the supporting wires. 2nd. In a device of the class described, the combination with a frame, of supporting wires connected thereto which have upwardly turned kinks, stay wires having downwardly turned kinks engaged with the kinks of the supporting wires, and springs connected to the said supporting wires, substantially as shown and described. 3rd. In a device of the class described, the combination with a frame, of supporting wires having their terminals turned upward by and engaged with the frame, stay wires passed beneath the supporting wires, and having their extremities bent downwardly and engaged with the top of the frame, the stay wires having downwardly directed kinks which receive the kinks or bends of the supporting wires and springs connected with the supporting wires, substantially as shown and described. 4th. In a device of the class described, the combination with a supporting wire of a conical convolute spring, one of which is provided with a hook and the other with a loop to receive and engage the hook, the spring having its element disposed appreciably above the lower convolution of the spring, whereby when the hook and loop are in engagement, the wire will be held against the lower convolution of the spring, substantially as shown and described. 5th. In a device of the class described, the combination with a supporting wire having an upwardly directed bend, of a conical, convolute spring, the wire at the lower minor end thereof being taken upwardly above the lowermost convolution to cross the plane of the latter, and having a hook extending diametrically of the spring above the lower convolution thereof, said hook being engaged with the upwardly directed portion of the wire, to hold the wire in the angle of crossing of the end of the wire and lower convolution and whereby the lower convolution is held against the supporting wire.

**No. 69,650. Door Locking Device. (Arrête-porte.)**

Ingwer Frank Redlfsen, Texarkana, Arkansas, U.S.A., 13th December, 1900; 6 years. (Filed 26th November, 1900.)

*Claim.*—1st. A locking and releasing means for sliding doors, comprising a longitudinally movable rod, a cylinder into which one end of said rod extends, a piston on the rod within the cylinder, a motive agent pipe leading into said cylinder, and a door engaging latch carried by and adapted to be moved out of locking engagement by a movement of the rod, substantially as specified. 2nd. A locking and releasing device for doors, comprising a vertically movable rod, a cylinder in which the lower end of said rod engages, a piston on the rod within the cylinder, means for supplying a

motive agent to the interior of said cylinder, a hook latch extended through an opening in said rod and having pivotal connection with



the rod, and a fixed plate having an opening into which the inner end of said latch passes, substantially as specified. 3rd. A door locking and releasing device, comprising a vertically movable rod, latches extended through openings in said rod and pivoted to the rod, a fixed plate having openings through which the inner ends of said latches pass, a keeper plate having openings to receive the outer hook ends of said latches, the said keeper plate being secured to the door, a spring for moving the rod downward, and an air pressure mechanism for moving the rod upward to release the latches from their locking connection with the door, substantially as specified. 4th. A locking and releasing mechanism for doors, comprising a vertically movable rod, latches having swinging connection with said rod and adapted for engagement with the door, a cylinder in which the lower end of said rod engages, a piston on the rod within the cylinder, a pipe leading into the cylinder below the piston, a valve in said pipe, and a nipple on said pipe between the valve and cylinder and adapted for attachment to a pump, substantially as specified. 5th. A locking and releasing device for doors, comprising a cylinder connected with a motive agent supply, a piston in the cylinder, a sliding rod with which the piston is connected, a latch pivoted to the rod, and a fixed part with which latch engages to swing it on its pivot when the rod is moved, substantially as described. 6th. A locking and releasing device for doors, comprising a cylinder connected with a motive agent supply, a piston in the cylinder, a sliding and spring pressed rod having one end connected with the piston, a latch pivoted between its ends to the rod, and a fixed part with which one end of the latch engages, substantially as and for the purpose set forth.

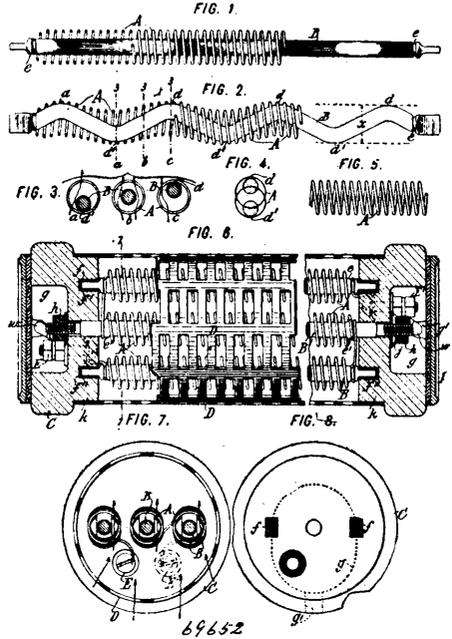
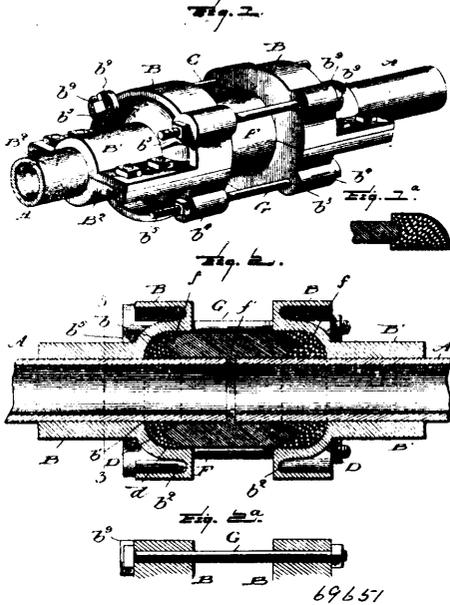
**No. 69,651. Pipe Coupling. (Joint de tuyau.)**

Solomon Robert Dresser, Bradford, Pennsylvania, U.S.A., 14th December, 1900; 6 years. (Filed 5th September, 1899.)

*Claim.*—1st. In a pipe coupling, a coupling plate or ring provided with an aperture for the passage of a pipe therethrough, and an elongated sleeve portion extending perpendicularly to the main body of said plate or ring, said plate or ring being divided in a plane passing through said sleeve portion, parallel to the axis thereof, means for drawing the parts of said elongated sleeve portion together to clamp it frictionally upon a pipe section, said ring or plate being provided with means for engaging coupling bolts, substantially as described. 2nd. In a pipe coupling, a coupling plate or ring provided with means for engaging coupling bolts, a central pipe receiving aperture, a sleeve portion extending perpendicularly to the main body of said plate or ring, and lateral flanges connecting said sleeve portion and the main body of the ring or plate, said plate or ring being formed in two parts divided in a plane passing through flanges on opposite sides of said sleeve portion parallel to the faces of said flanges and clamping devices engaging the parts of said flanges for clamping the sleeve portion upon a pipe section, substantially as described. 3rd. The combination with the meeting ends of two pipe sections, of a coupling plate surrounding each section and provided with clamping surfaces, elongated longitudinally of the pipe for frictionally engaging the same, means connected with each of said plates for clamping said surfaces upon the pipe but permitting the longitudinal movement of the pipe section there-

through, a packing ring in each of said plates surrounding the pipe section, a coupling sleeve engaging said rings and devices for drawing

support that its convolutions are pressed elastically into such tangential contact therewith. 3rd. An electric heater comprising an



said plates together, substantially as described. 4th. A pipe coupling comprising among its members a pair of coupling plates adapted to surround sections of pipes, each plate having the portion engaging the pipe divided, clamping means for forcing said divided portions together upon the pipe, a packing ring carried by each of said plates, a coupling sleeve for surrounding the meeting ends of two pipe sections, adapted to engage said packing rings, and coupling devices for drawing said plates together, substantially as described. 5th. A pipe coupling comprising among its members, a pair of coupling plates each being provided with laterally extending portions, a sleeve portion for surrounding a pipe provided with laterally extending flanges uniting said sleeve portion and said laterally extending portions, packing rings carried by said plates, a coupling sleeve adapted to engage said packing rings and to enclose the meeting ends of two pipe sections and coupling devices for engaging the laterally extending portions of said plates and drawing said plates together, substantially as described. 6th. A pipe coupling comprising among its members, a pair of coupling plates each provided with laterally extending portions, a sleeve portion adapted to engage a pipe section and lateral flanges connecting said sleeve portion and said laterally extending portions, said plates being each formed in two parts, divided in a plane passing through said flange and parallel with the faces thereof, clamping devices for engaging said flanges, for clamping the sleeve portion upon a pipe section, the coupling sleeve, packing rings interposed between said sleeve and said plates, and coupling devices engaging the laterally extending portions of said plates for drawing them together, substantially as described. 7th. A pipe coupling comprising among its members, a pair of coupling plates, each plate being composed of two parts provided each with a laterally extending portion, a semi-cylindrical sleeve portion for engaging a pipe section and flanges connecting the sleeve portion and said laterally extending portions, said plates having each a central packing recess, packing rings for said recesses provided each with an annular groove, a coupling sleeve provided with annular end portions wedge shaped in cross section for engaging the grooves of the packing ring, and coupling bolts passing through the said laterally extending portions of said plates for drawing said plates together, substantially as described.

open coil or helix of resistant wire of sufficient stiffness to retain its helical form, and a support therefor consisting of a stiff rod extended within said helix, of materially smaller diameter than the interior thereof, so that the helix is interiorly open for free circulation of air within it, and said rod bent to distort the helix and cause the latter to press elastically into tangential contact therewith. 4th. An electric heater comprising a supporting rod combined with a resilient resistant wire formed into successive loops constituting a coil, said coil extending in the same general direction as said rod, the rod passing through loops of said coil, the wire touching said rod at intervals, looped through the air out of contact with the rod between its touch points, and shaped to press elastically against the rod on different parts thereof so that the wire clings to the rod while its greater portion is free therefrom and exposed to circulation of air around it. 5th. An electric heater comprising an open helix of resilient resistant wire combined with a supporting rod extending within it, the rod and helix relatively conformed to cause the helix to press elastically against the rod so that the helix clings thereon, the helix having in each loop or convolution a length of wire exceeding the circumference of the rod, so that the greater portion of its wire is out of contact with the rod and exposed to circulation of air. 6th. An electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within said coil, the coil wound with its convolutions of the degree of openness required in the heater, and applied upon the rod without longitudinal stress so that its convolutions are free from any tendency to vary their relative spacing, essentially to the effect set forth. 7th. An electric heater comprising an open helix of resilient resistant wire, combined with a supporting rod within said helix of materially smaller diameter than the interior of the helix, the combined rod and helix extended in substantially straight direction, and the helix tending to assume a direction different from that of the rod so that it presses eccentrically against the rod, successive portions of the helix touching the rod at different points and pressing against it in different directions so that the helix clings upon the rod. 8th. The described electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within said coil, said coil and rod relatively conformed to make contact only at intervals longitudinally of the coil, the convolutions of the latter between the contact points being extended through the air out of contact with the rod. 9th. An electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within said coil, said rod formed with projections at intervals longitudinally thereof, adapted to make contact with the coil at such projections, the convolutions of the coil between such contact points being extended through the air out of contact with the rod. 10th. An electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within said coil, said coil distorted out of its natural shape by the rod, the rod being shaped to project beyond the natural outline of repose of the coil so to distort the coil, and making thereby tangential contact with the coil at its salient portions. 11th. An electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within said coil, said coil distorted out of its natural shape by the rod, the rod being formed with alternately opposite project-

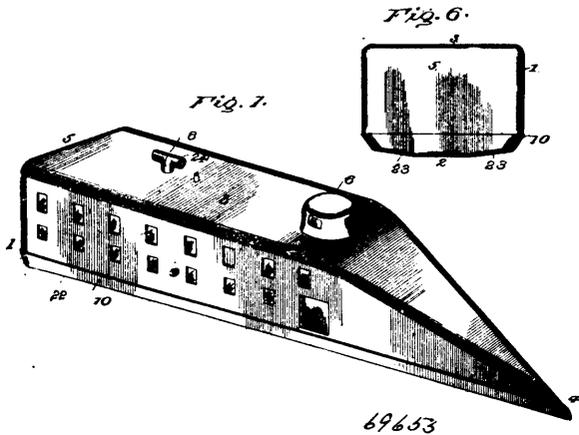
**No. 69,652. Electric Heater. (Chaufeur électrique.)**

Edward Ethel Gold, Manhattan, New York, U.S.A., 14th December, 1900; 6 years. (Filed 23rd January, 1899.)

**Claim.**—1st. An electric heater comprising an open coil or helix of resistant wire of sufficient stiffness to retain its helical form, and a support therefor consisting of a stiff rod extended within said helix, of materially smaller diameter than the interior thereof, so that the helix is interiorly open for free circulation of air within it, and supported by tangential contact of its convolutions with said rod at single points only in its circumference. 2nd. An electric heater comprising an open coil or helix of resistant wire of sufficient stiffness to retain its helical form, and a support therefor consisting of a stiff rod extended within said helix, of materially smaller diameter than the interior thereof, so that the helix is interiorly open for free circulation of air within it, and supported by tangential contact of its convolutions with said rod, and said helix so confined on said

ing or salient portions extending beyond the natural outline of repose of the coil, to distort the latter. 12th. In an electric heater the combination with a normally straight coil of resilient resistant wire, of a supporting rod therefor extended within it and formed with repeated bends adapted to distort the coil sufficiently out of its normal shape to cause it to cling upon the rod. 13th. The described electric heater comprising a coil of resilient resistant wire combined with a supporting rod extended within it, said coil and rod relatively conformed to cause the coil to cling upon the rod, and the wire at the opposite ends of the coil fastened upon the rod to prevent longitudinal displacement, substantially as set forth. 14th. An electric heater comprising opposite heads or supports, a plurality of supporting rods extended between said supports, a coil of resilient resistant wire carried on each rod, each such coil extending in the same general direction as its rod, with the rod passing through loops of such coil, and the wire thereof touching the rod at intervals, looped through the air out of contact with the rod between its touch points, and shaped to press elastically against the rod so as to cling thereto. 15th. An electric heater comprising opposite end heads, a group of parallel supporting rods extended between said heads, one of said rods passing through the heads and constructed as a bolt for connecting the heads together, and the remaining rods arranged symmetrically around said bolt having their ends socketed in said heads, and serving to hold the heads apart, and coils of resistant wire mounted on said rods. 16th. An electric heater comprising opposite end heads, a group of parallel supporting rods extended between said heads, one of said rods passing through the heads and constructed as a bolt for connecting the heads together, and the remaining rods having their ends socketed in said heads, coils of resistant wire mounted on said rods, and a tubular open work casing extending between said heads and enclosing said rods and coils.

**No. 69,653. Boat.** (*Vaisseau.*)



William Blair Motheral, North McGregor, Iowa, U.S.A., 14th December, 1900; 6 years. (Filed 17th February, 1900.)

*Claim.*—In a boat of the type described, a substructure comprising an air compartment closed at its edges by the sides of the hull and at its top and bottom by a floor and a sheet metal covering, the latter having its edge portions upwardly divergent and overlapping the lower edge portions of the sides which are inwardly deflected and secured thereto, and having lines of apertures in the surface rearwardly divergent and regularly spaced and in the bend, longitudinal disposed beams rearwardly divergent, tapering and placed between the lines of apertures, transverse ribs placed upon the longitudinal beams and supporting the floor, downwardly divergent braces interposed between the end portions of the transverse ribs and the inner lower edges of the bent up sides and disposed to come between the apertures at the bend of the said sides, and means for charging the compartment with air under pressure, substantially as described.

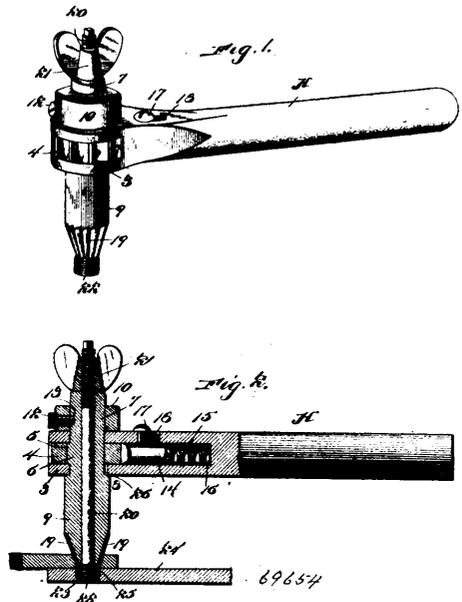
**No. 69,654. Hand Drill and Reaming Tool.**

(*Foret à main et fraise.*)

Albert Nathen Danley, Nebraska City, Nebraska, U.S.A., 14th December, 1900; 6 years. (Filed 26th March, 1900.)

*Claim.*—In a countersinking tool, the combination with a guide pin, one end of which is provided with an enlarged screw threaded head and the opposite end is squared and screw threaded adjacent thereto, of a tubular tool upon the pin, the end of which adjacent

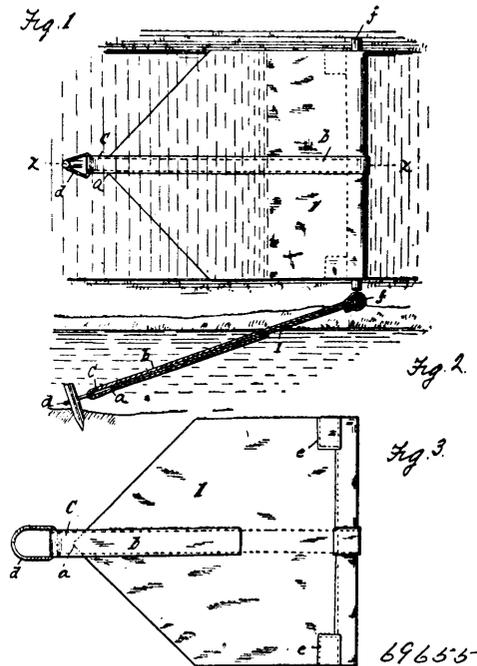
to the head is tapered and provided with cutting edges and the intermediate portion is provided with a shoulder and an integral key



above the shoulder, a bifurcated ratchet handle, each division of which is perforated to fit the tool above the handle, the wall of the lower perforation being recessed to fit over the key on the tool, an annular ratchet on the tool between the divisions of the handle, the inner wall of which is recessed to engage with the key upon the tool, a ring upon the tool above the handle, and a feeding nut upon the screw threaded portion of the guide pin above the top of the tool.

**No. 69,655. Irrigation of Arid Lands.**

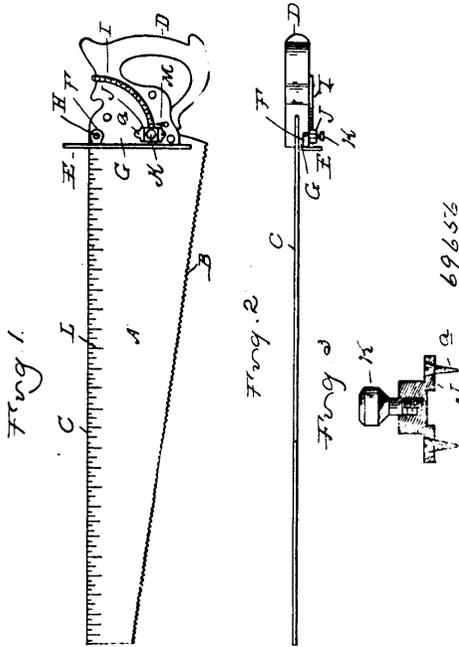
(*Arrosement des terres arides.*)



Luther Lee Smith, Augusta, Montana, U.S.A., 14th December, 1900; 6 years. (Filed 9th April, 1900.)

*Claim.*—A dam consisting of a piece of flexible waterproof material having a hem at one end and having its side edges converging, a reinforcing strip extending centrally of the piece of fabric and formed with a loop, a ring engaging said loop and adapted to be staked to the stream bed, and a pole located within said hem and adapted to extend from bank to bank or the stream in which the dam is placed, substantially as and for the purpose set forth.

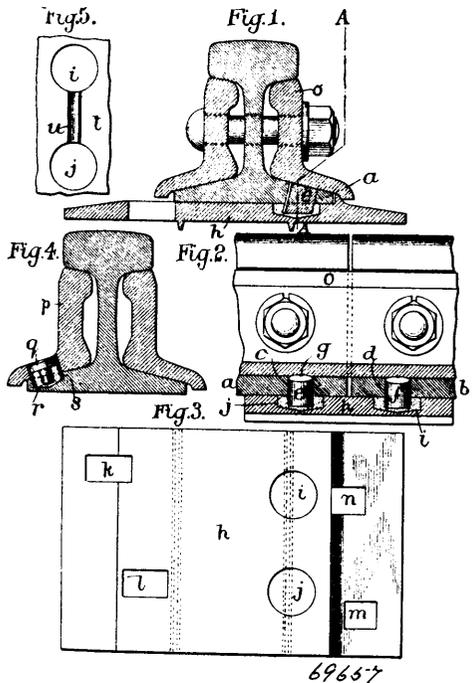
No. 69,656. Saw and Square. (Soie à équerre.)



John E. Spatz, Detroit, Michigan, U.S.A., 14th December, 1900; 6 years. (Filed 18th April, 1900.)

Claim.—In a combined saw and adjustable square, the combination with the saw proper having a straight edge formed thereon constituting the saw back and the stationary member of the square, the movable or adjustable square member comprising the arm pivoted upon the saw in operative relation to the back, a segment carried by the arm, and a clamp through which the segment passes for holding the latter in different positions relative to the straight edge, substantially as described.

No. 69,657. Electric Bond for Railway Rails. (Lien électrique pour rails de chemin de fer.)



Harold Pitney Brown, Montclair, New Jersey, U.S.A., 14th December, 1900; 6 years. (Filed 3rd May, 1900.)

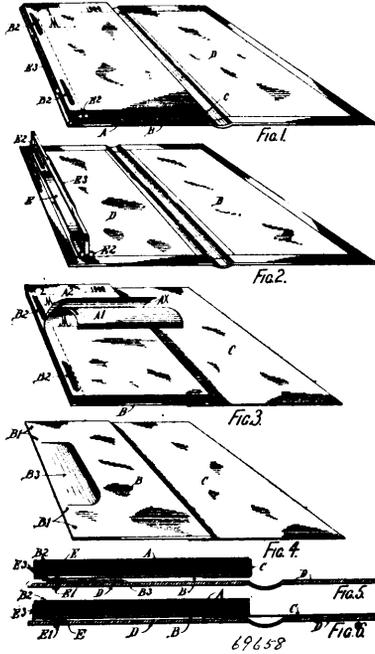
Claim.—1st. The combination with adjacent rails, of a bond plate arranged to overlap the meeting ends of the rails, the bond plate and the rails being provided, the one with electric conducting plugs fixed thereto and the other with bodies of plastic alloy in position to permanently engage the said plugs, substantially as set forth. 2nd. The combination with the adjacent rails, of a bond plate arranged to overlap the meeting ends of the rails and extended along the flanges at the bases of the rails, the said plate and the flanges at the bases of the rails being provided, the one with electric conducting plugs fixed thereto and the other with bodies of plastic alloy arranged to permanently engage the said plugs, substantially as set forth. 3rd. An electric bond comprising a plate provided with cups for holding bodies of plastic alloy and rails provided with electric conducting plugs fixed in their base flanges with their free ends projecting below the base flanges in position to enter the bodies of plastic alloy, substantially as set forth. 4th. An electric bond comprising a bond plate arranged to receive the meeting ends of railway rails and provided with cups for receiving bodies of plastic alloy and rails provided with electric conducting plugs fixed in their flanges and projecting therefrom in position to dip into the bodies of plastic alloy, the said plug being located in position to be covered by the usual angle plate, substantially as set forth. 5th. In combination, a bond plate adapted to receive the meeting ends of adjacent railway rails, and provided with cups for receiving bodies of plastic alloy and rails having electric conducting plugs fixed in their base flanges and projecting therefrom into the bodies of plastic alloy, the said plugs and the wall of the opening in which they are fixed being spaced from one another throughout a small extent of the periphery of the plug to form relief conduits between the body of plastic alloy and the top of the base flange of the rail, substantially as set forth. 6th. The combination with the base flanges of the rails provided with holes extending therethrough, of electric conducting plugs fixed in said holes and projecting below the rail bases and means for maintaining bodies of plastic alloy in permanent engagement with the ends of said plugs, substantially as set forth. 7th. The combination with rail bases having electric conducting plugs fixed therein and projecting below the bottoms of the rail bases, of a bond plate provided with cups in position to receive the projecting ends of said plugs and bodies of plastic alloy in said cups in engagement with the plugs, the projecting ends of the plugs being normally spaced from the walls of the said cups, substantially as set forth. 8th. The combination with rail bases provided with perforations therethrough, the walls of said perforations being amalgamated, of amalgamated electric conducting plugs fixed in said holes in the bases, and a bond plate provided with bodies of plastic alloy in position to permanently engage the said plugs, substantially as set forth. 9th. In an electric bond, the combination of two or more contiguous conductors, a receptacle formed in one conductor containing a plastic metal compound and a plug or rod electrically connected to a second conductor and dipping into the said plastic metal compound, substantially as set forth. 10th. In an electric bond, the combination of two meeting conductors, a hole formed in one conductor containing a plastic metal compound, and a plug, rod or projection electrically connected to a second conductor and dipping into the said plastic metal compound, the contact surfaces of said plugs and holes being amalgamated or rubbed and impregnated with a decomposable alloy of mercury, substantially as set forth. 11th. In an electric bond, the combination of two meeting conductors, a receptacle formed in one conductor, a plastic metal compound in said receptacle, a projection from the second conductor dipping into the said receptacle, and means for clamping or binding the two conductors together, substantially as set forth. 12th. In an electric bond, the combination of two meeting conductors, plugs or projections extending from same into holes in a third overlapping conductor, and a plastic metal compound contained in said holes, substantially as set forth. 13th. In an electric bond, the combination of two meeting conductors, plugs or projections extending from same into holes in a third overlapping conductor, a plastic metal compound contained in said holes and an adherent coating of amalgam on the contact surfaces of said plugs and holes, substantially as set forth.

No. 69,658. Counter Sales Book. (Livre de vente.)

Edward Milton Wildey, Sydney, New South Wales, Australia, 14th December, 1900; 6 years. (Filed 15th May, 1900.)

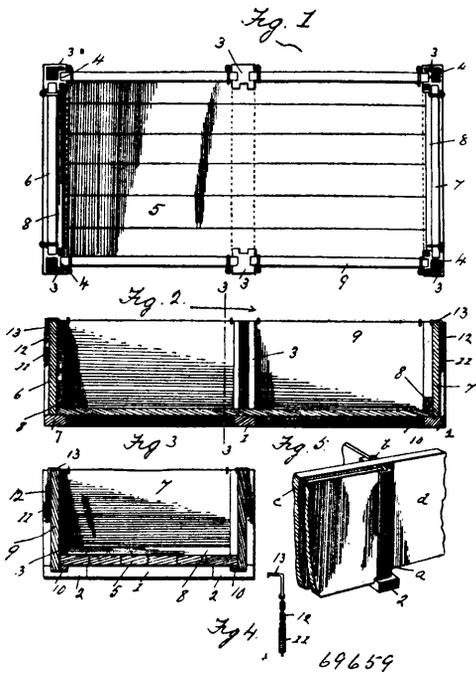
Claim.—1st. A counter sales book or tablet comprising a series of manifolding or copying sheets, with a carbon sheet affixed thereto, a "back" having a depressed tongue, an outer cover, and a frame having a bent up base portion adapted to receive thereunder said depressed tongue, the end portions of said base portion adapted to pass through and secured to said cover, and a hinged or pivoted bail connected to said base portion, and adapted to engage the edge portion of the tablet, substantially as specified. 2nd. A counter sales book or tablet, comprising a series of manifolding or copying sheets, with a carbon sheet affixed thereto, a "back" having a depressed tongue, an outer cover, and a frame having a base portion and a bail pivoted or hinged to upturned end terminals

of said frame, said base portion having having a upbent portion beneath which is received said depressed tongue, and adapted to



be passed through and secured to said "back," said "back" also adapted to be connected to sheets, substantially as specified.

No. 69,659. Vehicle Standard. (Montants de vehicules.)

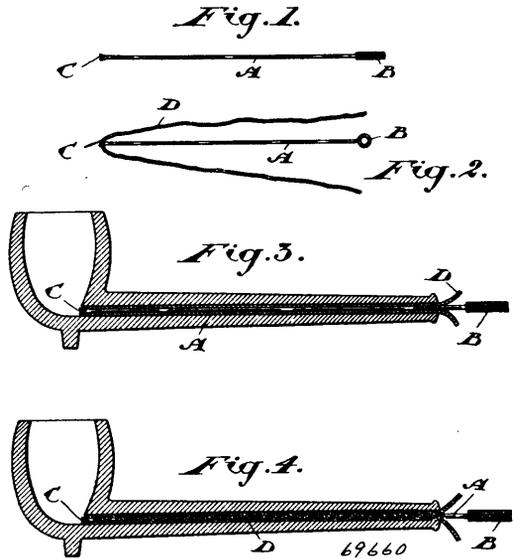


Thomas R. Carskadon, Keyser, West Virginia, U.S.A., 14th December, 1900; 6 years. (Filed 15th August, 1900.)

Claim.—1st. In vehicle bodies, standards having grooves facing transversely and longitudinally of the body, a series of bottom boards resting on the bolsters, a front board and end gate fitting in the grooves of the standards and having their lower edges resting on the bolsters in proximity to the end of the body, and strips on the front board and end gate protruding over and resting on the upper surfaces of the bottom boards, substantially as described. 2nd. In vehicle bodies, a series of bolsters, standards fastened to side boards fitting in grooves of the standards and so notched as to protrude below the lower surface of the bottom boards,

and stripes on the side boards protruding over and connecting with the under surface of the bottom boards, substantially as described. 3rd. In vehicle bodies, standards having grooves facing transversely and longitudinally of the body, a series of bottom boards resting on the bolsters, a front board and end gate fitting in the grooves of the standards and having their lower edges resting on the bolsters in proximity to the end of the body, and strips on the front board and end gate protruding over and resting on the upper surfaces of the bottom boards, side boards fitting in grooves of the standards and so notched as to protrude below the lower surface of the bottom boards, and strips on the side boards protruding over and contacting with the under surface of the bottom boards, substantially as described. 4th. In vehicle bodies standards having grooves facing transversely and longitudinally of the body, a series of bottom boards resting on the bolsters a front board and end gate fitting in the grooves of the standards and having their lower edges resting on the bolsters in proximity to the end of the body, and strips on the front board and end gate protruding over and resting on the upper surfaces of the bottom boards, side boards fitting in grooves of the standards and so notched as to protrude below the lower surface of the bottom boards and strips on the side protruding over and contacting with the under surface of the bottom boards and spring pressed hooks engaging the upper edges of the sides, front board and end gate, substantially as described. 5th. In combination, a standard comprising a shoe and two adjacent upright with an intervening space, the outer upright having a groove facing longitudinally of the body and the inner upright having a groove facing transversely of the body side boards fitting in the longitudinally facing grooves and in the space between the uprights one of the side boards on each side forming an extension, substantially as described. 6th. In combination, a central standard comprising a shoe and upright with grooves facing longitudinally of the body on each side and on the inner wall facing transversely.

No. 69,660. Pipe Cleaner. (Nettoyeur de pipes.)



Thomas B. Jebb, Orillia, Ontario, Canada, 14th December, 1900; 6 years. (Filed 19th November, 1900.)

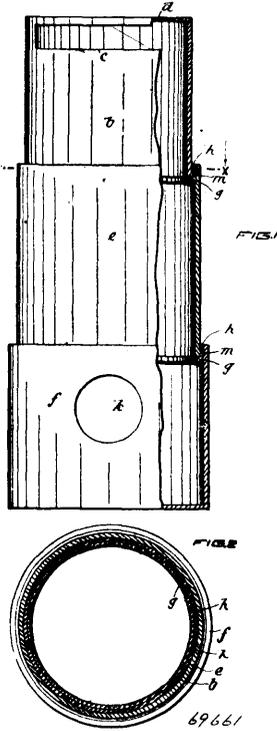
Claim.—1st. As a pipe cleaner a slender wire having a notch formed in one end and a handle at the other, substantially as and for the purpose specified. 2nd. As a pipe cleaner a slender wire having one end flattened and notched and the other end provided with a handle, substantially as and for the purpose specified. 3rd. As a pipe cleaner a slender wire having a notch formed in one end and a handle at the other, in combination with a piece of yarn or cord having its middle portion caught in the said notch, the thickness of the wire and cord being such that the cord may be twisted in a helix about the wire after the cleaner has been inserted in a pipe stem, and the length of the cord being such that its ends remain outside the stem when the cleaner has been inserted, substantially as and for the purpose specified.

No. 69,661. Catch Basin. (Bassin.)

Lewis Skaife, Montreal, Quebec, Canada, 14th December, 1900; 6 years. (Filed 23rd May, 1900.)

Claim.—1st. A catch basin comprising an intermediate section, an upper section and a lower section, the intermediate section having one end located in the adjacent end of one of the adjoining sections said intermediate section of uniform transverse area through-

out its exposed depth, and with its exposed exterior plane throughout, and means for supporting said intermediate section at the top



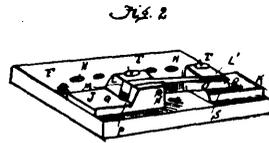
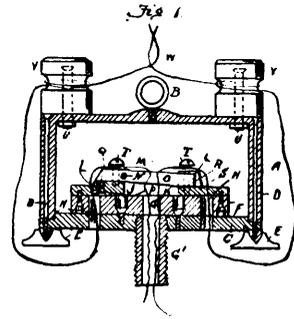
of said lower section substantially as described. 2nd. A catch basin comprising a bottom section with sewer connection, a top section with street opening and an intermediate section having one end located in adjacent end of one of the adjoining sections, said intermediate section, being of less transverse area than said bottom section and of uniform transverse area throughout its exposed depth, and with its exposed exterior plane throughout, and means for supporting said intermediate section at the top of said bottom section, substantially as described. 3rd. A catch basin of downwardly increasing transverse area and comprising a bottom section with sewer connection, a top section with street opening, and an intermediate section interchangeable with other intermediate sections of different lengths, substantially as described and for the purpose set forth. 4th. A catch basin comprising a top section *b* of uniform transverse area throughout its depth and having street opening *c*, an intermediate section *e*, of greater transverse area than said top section and of uniform transverse area throughout its depth and formed with an annular shoulder, *g*, for supporting said top section, a bottom section *f* having sewer connection *k* and being of greater transverse area than said intermediate section, and of uniform transverse area throughout its depth and formed with an annular shoulder *g* for supporting said intermediate section said intermediate section being interchangeable with other intermediate sections of different lengths, substantially as described. 5th. A catch basin comprising a top section *b* of uniform transverse area throughout the depth and having street opening *c*, an intermediate section *e*, of greater transverse area, than said top section and of uniform transverse area throughout its depth and formed with an annular shoulder, *g*, for supporting said top section, a bottom section *f* having sewer connection *k* and being of greater transverse area than said intermediate section, and of uniform transverse area throughout its depth and formed with an annular shoulder *g* for supporting said intermediate section, said intermediate section being interchangeable with other intermediate sections of different lengths, and distance flanges *m* located between the walls of the adjoining ends of said section, substantially as described.

**No. 69,662. Electric Cut-out. (Commutateur électrique.)**

Elza Pettet, Farmer City Illinois, U.S.A., 14th December, 1900; 6 years. (Filed 26th June, 1900.)

*Claim.*—1st. In a cut-out, the combination of a casing or box having a lid, a porcelain base mounted upon said lid, castings secured to said base upon opposite walls thereof, a vertically movable spring actuated lever mounted upon one side of the centre of its length in one of the castings and having its free end contacting the other casting, a piece of non-conducting material between the free end of the lever and the casting insulators upon the exterior of the box, and conductors connected to the insulators from thence through the lid

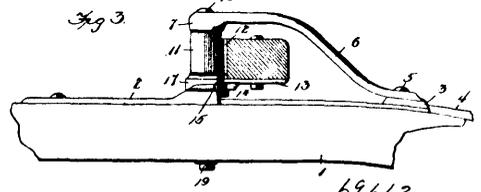
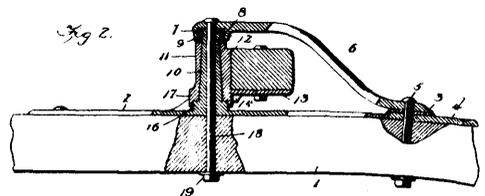
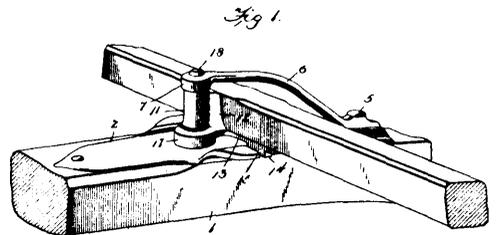
to the castings, and then to the lamp. 2nd. In a cut-out, the combination of a casing or box, a porcelain base mounted in said casing,



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a pair of castings secured to said base, a spring actuated vertically movable lever or bar pivoted upon one side of its centre to one of said castings and having its free end contacting the other casting, a piece of non-conducting material held upon one casting by the free end of the lever, insulators upon the exterior of the box, and conductors connected to the insulators and adapted to pass through the casings to the castings and then to a lamp. 3rd. In a cut-out, the combination of a casing or box, a porcelain base mounted in said casing or box, a pair of casting secured to said base and each formed with a projection one of said projections with a groove, a vertically movable lever pivoted upon one side of its centre in said groove, with its free end against the projection of the other casting, a piece of non-conducting material resting on said casting beneath the free end of the lever, and a spring beneath the other end of the lever and seated in a groove in the casting, insulators on the exterior of the casing, and conductors connected to said insulators and passed through the base to the castings and thence to the lamp, substantially as described.

**No. 69,663. Vehicle Coupling. (Joint de vehicules.)**

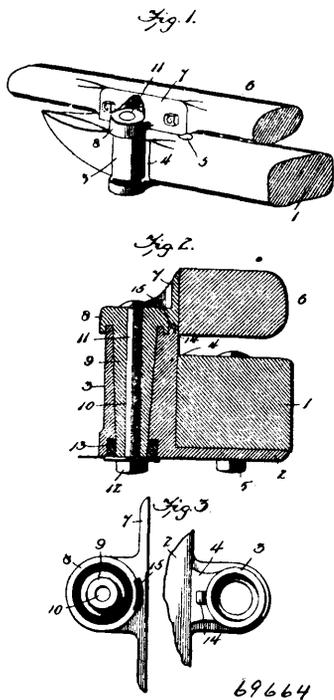


69663

Washington I. Wolverton, Avery, Ohio, U.S.A., 14th December, 1900; 6 years. (Filed 16th July, 1900.)

*Claim.*—1st. In a vehicle coupling, the combination with a support and a plate secured thereto provided with a hollow tapering post, and projecting stops of a double tree, a coupling iron secured thereto and provided with depending lugs and a hollow casing fitting over said post, a hammer strap fitting over the post, and a bolt for securing the parts together pivotally. 2nd. In a vehicle coupling, the combination with a tongue and a plate secured thereto provided with a hollow tapering post, and laterally projecting stops, of a double tree, a coupling iron secured thereto and comprising a horizontal plate having depending lugs, and a flanged casing fitting over the tapering post, a hammer strap provided with a cap fitting over the post, a yielding packing within the cap, and a bolt for securing the parts together. 3rd. In a vehicle coupling, the combination with a tongue and a plate secured thereto provided with a hollow tapering post, and laterally projecting stops, and at its rear end with a recess or socket, of a double tree, a coupling iron secured thereto, and comprising a horizontal plate having depending lugs, and a casing fitting over the post, and provided with a flange bearing against the front side of the double tree, a hammer strap provided with a cap at its front end, a packing for said cap, a bolt securing the rear end of the hammer strap, and a pivot bolt for securing the front end thereof. 4th. In a vehicle coupling, the combination with a tongue of a strap secured thereto provided with a hollow tapering post provided at its base with a collar, a double tree, a coupling iron secured thereto and comprising horizontal plate and a vertical casing, the latter having a depending flange, a hammer strap provided with a cap fitting over the post, a yielding packing within said cap, and a pivot bolt for securing the parts together.

**No. 69,664. Vehicle Coupling. (Joint de vehicules.)**

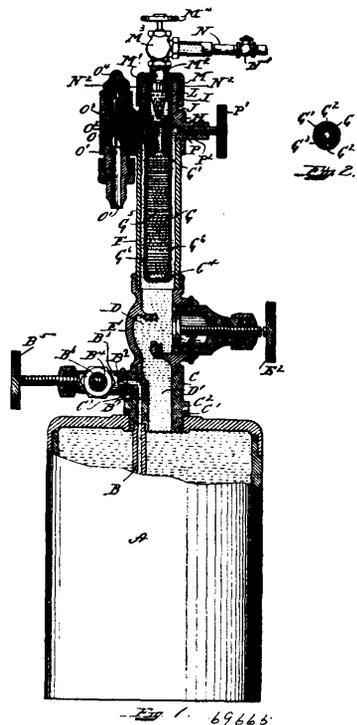


69664

Washington I. Wolverton, Avery, Ohio, U.S.A., 14th December, 1900; 6 years. (Filed 16th July, 1900.)

*Claim.*—1st. A vehicle coupling comprising a horizontal plate, and a vertically disposed cylindrical casing of tapering form, in combination with a coupling iron comprising a securing plate, a horizontal projecting cap, a hollow tapering post depending from said cap, and a pivot bolt. 2nd. A vehicle coupling comprising a horizontal plate and a vertically disposed hollow cylindrical casing of tapering form, provided with flanges, in combination with a coupling iron comprising a securing plate, having an integral horizontally projecting cap, and a hollow tapering post depending from said cap, a yielding washer between the casing and post, and a pivot bolt extending through said cap and post and held by a nut. 3rd. A vehicle coupling consisting of two members, one comprising a horizontal plate and a cylindrical casing of tapering form, provided with a flange and an upwardly projecting lug, and the other member comprising a securing plate formed with a segmental slot, a horizontally projecting cap, and a depending hollow tapering post, in combination with a yielding washer and a securing pivot bolt.

**No. 69,665, Carbonating Apparatus. (Appareil à carbonisation.)**



69665

Edward E. Murphy, Boston, Massachusetts, U.S.A., 14th December, 1900; 6 years. (Filed 16th August, 1900.)

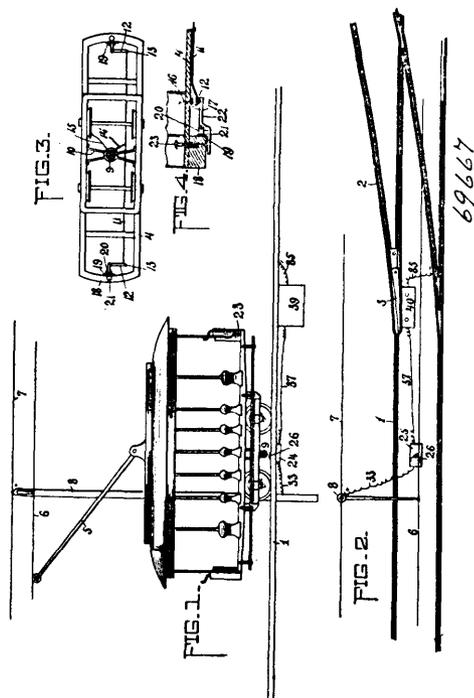
*Claim.*—In a carbonating apparatus, a liquid inlet pipe for supplying liquid under pressure, a gas inlet pipe for supplying gas under less pressure than that on the liquid, a mixing chamber for the gas and liquid in constant open communication with the liquid supply under initial liquid pressure and normally filled with gas and liquid, a valve normally closing said gas inlet pipe by the pressure in said mixing chamber and adapted to open automatically by the pressure of the gas upon a reduction of pressure in the mixing chamber below the gas pressure to admit the gas which flows into the mixing chamber by its own pressure independently of the flow of the liquid, means operating to allow the gas to fill the mixing chamber before it is filled with the liquid, and a passage through which the excess of gas from the mixing chamber returns to said mixing chamber and is drawn therein by the induction of the inflowing liquid. 2nd. In a carbonating apparatus, a liquid inlet pipe for supplying liquid under pressure, a gas inlet pipe for supplying gas under less pressure than that on the liquid, a mixing chamber for the gas and liquid in constant open communication with the liquid supply under initial liquid pressure and normally filled with gas and liquid, a valve normally closing said gas inlet pipe by the pressure in said mixing chamber and adapted to open automatically by the pressure of the gas upon a reduction of pressure in the mixing chamber below the gas pressure to admit the gas which flows into the mixing chamber by its own pressure independently of the flow of the liquid, means for subdividing and mechanically combining the gas and liquid, means operating to allow the gas to fill the mixing chamber before it is filled with the liquid, and a passage through which the excess of gas from the mixing chamber returns to said mixing chamber and is drawn therein by the induction of the inflowing liquid. 3rd. In a carbonating apparatus, a liquid inlet pipe for supplying liquid under pressure, a gas inlet pipe for supplying gas under less pressure than that on the liquid, a mixing chamber for the gas and liquid in constant open communication with the liquid supply under initial liquid pressure and normally filled with gas and liquid, a valve normally closing said gas inlet pipe by the pressure in said mixing chamber and adapted to open automatically by the pressure of the gas upon a reduction of pressure in the mixing chamber below the gas pressure to admit the gas which flows into the mixing chamber by its own pressure independently of the flow of the liquid, means for subdividing and mechanically combining the gas and liquid, means operating to allow the gas to fill the mixing chamber before it is filled with the liquid, and a passage through which the excess of gas from the mixing chamber returns to said mixing chamber and is drawn therein by the induction of the inflowing liquid. 4th. In a carbonating apparatus, a liquid inlet pipe for supplying liquid under pressure, a gas inlet pipe for supplying gas under less pressure than that on the liquid, a mixing chamber for



2nd. In an acetylene gas apparatus, the combination with a floatable bell, and a generator, of a water tank mounted on and movable vertically with said floatable bell, a spring closed valve connected to the tank, and a water pipe attached at one end to the generator and provided at its other end with a flared mouth which is disposed in the path of the spring pressed valve, whereby on the descent of the bell and the tank, the valve is opened and water is free to flow from the tank into the pipe, substantially as described. 3rd. An acetylene gas apparatus comprising an expandible gas holder, a generator having a removable cover, an open grate fitted removably in said generator and supporting a series of carbide receptacles one above the other, a water pipe attached at one end to the generator and provided at its other end with a flared mouth, within which mouth is a stop *d*<sup>4</sup>, a tank mounted on and movable vertically with the bell of said expandible gas holder, and a spring closed valve connected to the tank and arranged in the vertical plane of the flared mouth and its stop, whereby said valve is adapted to be opened by engagement with the stop on the descent of the bell, substantially as described.

**No. 69,667. Successive or Alternating Movement.**

(*Mécanisme pour communiquer le mouvement.*)



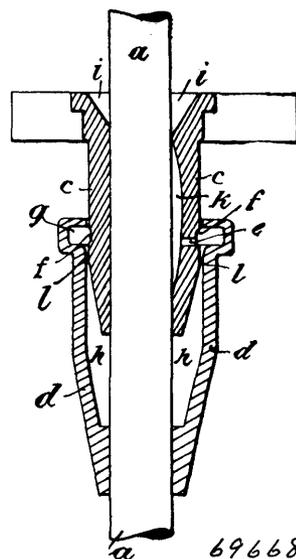
Elisha Moore, Meductic, New Brunswick, Canada, 14th December, 1900; 6 years. (Filed 17th November, 1899.)

*Claim.*—1st. The combination with a shifting member, of armatures, a common axis for said armatures connected with the shifting member, magnets for said armature and a relay having an armature common to both of its magnets interposed in the circuit between the magnets and source of supply. 2nd. The combination with a shifting member, of armatures, a common axis for said armatures connected to the said member, magnets for said armature, a relay having an armature common to both of its magnets and a make-and-break contact interposed in the circuit between the magnet and the source of supply. 3rd. The combination with a shifting member, of armatures a common axis for said armatures connected to said shifting member, magnets for the armatures, a relay having an armature common to both of its magnets, a make-and-break contact interposed in the circuit between the said magnets and source of supply, and means to operate the same contact. 4th. The combination with a shifting member, armatures, a common axis for said armatures connected with the said member, magnets for the armatures, of a relay having an armature common to both of its magnets and make-and-break contact interposed in the circuit between the said magnets and source of supply and a magnet to operate said contact. 5th. In a device of the character described, the combination with the magnets armatures and a common axis for said armatures, of a relay having an armature common to both of its magnets and means connecting the axis of the armatures and the relay to automatically shift the relay. 6th. In a device of the character described, the combination with the magnets and pivoted armatures for said magnets, of a relay and a flat spring connecting the armature of the relay with the axis of the said pivoted armatures to automatically shift the relay. 7th. The combination with the magnets, armatures for said magnets mounted on a common axis, and a shif-

ting member of a relay comprising two magnets, a common armature, contact springs mounted on the arm of the armature, contact points connected with the last named magnets with which the said springs alternately contact, and a flat spring connecting the armature of the relay with the axis of the first named magnets. 8th. The combination with a shifting member, of two magnets, armatures for the same mounted on a common axis, a relay connected with said magnets, a resilient connection between the said axis and the armature of the relay, a make-and-break contact and a magnet mounted upon a car to operate the said contact. 9th. The combination with the magnets, armatures for the same mounted upon a common axis, a shifting member connected with said axis, a relay comprising two magnets, an arm, an armature common to both magnets mounted upon said arm, contact points connected with the magnets, flat springs extending from each side of the arm adapted to alternately contact with said contact points, and a make-and-break contact lever, a coiled spring connecting the same with the source of supply. 10th. The combination with a shifting member, two magnets armatures for the same mounted on a common axis, a flat spring secured to one end of said axis, of a relay having an armature common to both of its magnets, and a forked projection extending from the end of the armature adapted to engage the flat spring secured to said axes.

**No. 69,668. Lubricating Mechanism.**

(*Mécanisme lubrifiant.*)



Paul Hofmann, Chemnitz, Saxony, Germany, 14th December, 1900; 6 years. (Filed 18th August, 1900.)

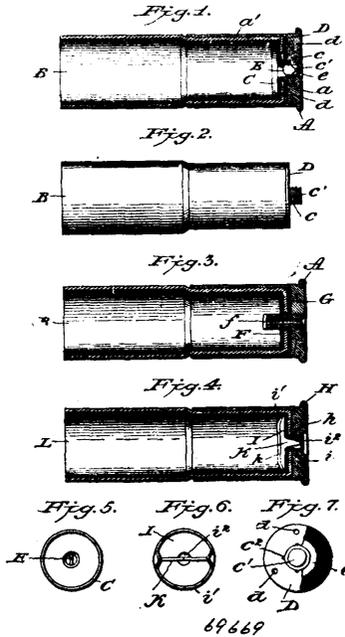
*Claim.*—In vertical shafts and spindles for spinning and similar machines a lubricating device, comprising the combination with the shaft or spindle *a* of a pear shaped receptacle, attached to the shaft and the upper portion of which encloses a sleeve within which the shaft or spindle turns, a channel with open interior side at the edge of said pear shaped receptacle and registering with an annular groove in the said sleeve, perforations in the said groove through the wall of the sleeve and communicating with an interior recess or groove which delivers the lubricant into the hollow cavity of the receptacle and means to rotate the shaft or spindle, whereby a circulation of the lubricant is set up, substantially as described.

**No. 69,669. Cartridge. (Cartouche.)**

Charles A. Bailey and Edward Stevens Coe, both of Cromwell, Connecticut, U.S.A., 14th December, 1900; 6 years. (Filed 12th April, 1900.)

*Claim.*—1st. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc over which the tube is crimped, a threaded nipple formed on the breech block and provided with a shoulder, and a washer placed on the shoulder, the latter being upset upon the washer to clamp the parts together, substantially as shown and for the purpose set forth. 2nd. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc upon which the tube is crimped, a threaded nipple projecting rearward from the breech block and adapted to engage the threaded opening in the cap, and a washer secured upon the threaded nipple against the crimped end of the tube, substantially as shown and for the purpose set forth. 3rd. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc over which the tube is crimped, said breech block having its outer surface roughened or serrated, a threaded

nipple projecting rearward from the centre of the breech block, and provided with a shoulder at its inner end, and a washer placed over

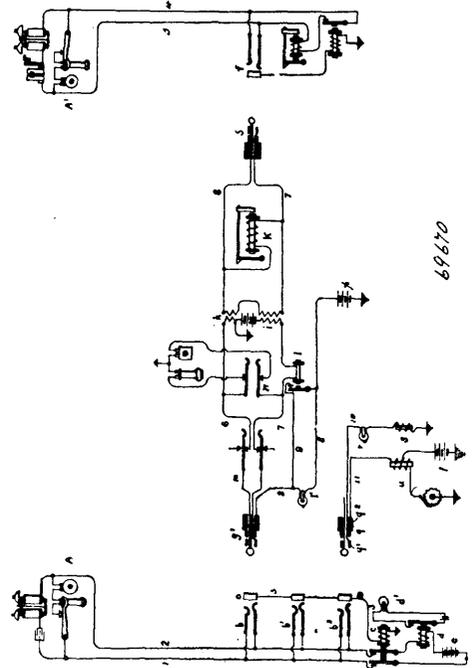


the shoulder to engage the crimped end of the tube, said washer having spurs, substantially as shown and for the purpose set forth. 4th. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc over which the tube is crimped, a nipple projecting rearward from the breech block and provided with external and internal threads and a thin outer end, and a washer placed over the nipple to clamp the crimped end of the tube between said washer and breech block, together with a flat piece or anvil screwed into the nipple, substantially as shown and for the purpose set forth. 5th. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc over which the tube is crimped, a nipple projecting rearward from the breech block, and provided with external and internal threads, and a thin outer end wall, and a washer placed over the nipple to clamp the crimped end of the tube between said washer and breech block, together with a flat metal piece or anvil having teeth at its sides, substantially as shown and for the purpose set forth. 6th. In combination with a metal cap having a threaded opening in its head, of a tube, a breech block or disc over which the tube is crimped said breech block having its rear surface roughened or serrated, a nipple projecting rearward from the breech block and provided with external and internal threads and with a shoulder at its inner end, and a washer placed over the shoulder and provided with spurs, to clamp the crimped end of the tube between said washer and breech block, together with an anvil screwed into the threaded nipple, substantially as shown and for the purpose set forth. 7th. As an improved article of manufacture for use in connection with a metal cap, comprising a tube, a breech block in the tube provided with a rearwardly projecting nipple having internal and external threads, a washer placed over the nipple to clamp the parts together, and an anvil screwed into the nipple, substantially as shown and described. 8th. As an improved article of manufacture for use in connection with the metal cap, comprising a tube, a breech block in the tube provided with a rearwardly projecting nipple having a thin wall at its end, fulminate on the inner side of said wall, and an anvil held in the nipple against the fulminate, the nipple being threaded externally to engage the threaded opening in the metal cap, substantially as described. 9th. A cartridge comprising a metal cap or head having an opening therein, a breech block provided with a projecting nipple adapted to fit into the aforesaid opening, and an anvil secured to the breech block and provided with a point or stem extending into the nipple, together with a tube held in place by the cap and breech block, substantially as shown and described. 10th. A cartridge comprising a metal cap or head having an opening therein, a breech block provided with a nipple projecting into the aforesaid opening and upset upon the metal cap, and an anvil secured to the breech block and having a point extending into the nipple, together with a tube held in place by the cap and breech block, substantially as described. 11th. In combination with a metal cap and breech block connected together, substantially as shown, the breech block having a nipple extending into the cap, of an anvil secured to the breech block and presenting a point extending into the nipple, substantially as shown and for the purpose set forth. 12th. In a cartridge, the combination with the metal cap and breech block connected together, substantially as shown the

breech block having a nipple extending through the cap and a flange, of an anvil secured to the breech block by upsetting the flange over the ends of said anvil, the anvil having a point extending into the nipple, substantially as shown and for the purpose set forth. 13th. In a cartridge, the combination of the metal cap or head having an opening therethrough, a breech block provided with a nipple adapted to enter the aforesaid opening and be upset upon the cap or head, an anvil secured to the breech block and having a stem projecting into the nipple, and a paper tube crimped over the breech block and clomped between said breech block and cap or head, substantially as shown. 14th. In a cartridge, the combination of the metal cap or head having an opening through the same, a breech block provided with a nipple adapted to enter the aforesaid opening and be upset upon the cap or head, a flange on the breech block, and an anvil secured to the breech block by upsetting the flange over the ends of the anvil, together with the paper tube having its inner end crimped over said breech block and clamped between said breech block and cap or head. 15th. In a cartridge, the combination, of the cap or head having an opening therethrough, a breech block provided with a nipple entering said opening and connected to the cap or head, a flange on the breech block, and an anvil secured to the breech block by upsetting the flange on the same, together with a paper tube and reinforcing sections crimped over the breech block and clamped between said breech block and cap or head.

No. 69,670. Telephone Test.

(Appareil à épreuve pour téléphone.)

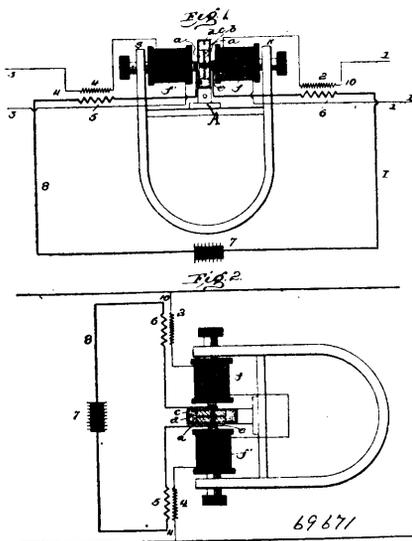


The Bell Telephone Company of Canada, Montreal, assignee of Charles Ezra Scribner, Chicago, Illinois, U.S.A., 14 December, 1900; 6 years. (Filed 9th December, 1898.)

Claim.—The combination with a telephone line and multiple springjacks thereof in different sections of a switchboard, and a test circuit for the multiple springjacks, of a source of specialized test current and means for connecting the said source of current with the test circuit of the line at one of said sections, a signal at the same section and means for connecting it with the line simultaneously with the connection of the test current, means for closing the test circuit at another section of the switchboard to obtain a test signal, and other means at said second mentioned section made operative in establishing connection with the line to display the said signal, as described. 2nd. The combination with a telephone line, multiple springjackets thereof at different sections of the switchboard, and a test circuit for the springjackets, of a source of specialized test current, and a supervising signal connected with the plug at one of the sections, means on another section for detecting the connection of said source of specialized test current with the test circuit, and a source of current at said second mentioned section, and switch contacts made operative in establishing connection with the line at said second mentioned section to connect the said source of current with the line to operate the signal at the other section, substantially as described. 3rd. The combination with a telephone line multiple springjacks thereof in different sections of the switch-

board, and a normally open test conductor uniting the test contacts of the springjacks, of a source of specialized test current, a plug having a contact piece adapted to make connection with the normally open test conductor, connected with said source of test current, a signal and a conductor including the signal connected with another contact piece of the same plug, means at another section for testing the line to determine the presence of such specialized test current, a plug for making connection with the line at such other section, and a source of current in circuit therewith adapted to be brought into circuit with the signal in making connection with the springjack, as described. 4th. The combination with a telephone line multiple springjacks thereof in different sections of a switchboard, of connecting plugs at the different sections, and a local test conductor uniting the test contacts of the springjacks, a source of specialized test current connected with a contact-piece of one of the plugs adapted for connection with said local test conductor, a signal and an impedance coil in a conductor connected with another contact piece of said plug adapted to register with a line contact of the springjack, a source of current connected with the corresponding line contact of the other plug, whereby a signal is given to disconnect the source of specialized testing current from the line when the required connection is made with the line, as described. 5th. The combination with the telephone line, multiple spring jacks thereof in different sections of a switchboard, and normal ground connections of the line, the cut-off relay for serving such grounds connections and the grounded local test circuit including the actuating magnet of said relay, of a connecting plug at one of the sections, a source of steady current for operating the cut-off relay and a source of specialized test current, connected with a contact piece of said plug adapted to make connection with the test circuit, and a conductor connected with the line contact of the plug including a signal together with an impedance coil, another connecting plug at a different section, a source of current connected with the contact piece thereof adapted to make connection with the test circuit, and a second source of current connected with the line contact thereof to operate the signal at the other section, whereby a specialized busy test may be applied at one section, a signal may be given from the other section to disconnect such specialized testing current, and the cut-off relay is made operative during the existence of either connection, as described.

**No. 69,671. Telephone Relay. (Relais téléphonique.)**



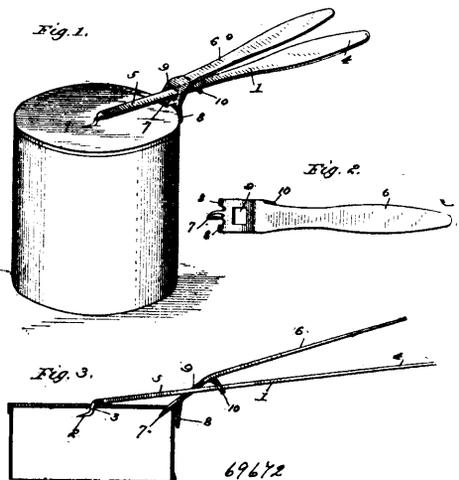
Josiah Trice, William Grant Urmsom, John William Parsons and Henry Augustus Hull, all of New Brunswick, New Jersey, U.S.A., 14th December, 1900; 6 years. (Filed 18th July 1900.)

*Claim.*—1st. A telephone relay comprising the combination of a microphone having electrodes separated by an air space, conducting material surrounding the electrodes, tension devices for holding the electrodes in a position of poise and an electromagnet for varying the action of the tension devices, substantially as described. 2nd. A telephonic relay comprising the combination of a microphone, preferably of the air space type, co-acting electromagnets on opposite sides thereof, secondary coils in circuit with each electromagnet and primary coils, co-operating with the secondary coils, in a common local circuit, substantially as described. 3rd. A telephonic relay comprising the combination of a microphone, a bi-polar permanent magnet and co-acting electromagnets mounted on the poles thereof and acting on the opposite sides of the microphone, substantially as described. 4th. A telephonic relay comprising the combination of a microphone having a pair of electrodes separated by an air space, conducting material surrounding the electrodes,

tension devices for holding the electrodes in a position of poise, a bipolar permanent magnet and co-acting electromagnets mounted on the poles thereof and acting on the opposite sides of the microphone, substantially as described. 5th. A telephonic relay comprising the combination of electrode, separated by an air space, granular material surrounding and bringing the electrodes, tension devices for holding the electrodes in a position of poise and an electromagnet for acting on the tension devices to vary the current in the microphone, substantially as described. 6th. A telephonic relay comprising the combination of a pair of electrodes separated a microphone having by an air space, conducting material surrounding the electrodes, tension devices for holding the electrodes in a position of poise, co-acting electromagnets situated on opposite sides of the microphone, secondary coils in circuit with each electromagnet and primary coils, co-operating with the secondary coils, in a common local circuit, substantially as described. 7th. A telephonic relay comprising the combination of a microphone, a bi-polar permanent magnet, co-acting electromagnets mounted on the poles thereof and acting on the opposite sides of the microphone, secondary coils in circuit with each electromagnet and primary coils, co-operating with the secondary coils, in a common local circuit, substantially as described. 8th. A telephonic repeater comprising the combination of a microphone, co-acting electromagnets on the opposite sides thereof, secondary coils in circuit with each electromagnet and the incoming and outgoing lines respectively and primary coils, co-operating with the secondary coils, in a common local circuit, substantially as described. 9th. In a telephone relay, a microphone having a pair of electrodes, spring arms surrounding the microphone and adjustable devices securing the electrodes to the opposite arms, substantially as described. 10th. In a telephone relay, a microphone having electrodes, a spring, having one arm secured to one electrode, and a screw and thumb nut for adjustably securing the other electrode to the other arm in a position of poise, substantially as described. 11th. In a telephone relay, a pair of brackets having arms, supporting devices for the brackets, a series of microphones, a spring surrounding each microphone having its opposite arms adjustably secured to the electrodes thereof, and connections between the bracket arms and electrodes, substantially as described. 12th. In a telephone relay, a pair of brackets having arms, supporting devices for the brackets, a series of microphones having screws projecting from its opposite electrodes, a spring surrounding each microphone having one arm rigidly connected to one screw and the other arm adjustably connected to the other screw, and connections between the bracket arms and the screws, substantially as described. 13. In a telephone relay, a microphone having a pair of separated electrodes, conducting material surrounding the electrodes, spring arms and adjustable devices for securing the electrodes to the spring arms in a position of poise, substantially as described. 14th. In a telephone relay, a pair of brackets having arms, springs on which the brackets are supported and a series of microphones supported respectively between opposite arms of the brackets, substantially as described.

**No. 69,672. Can Opener.**

(Machine à ouvrir les boîtes métalliques.)

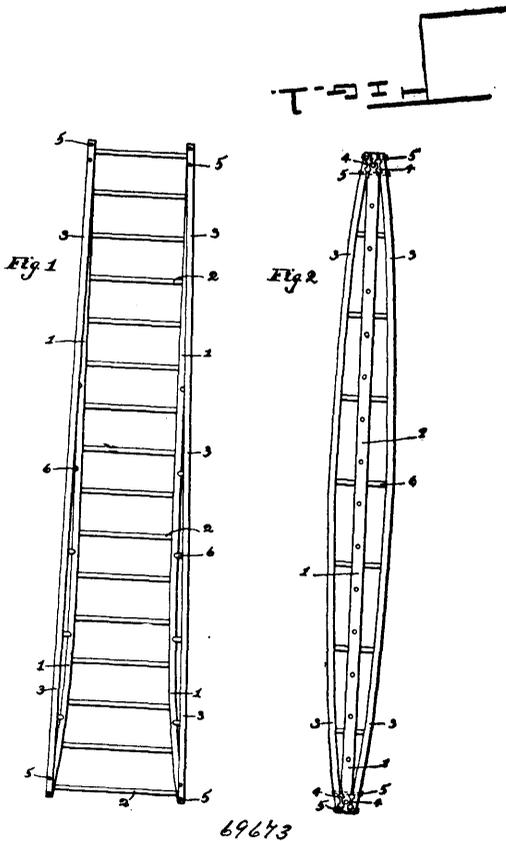


Charles A. Anderson and Oscar Anderson, both of Portland, Maine, U.S.A., 17th December, 1900; 6 years. (Filed 30th November, 1900.)

*Claim.*—1st. In a can opener, the combination of a lever bar formed with a handle part and an entering point adapted to form a fulcrum, a cutter carrying bar provided with an opening through which the lever bar works and with an outward extending handle part lying above and adjacent the handle part of the lever, so both

said handle parts may be grasped with one hand, a downward extending cutter on the inner end of the cutter carrying bar, a guide lug or stop formed on the cutter carrying bar adjacent the cutter and adapted to engage the side of the can and prevent the cutter bar moving toward the fulcrum point of the lever while in operation. 2nd. In a can opener, the combination of a lever bar provided with an entering point adapted to form a fulcrum for the lever, a cutter carrying bar adapted to slide on said lever bar provided with a downward extending cutter and a depending stop adapted to engage the side of the can, and a downward extending lug formed on the side of said cutter bar and adapted to engage the right hand side of the lever bar, substantially as described and for the purpose set forth. 3rd. In a can opener, the combination of a lever bar provided at one end with an entering fulcrum point and at its other end with a handle, a cutter carrying bar bent downward at one end and provided with a pair of stop lugs and a cutter there between at its other end with a handle lying above and adjacent to the handle of the lever bar this cutter carrying bar being provided with an opening in the downward bent portion, just above the cutter, through which said lever bar works, and also with a depending stop lug above the opening adapted to engage the lever bar, for the purposes set forth.

**No. 69,673. Ladder. (Echelle.)**



Frederick Scott Seagrave, Columbus, Ohio, U.S.A., 17th December, 1900; 6 years. (Filed 29th November, 1900.)

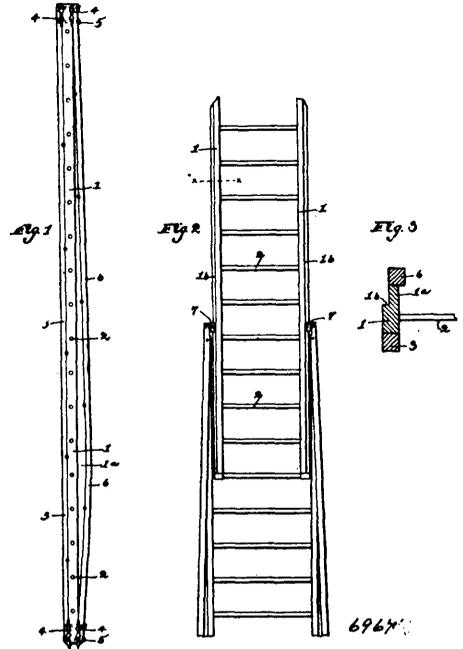
*Claim.*—1st. In a ladder, the combination with the legs 1, and 2, of the truss bars 3, one of which extends from the upper to the lower portion of each ladder leg on opposite sides thereof, said ladder legs and truss bars being connected at intervals by struts, substantially as specified. 2nd. In a ladder, the combination with the legs 1, having their upper portions parallel and their lower portions flaring outward and rungs connecting said legs at intervals, of truss bars 3, arranged in front and rear of each of said legs and inclining from the upper ends thereof to the lower ends of the flared portions of said legs and struts connecting said legs and truss bars, substantially as specified.

**No. 69,674. Ladder. (Echelle.)**

Frederick Scott Seagrave, Columbus, Ohio, U.S.A., 17th December, 1900; 6 years. (Filed 29th December, 1900.)

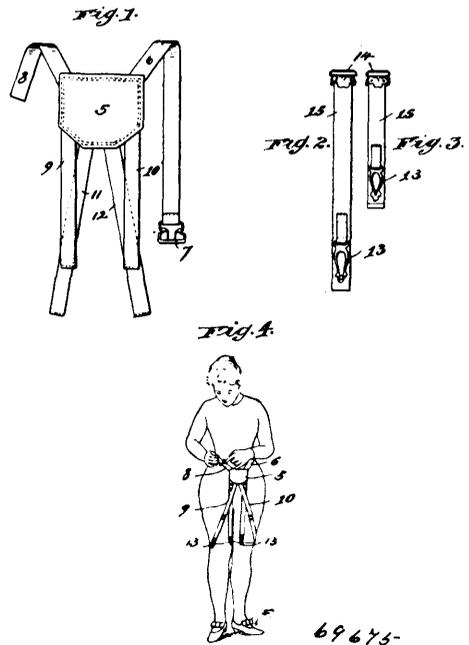
*Claim.*—1st. In a ladder construction, the combination with the parallel legs 1, and transverse rungs uniting said legs at intervals, of underside truss bars running parallel with and united with the undersides of said legs and curved outwardly bowed upper side

truss bars extending throughout the length of and united with the upper sides of said legs, substantially as specified. 2nd. In a ladder,



the combination with the parallel legs 1, each of which has formed therewith an upper side web 1<sup>a</sup>, the latter being bowed outwardly and transverse rungs connected with said legs, of a truss or strengthening bar running parallel with and secured to the undersides of said legs and a truss bar running over and united with said web legs and conforming to the curvature of the latter, substantially as specified.

**No. 69,675. Hose Support. (Support pour bas.)**

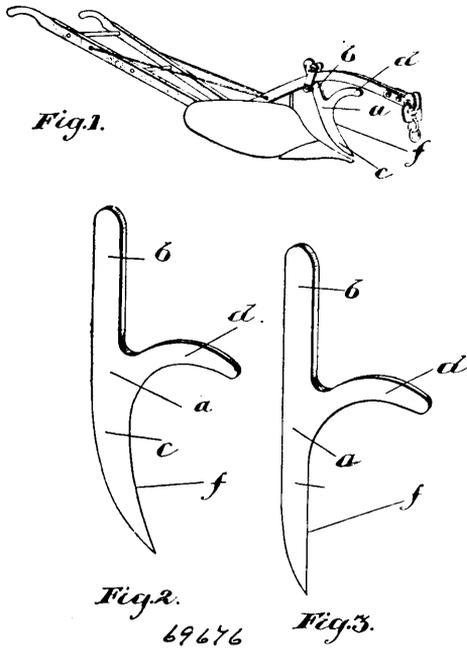


Ella Foster Young, Chicago, Illinois, U.S.A., 17th December, 1900; 6 years. (Filed 29th November, 1900.)

*Claim.*—1st. In a combined abdominal pad and hose supporter, the combination with a flat abdominal pad having a continuous integral body with a smooth unbroken bearing or contact surface and of a size about equal to that of the upper central portion of the hypogastric region, of a support attached to said pad at its upper edge and hose supporting straps attached to the lower edge of said pad, whereby in use strain is applied to said pad in substantially

vertical lines and the pressure is localized, substantially as described. 2nd. In a combined abdominal pad and hose supporter, the combination with a continuous integral flat body having a smooth, unbroken bearing or contact surface, of a strap secured to the upper edge portion of said pad and adapted to pass around the body and having a fastening for attaching it to the upper edge of the pad, hose supporting straps secured to the outer lower edge of said pad, extending thence downward in substantial parallelism and adapted to be connected to the hose on the inner side of the leg and the other longer hose supporting straps secured to the lower edge of the pad between the first mentioned hose supporting straps and adapted to be carried outward across them and to be secured to the hose on the outer side of the leg, substantially as described.

**No. 69,676. Plough Coulter.** (*Coulter de charrue.*)



Alfred J. Lemon, Toronto, Ontario, Canada, 17th December, 1900; 6 years. (Filed 28th November, 1900.)

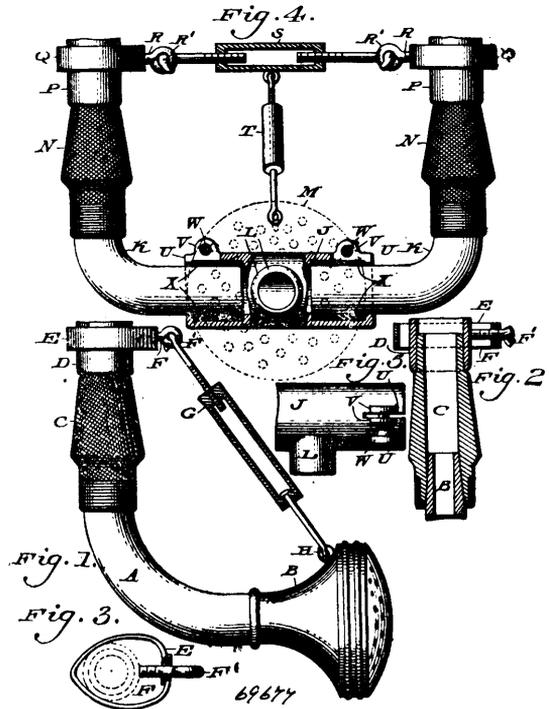
*Claim.*—1st. A coulter, embracing in its construction a blade, and a horn projecting forwardly from the blade, the cutting edge of which is continuous with the cutting edge of the blade, substantially as specified. 2nd. A coulter, embracing in its construction a blade having a curved cutting edge and a curved horn projecting forwardly from the blade, the curvature of the cutting edge of which is continuous with the curvature of the cutting edge of the blade, substantially as specified.

**No. 69,677. Sprinkler.** (*Arrosoir.*)

George Washington Weston, William Henry Weston, both of Philadelphia, and Mitchel Ancker, Bristol, all in Pennsylvania U.S.A., 17th December, 1900; 6 years. (Filed 8th October, 1898.)

*Claim.*—1st. In a sprinkler, a branch, a rose at one end thereof, a pliable sleeve at the other end thereof, a clip attachable to a fixed point and adjustable connections between said clip and rose. 2nd. In a sprinkler, a branch, a rose at one end thereof, a pliable sleeve at the other end thereof, attachable to a faucet, a clip adapted to be fitted on said faucet, and adjustable connections between said rose and clip, the latter being divided and its ends provided with a clamping screw. 3rd. In a sprinkler, confluent branches, a coupling therefor, a rose on said coupling, clips attachable to faucets, a bridge attached to said clips, and a hanger attachable to said bridge and said rose. 4th. In a sprinkler formed of confluent branches and a rose thereon, a support for said branches consisting of an adjustable bridge attachable to faucets, and an adjustable hanger attachable to said bridge and said rose. 5th. In a sprinkler, confluent branches, sleeves connectable with said branches and with faucets, a coupling for said branches and a rose on said coupling, in combination with clips attachable to said faucets, eyes in said clips, rods attached to said eyes, a buckle engaging said rods and additional rods connected with said buckle and said rose and a buckle engaging said additional rods. 6th. The combination of a branch, a rose thereon, a sleeve in engagement with an end of said branch, a packing located in the upper portion of said sleeve, a collar or clip adapted to engage a faucet, a screw eye connected with the ends of said collar, an eye on

said rose and a buckle common to said eyes. 7th. In a sprinkling device of the character stated, a plurality of branches A, sleeves B



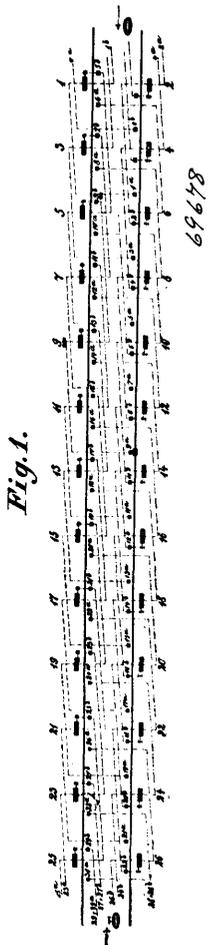
engaging the upper ends of said branches, a split T-coupling D for said branches, packing within said coupling at opposite ends thereof, means for compressing said coupling, a rose attached to a member E of said coupling, collars or clips adapted to engage faucets, screw eyes engaging said collars, a buckle common to said eyes, and a buckle common to said rose and to said first-mentioned buckle.

**No. 69,678. Apparatus for Preventing Railway Collisions.** (*Appareil pour prévenir les collisions de chemin de fer.*)

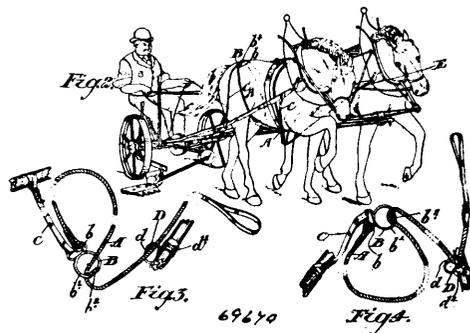
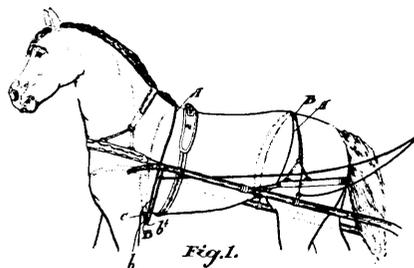
Georges Michel Scriber, Czestocowa, Theatralna, Russia, 17th December, 1900; 6 years. (Filed 15th May, 1900.)

*Claim.*—In combination in apparatus for preventing railway accidents, a series of train-stopping devices, a setting device consisting of a train operated lever and means for setting and re-setting the same, and each connected to set two of the said train stopping devices at a distance in each direction along the track, and connections for re-setting the said train stopping devices from a much greater distance along the track, whereby an engine or train will successively set the train stopping devices at a given distance in advance and at a given distance in the rear, and subsequently re-set them, substantially as set forth. 2nd. In combination in apparatus for preventing railway accidents, a series of train stopping devices, said devices consisting of a cylinder and lever and mechanism for setting and re-setting the lever, all being situated without the line of the rails, a series of setting devices therefor actuated by engines or trains when moving in one direction only, and each connected to set two of the said train stopping devices at a distance in each direction along the track, and connections for re-setting the said train stopping devices from a much greater distance along the track, whereby an engine or train will successively set the train stopping devices at a given distance in advance and at a given distance in the rear, and subsequently re-set them, substantially as set forth. 3rd. In combination in apparatus for preventing railway accidents, a series of train-stopping devices for engines or trains going in one direction, comprising a cylinder or drum and a train operated lever with means for setting and resetting the same, a series of train-stopping devices for engines or trains going only in the opposite direction, a series of setting devices therefor, operated only by engines or trains going in the first said direction and connected to set one of the train-stopping devices at a suitable distance ahead and one of them at a suitable distance in the rear, and means for re-setting the said stopping devices to normal position when the engine or train has gone further, substantially as set forth. 4th. In combination in apparatus for preventing railway accidents, a series of train stopping devices for engines or trains going in one direction, a series of train-stopping devices for engines or trains going only in the opposite direction, a series of setting devices therefor, consisting of a cylinder and lever, operated only by engines or trains going in the first said direction and connected to set one of

the train stopping devices at a suitable distance ahead, and one of them at a suitable distance in the rear, and means for



end connected to the ring to which the strap is connected, such ropes being designed to extend in the form of a loop around the body of



the horse and passing through the opposite end of the double ring, as and for the purpose specified. The combination with the holdfast strap secured at one end to the shaft and the double ring connected with the other end of such strap, of a rope having one end connected to the ring to which the strap is connected, such rope being designed to extend in the form of a loop around the body of the horse and passing through the opposite end of the double ring and a friction roller on the double ring, and a guiding ring also provided with a friction roller and secured to the shaft and designed to form a guiding means for the end of the rope to which the power is applied, as and for the purpose specified.

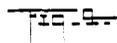
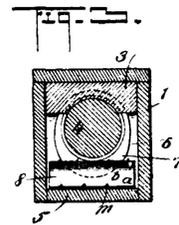
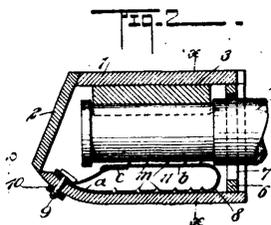
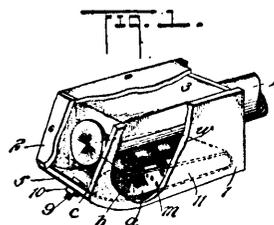
No. 69,680. Automatic Oiler. (Graisseur.)

Resetting the said stopping devices to normal position when the engine or train has gone further, a similar series of setting devices operated only by engines or trains going in the same opposite direction on the same track, and two similar series of co-operating train-stopping devices and means for resetting them, whereby an engine or train will be protected against being run into by trains approaching in either direction, and also against running into a standing or derailed train, substantially as set forth. 5th. In combination with a train-stopping device, a cylinder at a distance operatively connected thereto, a train-operated lever, a weight acting upon the lever in direction to return it to normal position when actuated by a train, a pawl and ratchet and connections between said lever and said cylinder for actuating the cylinder by the return movement of the said lever, and means for resetting the cylinder to its normal position, substantially as set forth.

No. 69,679. Attachment for the Cure of Balking Horses. (Appareil pour entrainer les chevaux.)

Charles Albert Barclay, Brougham, Ontario, Canada, 17th December, 1900; 6 years. (Filed 28th November, 1900.)

Claim.—1st. The method of preventing balking and kicking horses consisting in applying a looped rope around the body of the horse in such a manner as to hold such loop from turning, then pulling on one end of the rope of the loop, so as to tighten the loop around the muscles of the horse as herein set forth. 2nd. A horse balking and kicking controlling device comprising a rope connected at one end by a strap to the shaft or trace and having the other end extending in the form of a loop to and through the ring connected to the aforesaid end, such latter end being designed to be pulled so as to contract the loop, as and for the purpose specified. 3rd. A horse balking and kicking controlling device comprising a rope connected at one end by a strap to the shaft or trace and having the other end extending in the form of a loop to and through the ring connected to the aforesaid end, such latter end being designed to be pulled so as to contract the loop and a guiding device secured to the shaft for the portion of the rope which is designed to be pulled, as and for the purpose specified. 4th. The combination with the holdfast strap secured at one end to the shaft and the double ring connected with the other end of such strap, of a rope having one

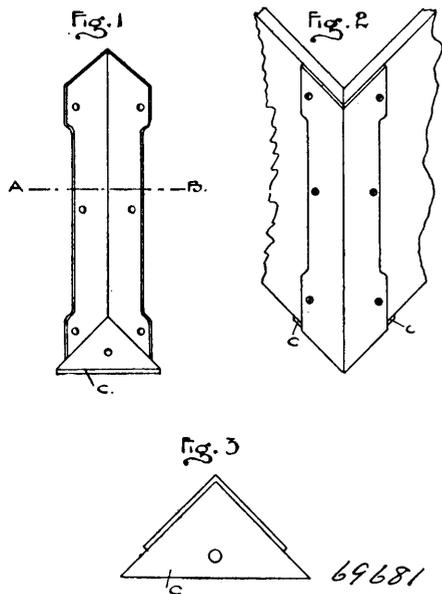


John Francis McEntee, Kahulin, Mani, Hawaii, 17th December, 1900; 6 years. (Filed 7th September, 1900.)

Claim.—An automatic oiler for journal boxes, comprising a U shaped resilient member, one leg of said member being adapted to rest

against the under surface of said journal, while the other leg rests on the bottom of said box, a series of spurs being turned upward and forming openings in said legs, an oil vehicle between said legs and protruding through the opening in said upper leg, and a projection formed integral on said lower leg and turned backward toward said upper, leg, substantially as and for the purpose set forth.

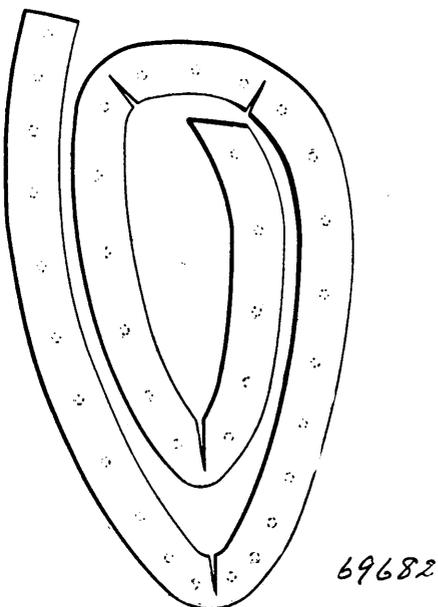
**No. 69,681. Buggy. (Voiture.)**



George Minchin and John Bauer, Shakespeare, Ontario, Canada, 17th December, 1900; 6 years. (Filed 30th August, 1900.)

*Claim.*—A buggy corner pillar consisting of two similar plates A and B joined along similar sides (in the form of an angle iron) at the lower extremity of which in the angle formed by A and B, is joined or attached, a flange C, the sides and flange being pierced for screw or bolts to permit of their being securely attached to the panels and bottom or mitre joints of a buggy box.

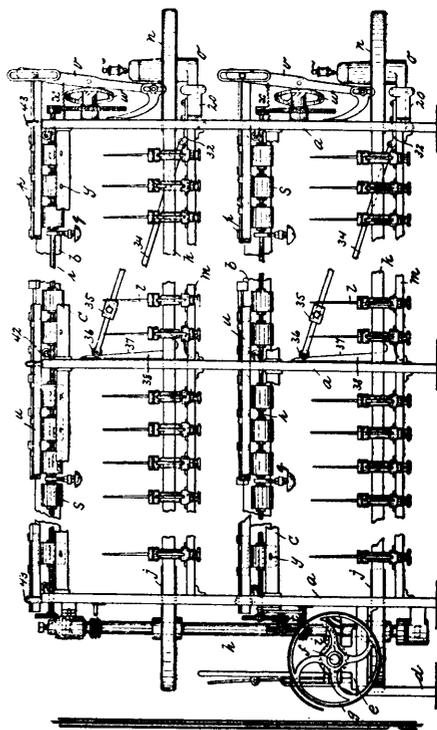
**No. 69,682. Clump Sole for Foot Wear. (Semelle pour chaussures.)**



Arthur Standish Hartrick, Hayfield, Victoria, Australia, 17th December, 1900; 6 years. (Filed 24th November, 1900.)

*Claim.*—An improved adjustable clump sole foot wear consisting of a strip of leather or the like, formed or moulded as illustrated in the accompanying drawing and for the purposes specified.

**No. 69,683. Spinning Machine. (Métier.)**



Adolph Haenichen, Paterson, New Jersey, U.S.A., 17th December, 1900; 6 years. (Filed 21st February, 1900.)

*Claim.*—1st. The combination of a revoluble vertical shaft, suitably supported pedestals disposed the one above the other and having sockets receiving the ends of said shaft, a collar fixed on said shaft, and a hardened washer and anti-friction devices disposed between said collar and the lower pedestal and bearing the one against the other, substantially as described. 2nd. The combination of a revoluble vertical shaft, pedestals disposed the one above the other and having sockets receiving the ends of said shaft, a frame, said pedestals being secured to said frame and vertically adjustable thereon, a collar fixed on said shaft, a hardened washer penetrated by the shaft, a ball race in the lower pedestal and surrounding the shaft, balls arranged in said ball race, said washer being interposed between the collar and the balls, a bushing arranged in the upper pedestal, the shaft being capped by said bushing, and a set screw arranged in the pedestal and bearing against the bushing, substantially as described. 3rd. In a spinning machine, the combination, with the frame, of two revoluble shafts arranged in intersecting planes and adapted the one to drive the other, one of said shafts being disposed approximately horizontal, a worm and worm wheel gearing connecting said shafts, pedestals supporting the horizontal shaft, suitable supporting means for the other shaft, collars fixed on said horizontal shaft, and a hardened washer and anti-friction devices adapted to bear the one against the other and disposed between each collar and the corresponding pedestal, substantially as described. 4th. In a spinning machine, the combination, with the frame, of two revoluble shafts adapted the one to drive the other, one of said shafts being disposed vertically and the other horizontally, a worm and worm wheel gearing connecting said shafts, pedestals supporting the horizontal shaft, other pedestals disposed the one above the other and having sockets receiving the ends of the vertical shaft, a pair of collars fixed on said horizontal shaft, a hardened washer and anti-friction devices disposed between each collar and the corresponding pedestal, another collar fixed on the vertical shaft, and a hardened washer and anti-friction devices also disposed between said last named collar and the lower pedestal for the vertical shaft, substantially as described. 5th. In a spinning machine, the combination with the frame, of spindles journaled therein, spaced revoluble sheaves, a bracket movably arranged in said frame and carrying one of said sheaves, a belt extending over said sheaves and adapted to drive the spindles, means for driving one of said sheaves, and automatic means operatively engaging said bracket and tending to move the same to space said sheaves, substantially as described. 6th. In a spinning machine, the combination with the frame, of spindles journaled therein, spaced revoluble sheaves, a bracket movably arranged in said frame and carrying one of said sheaves, a belt extending over said sheaves and adapted to drive the spindles, a projection mounted on said frame and having an inclined bearing surface, and a weighted rod pivotally connected to said bracket at one of its ends and bearing against the inclined sur-

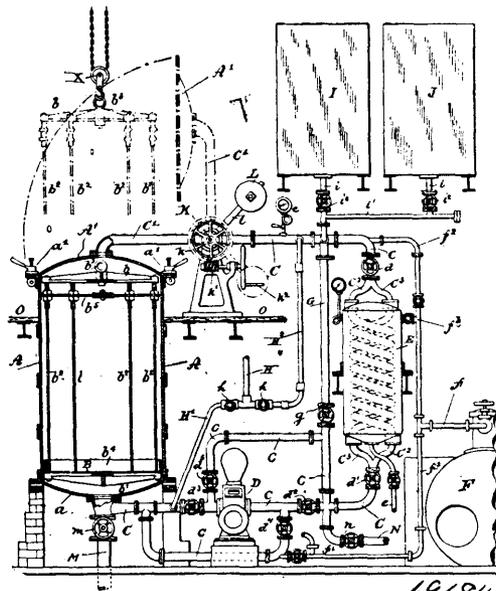
face of said projection at the other of its ends, substantially as described. 7th. In a spinning machine, the combination with the frame, spindles journaled therein, spaced revoluble sheaves, a roller carrying support projecting from said frame, a movable bracket mounted in said support and guided between the rollers thereof, said bracket carrying one of said sheaves, a belt extending over said sheaves and adapted to drive the spindles, a projection mounted on said frame and having an inclined bearing surface and a weighted rod pivotally connected to said bracket at one of its ends and carrying a roller bearing against the inclined surface of said projection at the other of its ends, substantially as described. 8th. In a spinning machine, the combination, with the frame, of revoluble spindles mounted in said frame, bobbin supporting and bobbin driving means also arranged in said frame, means for driving the spindle, thread guide carrying rails, means for reciprocating said rails, and roller carrying brackets mounted in said frame, the rollers of said brackets engaging the under and side surfaces of said rails, substantially as described. 9th. In a spinning machine, the combination, with the frame and with a horizontal beam thereof, of roller carrying shafts, means for rotating said shafts, brackets secured to said beam, vertical spindles carried by said brackets, heads mounted on said spindles and affording bearings for said shafts, and cups removably secured to the lower ends of said spindles, substantially as described. 10th. The combination, with a spindle, of two hinged members, one of said members carrying the spindle and the other of said members being adapted to be secured to a suitable support, and the spindle carrying member being spring actuated, a plate spring projecting from one of said members, and a detent carried by said plate spring and adapted to engage the other member, substantially as described. 11th. The combination, with a spindle, of two hinged members, one of said members being stationary, comprising a plate and being adapted to be thereby secured to a spindle rail, and the other of said members carrying the spindle and having a projection, said spindle carrying member being spring actuated, a plate spring adapted to be secured at one of its ends between said plate and the rail, and a pawl projecting from the free portion of said plate spring, its free end being bevelled off and adapted to engage said projection, substantially as described. 12th. The combination, with a spindle, of two members having pairs of arms and having said arms pivotally connected to each other, one of said members being adapted to be secured to the spindle rail and the other of said members carrying the spindle, a pin constituting one of the pivots of said pivotal connection, a spring coiled about said pin and engaging the same and one of said arms, said pin being movable revolubly in the arm of the stationary member, and said arm and the pin having openings adapted to register with each other, and a pin adapted to be inserted into said openings, substantially as described. 13th. The combination, with a spindle, of two members having pairs of arms and having said arms pivotally connected to each other, one of said members being adapted to be secured to the spindle rail and the other of said members carrying the spindle, a pin constituting one of the pivots of the pivotal connection, a spring coiled about said pin and engaging the same and one of said arms, and a spring actuated detent adapted to secure the spindle carrying member against actuation of said spring, substantially as described. 14th. The combination, with a spindle, of a supporting member comprising a step portion and a sleeve portion disposed above said step portion, a thimble mounted in said sleeve portion and penetrated by said spindle, anti-friction devices arranged in said thimble, a hardened annulus fixed on said spindle and adapted to bear against said anti-friction devices, and a cap secured on said thimble and penetrated by the spindle, said cap covering the anti-friction devices, substantially as described. 15th. The combination, with a spindle, of a supporting member comprising a step portion and a sleeve portion disposed above said step portion, a thimble removably mounted in said sleeve portion and penetrated by said spindle, anti-friction devices arranged in said thimble, a hardened annulus fixed on said spindle and adapted to bear against said anti-friction devices, and a cap secured on said thimble and penetrated by the spindle, said cap covering the anti-friction devices, substantially as described.

**No. 69,684. Apparatus for Treating Flax.**  
(Appareil pour le traitement du lin.)

Charles Wetherwax, Best, New York, U.S.A., 17th December, 1900; 6 years. (Filed 15th March, 1900.)

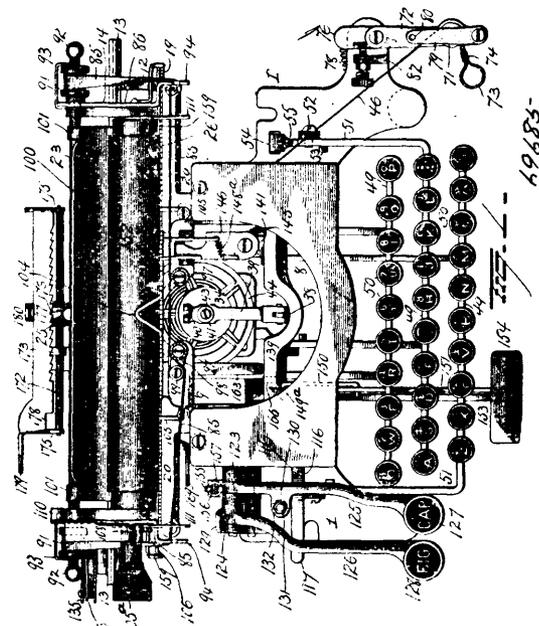
*Claim*—1st. An apparatus of the kind described, comprising a digester, a system of piping connected to opposite ends of the digester, the upper terminal section piping through the digester cover and being movable with the cover, and a pump and heater included in the circulation. 2nd. In an apparatus of the kind described, comprising a digester, a system of piping connected to opposite ends of the digester and including a pump and heater, a removable cover for the digester, and a removable cage contained in the digester and comprising opposite end portions, and rods connecting said end portions, the centre of the cage being left free and unobstructed. 3rd. An apparatus of the kind described, comprising a digester having a removable cover, a system of piping connected to opposite ends of the digester and including a heater, a pump included in said pipe circulation, a system of pipes and valves for cutting out the pump or heater, or both, a drain pipe for the digester, and a second drain pipe between the pump and the upper end of the digester,

substantially as described. 4th. The combination with the digester and the pipe system suitably drained and connecting opposite ends



of the digester, of the heater included in and forming a part of said pipe system, said heater comprising a series of coiled branch pipes, the relative area of which is greater than the area of the pipe forming the main system of circulation. 5th. The combination with the digester having a removable cover, of the open sided cage contained in the digester and removable therefrom, said cage comprising spiders arranged at opposite ends, and rods connecting the two spiders leaving the middle portion of the cage free and unobstructed. 6th. The combination with the digester and its removable top, of the piping system connected to the top and bottom of the digester, the upper terminal of the pipe system forming a cantilever attached to the said digester cover, and a gear mechanism for working the said cantilever, substantially as described.

**No. 69,685. Type Writing Machine.** (Claviographe.)



John Jay Green, Boonton, New Jersey, U.S.A., 17th December, 1900; 6 years. (Filed 22nd January, 1900.)

*Claim*—1st. In a typewriting machine, the combination with a shaft and a type carrier connected therewith, of a toothed ring secured to the shaft and having a number of teeth which shall be equal to a part of the number of characters on the type carrier,

means for turning said shaft, key bars and a series of devices co-operating with said key bars and toothed wheel to insure the accurate positioning of the type carrier. 2nd. In a typewriting machine, the combination with a shaft means for turning the same and a type wheel secured to said shaft, of a toothed wheel secured to the shaft and having a number of teeth equal to a part of the number of characters on the type carrier, a series of key bars, each having a series of keys and a series of dogs corresponding in number with the key bars and actuated by them to co-operate with the toothed wheel and set it according to the key bar depressed to position the type wheel. 3rd. In a typewriting machine, the combination of a shaft, a type wheel carried thereby and means for rotating shaft, of a toothed ring having a number of teeth equal to a part of the number of characters on the type wheel, a series of dogs adapted to enter the notches between the teeth of the toothed ring and respectively engage the teeth at different points, and a separate key bar for actuating each of said dogs. 4th. In a typewriting machine, the combination with a shaft, a type wheel carried thereby and means for rotating said shaft, of a toothed ring secured to the shaft, a series of dogs arranged side by side and all adapted to enter between any two teeth of said ring and key bars connected with and adapted to actuate the respective dogs. 5th. In a typewriting machine, the combination of a shaft, a type wheel carried thereby and means for rotating said shaft, of a toothed ring secured to the shaft and having a number of teeth equal to a part of the number of characters on the type wheel, a series of dogs, all of which are adapted to enter between any two teeth of said ring and a separate key bar for operating each dog. 6th. In a typewriting machine, the combination with a shaft a type wheel thereon and means for rotating the shaft, of a ring secured to the shaft having a number of depending teeth equal to a part of the number of characters on the type wheel, a series of arms pivotally mounted on a common support and provided at their free ends with dogs arranged side by side, all of said dogs adapted to enter between any two teeth of said ring, a series of key bars equal in number to said dogs and a lever connected with each key bar and adapted to operate one of the arms to force the dog thereon into the toothed ring. 7th. In a typewriting machine, the combination with a pivoted carrier frame, a shaft secured at one end thereto and a type wheel mounted on said shaft, of a standard on said carrier frame, an arm pivoted to said standard and connected with the upper end of said shaft, a platen and means for tilting the carrier frame to throw the type wheel against the platen. 8th. In a typewriting machine, the combination with a pivoted carrier frame, a shaft secured at its lower end thereto, a type wheel mounted on said shaft, a standard on said frame, an arm hinged to said standard and having a hole near its free end, a thimble disposed in said hole and adapted to receive the upper end of said shaft, a screw entering the end of said thimble and bearing on the shaft and means for tilting said carrier frame. 9th. In a typewriting machine, the combination with a shaft of a sleeve thereon, a type wheel mounted on said shaft and secured to said sleeve, a grooved wheel at the lower end of said shaft, a cord for rotating said wheel and provided with a finger loop, a toothed ring carried by said wheel, a series of dogs to engage said ring and key bars for operating said dogs. 10th. In a typewriting machine, the combination with a pivoted carrier frame, a shaft secured at its lower end thereto, and a type wheel mounted on said shaft, of a standard on said frame, an arm pivoted to said standard and connected with the upper end of the shaft, a platen behind the type wheel and a sight or indicator at the free end of said pivoted arm. 11th. In a typewriting machine, the combination with a fixed frame and a platen, of a pivoted counterweighted carrier frame on said fixed frame, a type wheel carried by the carrier frame, means for rotating the type wheel, key bars and devices intermediate of the key bars and pivoted carrier frame for locking the type wheel and tilting the carrier frame to throw the type wheel against the platen. 12th. In a typewriting machine, the combination with a shaft and a type wheel and a grooved wheel mounted to rotate together on said shaft, of a cord wound on said grooved wheel, a loop on said cord, a yielding arm provided with a pulley over which said cord passes, a key bar having a series of finger keys thereon, and devices connected with said key bar for causing said type wheel to print. 13th. In a typewriting machine, the combination with a shaft and a type wheel and a grooved wheel mounted to rotate together thereon, a pivoted spring retained arm, a pulley mounted on said arm, a key bar having a series of finger keys thereon, intermediate connections between the key bar and type wheel shaft for moving the latter, and a cord wound on said grooved wheel and passing over the pulley of the pivoted spring retained arm, for rotating the type wheel. 14th. In a typewriting machine, the combination with fixed frame, a shaft, and a type wheel and a grooved wheel mounted to rotate together on said shaft, of an arm pivoted to the frame, a spring connecting one end of said arm with the frame, an adjustable stop for said arm, a pulley mounted on said arm, a key bar, intermediate connections between the key bar and type wheel shaft, a cord wound on said grooved wheel and passing over the pulley on the pivoted arm and a loop on said cord. 15th. In a typewriting machine, the combination with a shaft of a type wheel and a grooved wheel mounted to rotate together on said shaft, a spring for retaining the type wheel and returning it to normal position, a pivoted spring retained arm, means for limiting the movements of said arm, a pulley on said arm, a cord wound on the grooved wheel and passing over said pulley and a loop on said cord. 16th. In a typewriting machine, the combination with a shaft of a

type wheel and a grooved wheel mounted to rotate together on said shaft, a spring for maintaining the type wheel in and returning it to normal position, a spring retained pivoted arm, a pulley mounted on said arm, a cord wound on said grooved wheel and passing over said pulley, a spring arm secured to the pivoted arm to retain the pulley in place and guide the cord and a loop on the end of said cord. 17th. In a typewriting machine, the combination with two pivoted frames, of a carriage mounted on one of said frames and a type wheel mounted on the other, means for rotating the type wheel, means for tilting the frame carrying the type wheel to move the latter toward the carriage, and means for swinging the frame carrying the carriage for upper case characters. 18th. In a typewriting machine, the combination with a fixed frame, a platen, a tilting carrier frame and a type wheel carried by said tilting frame, of a key bar having a series of keys thereon, a pivoted arm projecting from said key bar, a spring secured to the base frame and bearing against said arm and connections between said key bar and tilting frame. 19th. In a typewriting machine, the combination with printing devices, of a pivoted frame, a carriage mounted thereon, and carrying a platen, a spring for retaining said frame elevated, and independent devices for lowering said frame different distances. 20th. In a typewriting machine, the combination with printing devices, of a pivoted frame carrying a platen, a spring for retaining said frame elevated, a pivoted lever connected with said frame, key levers disposed over said pivoted lever and means for permitting one key lever to be depressed further than the other, substantially as set forth. 21st. In a typewriting machine, the combination with printing devices, of a pivoted frame carrying a platen, a pivoted lever connected with said frame, key levers projecting over said pivoted lever for operating it, means for adjusting said pivoted lever and adjusting devices for regulating the throw of said pivoted frame. 22nd. In a typewriting machine, the combination of a shaft, means for oscillating it, a type wheel mounted on said shaft, means for rotating said wheel, a vertically movable frame, a carriage and a platen mounted thereon and means for moving said vertically movable frame different distances. 23rd. In a typewriting machine, the combination with printing devices, a pivoted frame, and a key bar, of a carriage mounted on the pivoted frame and carrying a ratchet bar and ratchet devices mounted on the pivoted frame and connected with the key bar. 24th. In a typewriting machine, the combination with printing devices and a carriage, of a ratchet bar on the carriage, a rocking bar, a plate attached to the rocking bar and having a fixed dog to engage the ratchet bar, a plate pivoted to the first-mentioned plate and having a tooth to engage the ratchet bar, a key bar and connections between the key bar and rocking bar. 25th. In a typewriting machine, the combination with printing devices, a carriage and a ratchet bar secured to the carriage, of a rocking bar, ratchet devices pivoted to said rocking bar, an arm projecting from said rocking bar, a series of key bars, a stepped lever under said key bars and a rod connecting said stepped lever with the arm on the rocking bar. 26th. In a typewriting machine, the combination with printing devices, the carriage and a ratchet bar on the carriage, of a rocking bar, ratchet devices pivoted to the rocking bar, an arm on the rocking bar, a series of key bars, a stepped lever under said key bars, and connected with the arm on the rocking bar, a spring sustained spacing lever, and a finger button thereon, said finger button disposed over the end of the stepped lever and adapted to operate it. 27th. In a typewriting machine, the combination with printing devices, a carriage and carriage feed devices, of a device actuated by the carriage and adapted to lock said carriage feed devices. 28th. In a typewriting machine, the combination with printing devices, a carriage, feed devices, keys and carriage feed mechanism, of means actuated automatically by the carriage for locking the mechanism and preventing the operation of the machine. 29th. In a typewriting machine, the combination with printing devices and a carriage, and keys, of a rocking bar connected with the keys, ratchet devices for the carriage connected with said rocking bar, and a pivoted arm adapted to be operated by the carriage for locking said rocking bar. 30th. In a typewriting machine, the combination with printing devices, a carriage and keys, of a rocking bar, connections between the keys and rocking bar for operating the latter, a lug on the rocking bar, a pivoted arm, a device on the carriage for moving said arm in line with the lug on the rocking bar for locking the latter, and ratchet feed devices connected with said rocking bar. 31st. In a typewriting machine, the combination with printing devices, a carriage and keys, of a rocking bar, ratchet feed devices connected with the rocking bar, connections between said rocking bar and keys, a lug on the rocking bar, a series of shoulders on the carriage, and spaced apart, a pivoted arm having two members, a tooth on one member adapted to engage the shoulders on the carriage and move the other member of the pivoted arm in line with the lug on the rocking bar, and a finger bar projecting from said pivoted arm. 32nd. In a typewriting machine, the combination with a frame and a carriage, of a post on the frame, a longitudinally movable bar mounted in said post parallel with the carriage, a tooth on said post, a ratchet bar attached to the ends of said movable bar, and adapted to be engaged by the carriage and to engage the teeth on the post, a thumb piece for moving the ratchet bar away from the tooth, and a spring for passing the ratchet bar into contact with the tooth. 33rd. In a typewriting machine, the combination with a fixed frame, of two pivoted frames, printing devices carried by one of said pivoted frames, and a carriage, carriage lock, car-

riage feed mechanism and a margin stop carried by the other pivoted frames, and independent means for operating said pivoted frames. 34th. In a typewriting machine, the combination with a printing mechanism a carriage and ratchet feed mechanism for the carriage, of a wire mounted on the carriage under the dogs of the ratchet feed devices, said wire being bent to form loops or handles and the extremities of said wire pivotally connected to the ends of the carriage. 35th. In a typewriting machine, the combination with a frame a carriage and a platen roller, of a wire secured at its ends to said frame and bent V-shaped between its ends said V-shaped portion partially embracing the platen roller to press paper against the same. 36th. In a typewriting machine, the combination with a carriage and a platen roller thereon, of a sheet metal paper guide having tongues secured to the carriage and projecting under the platen roller, a feed roller mounted at the inner edge of said guide and bearing against the platen roller, means for moving the feed roller away from the platen roller and a spring for pressing the feed roller against the platen roller. 37th. In a typewriting machine, the combination with a platen roller and means for guiding paper thereon, of means for turning the platen roller, a spur wheel secured to the roller, a spring having a tooth or shoulder to engage said spur wheel, and a pivoted lever having a shoulder to engage the tooth or shoulder on the spring and move it out of engagement with the spur wheel. 38th. In a typewriting machine, the combination with a frame of a rail and a post thereon, the post having an open slot in its top, a carriage having bearings at one side on said rail and a bar at the other side of the carriage passing through the open slot at the upper end of the post. 39th. In a typewriting machine, the combination of printing devices, a carriage, a platen roller mounted in the carriage, plates mounted on the journals of said roller, ribbon reels mounted at one end of said plates and ribbon guiding arms at the other ends of said plates. 40th. In a typewriting machine, the combination with printing devices, a carriage, a platen roller mounted therein, plates mounted between their ends and the journals of the platen roller, a ribbon reel mounted on one end of each plate, a guide arm at the other end of each plate and means for removably connecting said plates with the carriage frame. 41st. In a typewriting machine, the combination of printing means, a carriage, a platen roller on the carriage, plates mounted between their ends on the journals of said roller, each plate having an open slot, screws passing through said slots and entering the carriage frame, a ribbon reel mounted on each plate, and an outwardly projecting arm on each plate, each arm having an open slot for the reception of the inking ribbon. 42nd. In a typewriting machine, the combination of printing devices, a carriage, a platen roller thereon, an inking ribbon mounted on and moving with the carriage, and a tension device for the ribbon mounted on a part independent of the carriage, said tension device bearing against the inking ribbon and maintaining it normally away from the platen roller. 43rd. In a typewriting machine, the combination with printing devices, a carriage, a platen roller thereon, inking ribbon mounted on and moving with the carriage, inking rollers for the ribbon mounted on a part independent of the carriage and a tension device bearing against the inking ribbon and maintaining it normally away from the platen roller and against the inking rollers. 44th. In a typewriting machine, the combination of a printing devices, a carriage, a platen on the carriage, an inking ribbon mounted on and moving with the carriage, inking rollers for the ribbon mounted at a part independent of the carriage, and a spring pressed arm bearing against the ribbon and pressing it against the inking rollers and away from the platen.

**No. 69,686. Electric Smelting. (Fonderie électrique.)**

Wilhelm Borchers, Aachen, Germany, 17th December, 1900; 6 years. (Filed 6th May, 1899.)

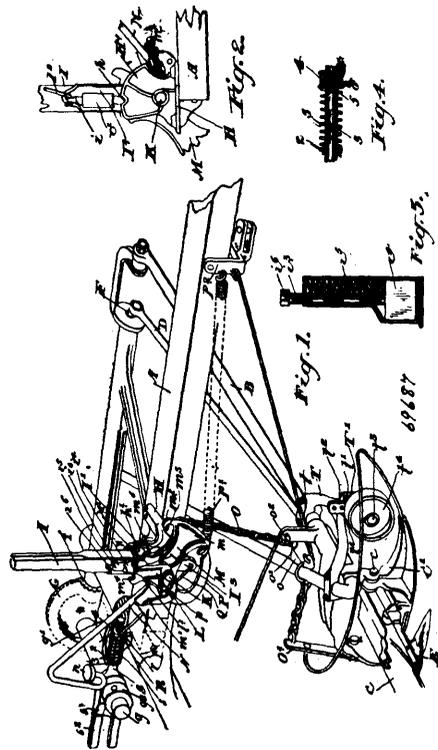
*Claim.*—The process of electric smelting or reducing by the action of carbon and heat, which consists of introducing a mass of carbon between two electrodes, packing the substance to be reduced un-mixed with carbon around said mass and passing an electric current through said carbon and electrodes, substantially as specified.

**No. 69,687. Mower. (Faucheuse.)**

The Noxon Manufacturing Company and William F. Johnston, Frederick Duncan Mercer and Joseph Stevenson, all of Ingersoll, Ontario, Canada, 17th December, 1900; 6 years. (Filed 28th November, 1900.)

*Claim.*—1st. The combination with the mower bar hinged to the lower free end of the bail, of a bracket secured to the tongue and provided with a laterally extending pivot pin, the lever suitably journaled on the pin, the double arm journaled on the pin adjacent to the lever and provided with a quadrantal end and rearwardly extending tail and quadrantal upper end provided with a front notch and rear tooth, the lifting chain connected at the upper end of the forward quadrant of the double arm at one end and to the heel of the mower bar at the opposite end, the foot lever secured to the rear tail of the double arm, the arm secured on the end of the pivot pin and the plunger secured on the lever and designed to co-act therewith as and for the purpose specified. 2nd. The combination with the mower bar hinged to the lower free end of the bail, of a bracket secured to the tongue and provided with a laterally extending pivot pin, the lever suitably journaled on the pin, the double arm jour-

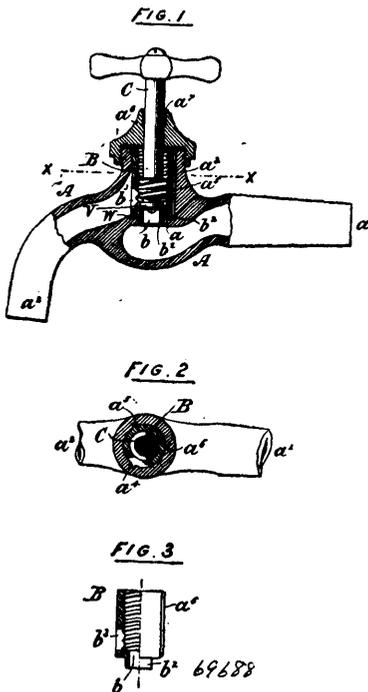
nalled on the pin adjacent to the lever and provided with a quadrantal end and rearwardly extending tail and a quadrantal upper



end provided with a front notch and rear tooth, the lifting chain connected at the upper end of the forward quadrant of the double arm at one end, and to the heel of the mower bar at the opposite end, the foot lever secured to the rear tail of the double arm, the arm secured on the end of the pivot pin and provided with a flat upper end and bevelled rear side extending to such end, the free spring-actuated plunger held in a suitable case in the side of the lever and provided with a broadened end, the outer portion of which is designed to rest on the flat top of the arm and end of the pin, so as to hold such plunger free of the front portion of the quadrantal upper end of the double arm, as and for the purpose specified. 3rd. The combination with the mower bar hinged to the lower free end of the bail, of a bracket secured to the tongue and provided with a laterally extending pivot pin, the lever suitably journaled on the pin, the double arm journaled on the pin adjacent to the lever and provided with a quadrantal end and rearwardly extending tail and a quadrantal upper end provided with a front notch and rear tooth, the lifting chain connected at the upper end of the forward quadrant of the double arm at one end and to the heel of the mower bar at the opposite end, the foot lever secured to the rear tail of the double arm, the arm secured on the end of the pivot pin and the plunger secured on the lever and designed to co-act therewith and a quadrant attached to or forming part of the bracket secured to the tongue and provided with a substantially V-shaped notch and the spring-actuated plunger on the opposite side of the lever designed to normally engage with such notch and to be withdrawn, as shown and for the purpose specified. 4th. The combination with the mower bar hinged to the lower free end of the bail, of a bracket secured to the tongue and provided with a laterally extending pivot pin, the lever suitably journaled on the pin, the double arm journaled on the pin adjacent to the lever and provided with a quadrantal end and rearwardly extending tail and a quadrantal upper end provided with a front notch and rear tooth, the lifting chain connected at the upper end of the forward quadrant of the double arm at one end and to the heel of the mower bar at the opposite end, the foot lever secured to the rear tail of the double arm, the arm secured on the end of the pivot pin and the plunger secured on the lever and designed to co-act therewith and a quadrant attached to or forming part of the bracket secured to the tongue and provided with a substantially V-shaped notch and the spring-actuated plunger on the opposite side of the lever designed to normally engage with such notch and to be withdrawn and a lateral projection at the front of the stationary quadrant against which the front of the lever abuts when in its normal position, as and for the purpose specified. 5th. The combination with the counter shaft and bevel wheel on one end of same and the driving shaft having a bevel pinion at one end meshing with the bevel wheel, the pitman, the mower bar and knife and the operating hand lever pivoted on a pin secured in the bracket on the tongue and the double arm having the quadrantal forward

end and the chain connection between such forward end and the heel of the mower bar and an operative connection between such double arm and the hand lever, of a tail extension or arm connected to the hand lever, means for throwing the bevel wheel out of gear and a rod connecting the tail to such means, as and for the purpose specified. 6th. The combination with the counter shaft and bevel wheel, on one end of same and the driving shaft having a bevel pinion at one end meshing with the bevel wheel, the pitman, the mower bar and knife and the operating hand lever pivoted on a pin secured in the bracket on the tongue and the double arm having the quadrantal forward end and the chain connection between such forward end and the heel of the mower bar and an operative connection between such double arm and the hand lever, of a tail extension or arm connected to the hand lever, the forked rod straddling the counter shaft and provided with a wide and narrow portion and a stem, the collar on the end of the counter shaft, the front collar on the stem, the spring extending between the front collar and the rear collar on the stem and the rod connecting the front collar to the tail or arm on the hand lever, as and for the purpose specified. 7th. The combination with the mower bar and double arm pivoted on a spindle extending laterally from the tongue and the lifting chain connecting the forward quadrantal end of the double arm to the heel on the mower bar, of the hand lever and free plunger and an arm of the end of the pin for normally holding the plunger out of engagement with the quadrantal upper portion of the double arm, as and for the purpose specified. 8th. The combination with a frame, bail and mower bar hinged to the bail at the heel thereof, of a supporting means for the heel end of the mower bar secured to the bail frame independently of the mower bar and in proximity to the heel thereof as and for the purpose specified. 9th. The combination with a frame, bail and mower bar hinged to the bail at the heel thereof, of a wheel located in proximity to the heel of the mower bar and means for supporting the same upon the frame independently of the mower bar, as and for the purpose specified. 10th. The combination with a frame, bail and mower bar hinged to the bail at the heel thereof, of a wheel located in proximity to the heel of the mower bar, a forwardly extending double arm bracket designed to hold the wheel at its apex and means for securing the ends of the bracket to each member of the bail, as and for the purpose specified. 11th. The combination with the frame, bail and mower bar, of a wheel and a suitable supporting bracket for securing the wheel to said bail and means for securing the bracket to the said bail, as and for the purpose specified.

**No. 69,688. Water Tap. (Robinet à eau.)**



Edward Franklin Phillips, Toronto, Ontario, Canada, 18th December, 1900; 6 years. (Filed 12th December, 1899.)

*Claim*—1st. In a tap or faucet, the combination with the shell, of a removable thimble having a valve seat and a side aperture, and threaded upon its interior, a spindle threaded for a portion of its length to correspond with the thread of the thimble, and a valve carried on the end of the spindle, substantially as and for the purpose set forth. 2nd. In a water tap, the combination with the

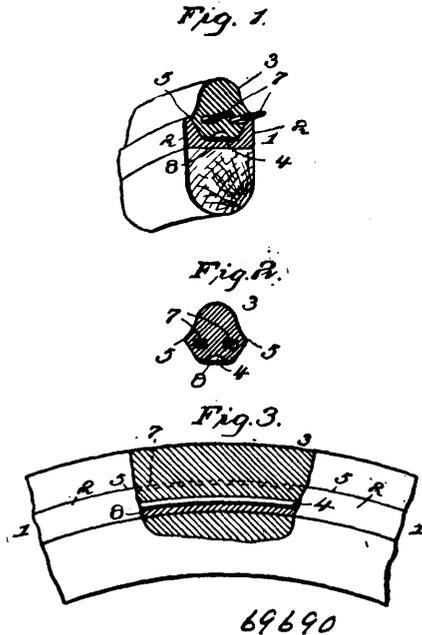
shell A having flange a, and grooves a', of the thimble B having projections a'', central aperture b, and valve seats b', side aperture b'', and the internal thread, the thread spindle C carrying valve V, and the retaining cap a'', all combined and arranged substantially as and for the purpose set forth.

**No. 69,689. Glass Plates for Reproducing Pictures etc. (Plaque de verre pour reproduire les images, etc.)**

Gottfried Scheuber, Berlin, Prussia, 18th December, 1900; 6 years. (Filed 24th February, 1898.)

*Claim*.—A process for the production of glass plates for production purposes, consisting in coating the glass plate with a light enamel colour capable of being burnt in, on which lines can be etched with a point or needle, and in the case of half tints, points made by means of a stiff brush or pencil, substantially as described.

**No. 69,690. Vehicle Tire Fastener. (Attache pour bandages de vehicules.)**



James R. Colt, Batavia, New York, U.S.A., 18th December, 1900; 6 years. (Filed 12th September, 1900.)

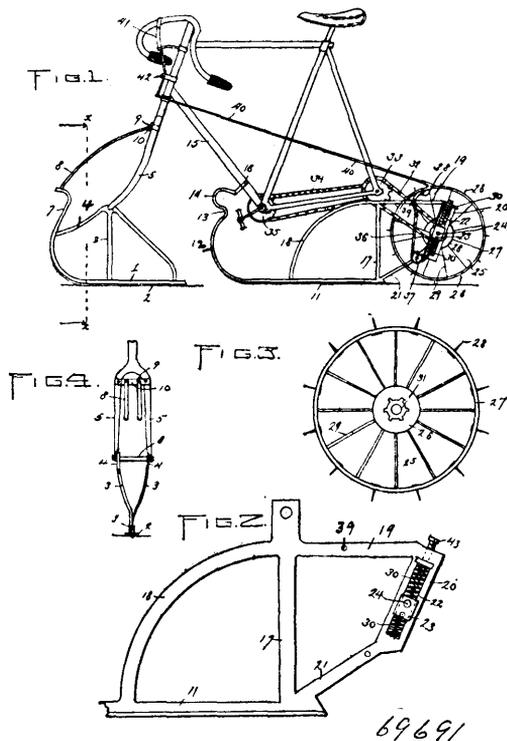
*Claim*.—1st. In a vehicle wheel, the combination, with a rim provided with flaring wings, of an elastic tire seated therein, the base of which is provided with a longitudinal groove, and the sides of which are provided with a laterally extending rib to overlap the corresponding wings of the tire, of two flat insulated metallic bands in the main portion of the tire, the inner edges of which are outside of a vertical line drawn from the groove in the base, and the outer edges overhang the bottom portion of said wings, the sides of the tire overlapping the upper portion of said wings, substantially as described. 2nd. In a vehicle wheel, the combination with a rim provided with flaring wings, of an elastic tire seated therein, the base of which is provided with a semi-cylindrical groove extending longitudinally thereof, and the main portion is provided with two flat metallic bands, and a piece of canvas secured to the base of the tire, so as to span or lap over said groove, substantially as described.

**No. 69,691. Sled Attachment for Bicycles. (Attache de patins pour bicycles.)**

Alfred Nelson, Helena, Montana, U.S.A., 18th December, 1900; 6 years. (Filed 11th September, 1900.)

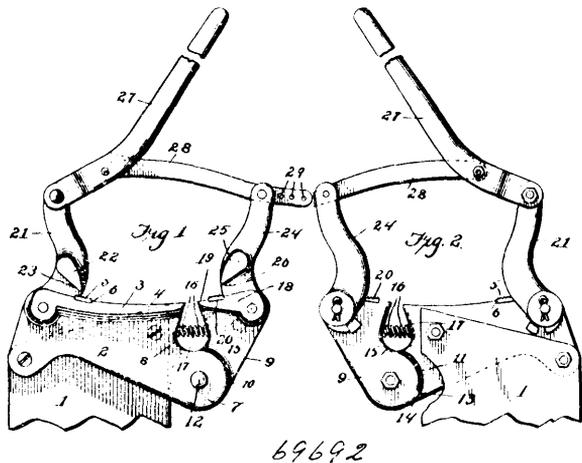
*Claim*.—1st. The combination with the front fork of a bicycle, of a runner pivotally connected thereto, and a rod connected to the forward end of the runner and having a sliding engagement with the fork at or near its rear end, substantially as and for the purpose set forth. 2nd. The combination with the front fork of a bicycle, of a runner pivotally connected thereto and extending in advance thereof, and a pair of curved rods connected to the forward end of the runner and extending rearward through guides, said rods having a sliding engagement with the front fork, substantially as and for the purpose specified. 3rd. The combination with a runner adapted to be applied to an ordinary safety bicycle, and having a single tread, of slotted bars arranged in rear of the heel end of the runner, a spiked driving wheel journaled in boxes slidably fitted in said

slotted bars, springs for sustaining said boxes in position to hold the driving wheel out of operation, means for imparting motion to said



driving wheel, an idle pulley journalled on the runner frame, a chain connected to one of the journal boxes of the driving wheel, and passing around said pulley, and connections from said chain to a point within reach of the rider while in the saddle, substantially as and for the purpose specified. 4th. The combination with the frame of a bicycle, of a runner detachably connected thereto, parallel horizontal arms extending rearward from the upper portion of said runner, inclined slotted bars connected to said bars, oblique braces connecting said slotted bars with the heel ends of the runners, sliding boxes fitted in said sliding bars, a spiked driving wheel journalled in said boxes, means for propelling said wheel, springs for sustaining said boxes in proper position to hold the wheel operative, chains connected to said boxes, an elbow lever connected to said chains and fulcrumed on the runner frame, and connections leading from said elbow lever to a point within convenient reach of the rider while in the saddle, substantially as and for the purpose specified.

**No. 69,692. Tire Shrinker.** (*Appareil à rétrécir les bandages.*)

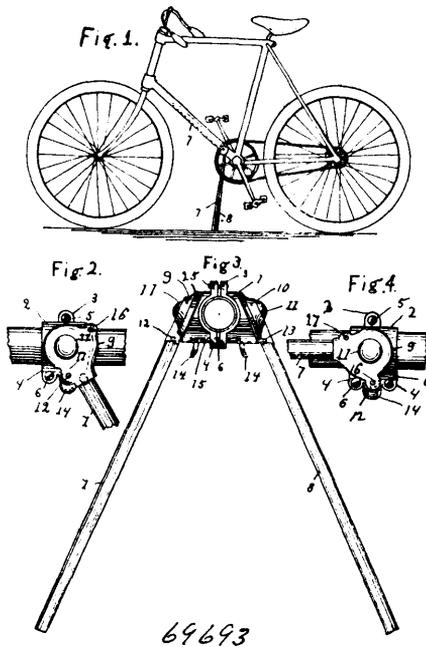


Mortimer Delay Gould, Saguache, Colorado, U.S.A., 18th December, 1900; 6 years. (Filed 12th September, 1900.)

Claim.—1st. In a tire shrinker, the combination of a fixed bed plate, a lever pivoted thereto, the lever and bed plate having upper

concaved faces, dogs pivoted to the bed plate and lever below the concaved faces thereof and having projecting jaws extending over the concaved faces, and means for operating the said dogs and lever, the dogs moving toward each other in their descent toward the bed plate and lever and separating when released. 2nd. In a tire shrinker, the combination of a bed plate, of a lever pivoted to said bed plate, the upper portions of the bed plate and lever having tables or ledges with concaved faces, transversely positioned ratchet plates in the said concaved faces, dogs pivoted to the bed plate and lever below the level of the tables or ledges and having projecting jaws arranged at an angle of inclination in reverse direction on opposite dogs and provided with lower biting edges, a lever attached to one dog, and a link bar connected to said lever and adjustably attached to the opposite dog. 3rd. In a tire shrinker, the combination of a fulcrum head, a bed plate formed with a stop shoulder adjacent the fulcrum head, a lever pivoted on said fulcrum head and having a corresponding stop shoulder, the adjacent faces of the lever and bed plate being formed with concave recesses, studs extending into said recesses, a spring around said studs, and located in the recesses, concaved faced ledges in the upper portions of the bed plate and lever, transversely positioned ratchet plates in the said concave faces, dogs pivoted to the bed plate and lever below the level of the said ledges and having projecting jaws arranged at an inclination in reverse directions on opposite dogs, a lever pivotally attached to one dog, a link bar connected to the other and means for adjusting said link bar with relation to said dog, the opposite end of the link bar being pivotally connected to said lever, all substantially as shown and described.

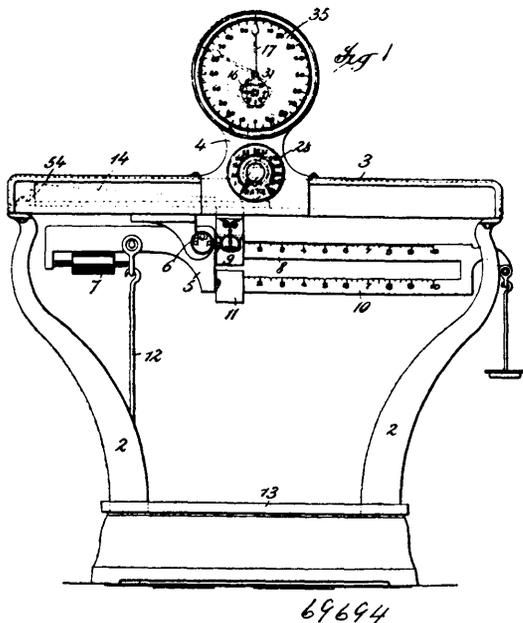
**No. 69,693. Bicycle Support.** (*Support de bicyclet.*)



Edward E. Josef, Buffalo, New York, U.S.A., 18th December, 1900; 6 years. (Filed 12th September, 1900.)

Claim.—A device for supporting a bicycle in an upright position, comprising two semi-circular clamping portions adapted to partially encircle the frame tube, and each provided with a diagonally outward and downward inclining outer face and projecting ears, bolts passing through said ears for drawing the portions toward each other and tightly around the tube, a locking bolt mounted in each of said clamping portions and adapted to slide easily therein, springs for holding said bolts in a normally locked position, operating fingers or triggers for retracting said bolts, upon their movement toward each other by the operator, two supporting arms each having an enlarged upper end provided with a circular opening and two lugs having openings projecting from the sides of said end, screw bolts passing through said circular openings in the ends to pivotally fasten said supporting arms to the diagonal outer faces of the clamping portions, the openings in two of the lugs, one on each of the supporting arms, being adapted to receive the bolts when the arms are in their open position spread from each other to support a bicycle and the openings in the remaining lugs being adapted to receive the bolts when in their closed position, as set forth.

No. 69,694. Price Scales. (*Bascule à indicateur de prix.*)



Frederick Lincoln Fuller, Trenton, New York, U.S.A., 18th December, 1900; 6 years. (Filed 14th September, 1900.)

*Claim.*—1st. The combination with a scale beam, of price computing mechanism, comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, substantially as described. 2nd. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, and connections between the poise and inclined member, substantially as described. 3rd. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, and connections between the poise and inclined member, said connections being loose to permit vertical play of the beam and poise relatively to the inclined member, substantially as described. 4th. The combination with a scale beam, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby and adjustable transversely to the incline, said incline varying progressively in the direction of adjustment, substantially as described. 5th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby and adjustable transversely to the incline, said incline varying progressively in the direction of adjustment, and connections between the poise and inclined member, substantially as described. 6th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby and adjustable transversely to the incline, said incline varying progressively in the direction of adjustment, and connections between the poise and inclined member, said connections being loose to permit vertical play of the beam and poise relatively to the inclined member, substantially as described. 7th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being

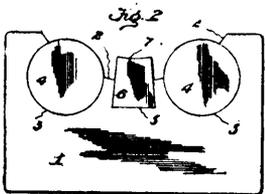
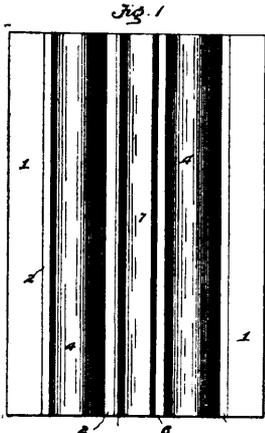
adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, and connections between said poise and inclined member comprising two pivoted jaws carried by the inclined member and a member engaged thereby carried by the poise, substantially as described. 8th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, connections between said poise and inclined member comprising two pivoted jaws carried by the inclined member and a member engaged thereby carried by the poise, and means for limiting the gripping movement of the jaws, substantially as described. 9th. The combination with a scale beam and its poise, of price computing mechanism comprising a member movable in a plane substantially parallel to the beam and inclined in the direction of its movement and a movable member controlled by said inclined member, and connections between the poise and inclined member whereby the two are caused to move together, substantially as described. 10th. The combination with a scale beam and its poise, of price computing mechanism comprising a member movable in a plane substantially parallel to the beam and inclined in the direction of its movement and a movable member controlled by said inclined member, and connections between the poise and inclined member whereby the two are caused to move together, said connections being loose to permit vertical play of the beam and poise relatively to the inclined member, substantially as described. 11th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, and connections between said poise and inclined member comprising pivoted jaws 39 carried by the inclined member, and a pin 40 carried by the poise and engaged by said jaws, substantially as described. 12th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, said members being adjustable one relatively to the other transversely to the incline and said incline varying progressively in the direction of adjustment, connections between said poise and inclined member comprising pivoted jaws 39 carried by the inclined member, a pin 40 carried by the poise and engaged by said jaws, and limiting-stop 42, substantially as described. 13th. The combination with a scale beam and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, and connections between said poise and inclined member comprising pivoted jaws 39 carried by the inclined member and a pin 40 carried by the poise and engaged by said jaws, substantially as described. 14th. The combination with a scale beam, and its poise, of price computing mechanism comprising an inclined member movable in a plane substantially parallel to the beam and a movable member controlled thereby, and connections between said poise and inclined member comprising pivoted jaws 39 carried by the inclined member, a pin 40 carried by the poise and engaged by said jaws, and limiting stop 42, substantially as described. 15th. The combination with a scale beam, of inclined member 14, rack 15, indicating devices actuated by the latter, and means for adjusting the rack transversely to the inclined member, substantially as described. 16th. The combination with a scale beam, of inclined member 14, suitably supported rack 15, indicating devices actuated by the latter, shaft 22, and connections between said shaft and the rack support consisting of a cam groove 23 on one and a pin 24 on the other entering said cam groove, substantially as described. 17th. The combination with a scale beam, of inclined member 14, rack 15, guiding support 20 therefor, shaft 22 and connections between said shaft and support consisting of a cam groove 23 on one and a pin 24 on the other entering said cam groove, substantially as described.

No. 69,695. Journal Bearings. (*Coussinet de tourillon.*)

George Fulton, Roodhouse, Illinois, U.S.A., 18th December, 1900; 6 years. (Filed 17th September, 1900.)

*Claim.*—In a journal bearing, a bearing section having a curved face to receive the journal, a central transverse dove-tailed recess opening through said curved face and grooves also opening through the curved face upon opposite sides of and parallel with said recess, in combination with friction rollers journalled in the grooves and adapted to be slipped into or out of the same by an endwise move-

ment, and a dove-tailed stick of Babbit or like metal removably mounted in the recess and having a curved face which is in the arc

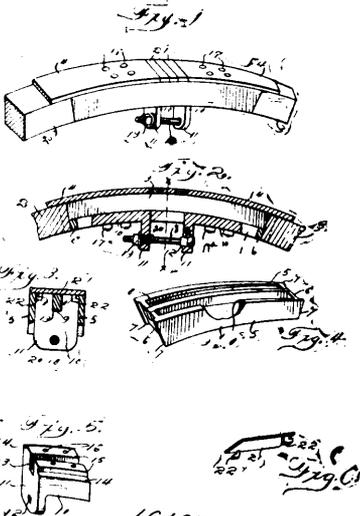


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of a circle that touches the outermost points of the rollers, substantially as set forth.

**No. 69,696. Tire Tightener.**

(Appareil à assujettir les bandages.)



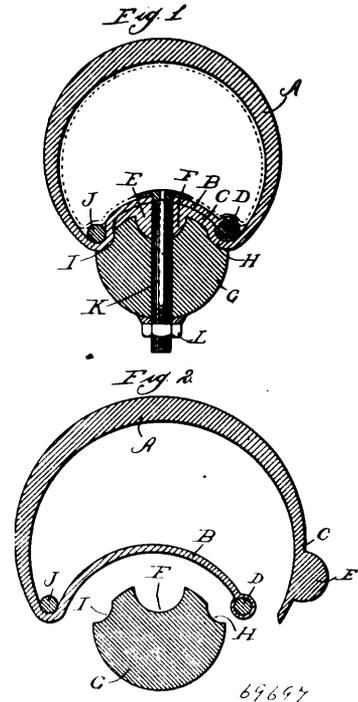
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Joseph Jackson Folks, Dunnellon, Florida, U.S.A., 18th December, 1900; 6 years. (Filed 13th September, 1900.)

*Claim.*—1st. In a tire tightener, the combination with a housing having inner and outer open sides, of opposite slidable heads mounted within the housing, adapted to be connected through one of the open sides of the housing and to the respective ends of the tire, and having ears or shoulders projecting through the opposite open side of the housing, and means adjustably connecting the ears and located exteriorly of the housing, substantially as shown and described. 2nd. In a tire tightener, the combination with a housing, of a pair of slidable heads adapted to be connected to the respective ends of the tire and provided with shoulders or lugs having aligned bolt openings, a bolt having an angular portion and adapted to be fitted in said openings, and a nut or the like carried by the bolt and adapted to engage one of the ears or shoulders, whereby the heads

may be adjusted, one of the bolt openings being angular and adapted to receive the angled portion of the bolt, and the other bolt opening being larger in diameter than the bolt to permit of lateral play, substantially as shown and described. 3rd. In a tire tightener, the combination of a housing or casing open throughout its outer side and provided with a longitudinal brace bar located intermediate of the opposite lateral closed sides of the housing, slidable heads mounted within the housing and provided with longitudinal grooves adapted to slidably receive the brace bar, said heads being adapted to be connected through the open side of the housing to the respective ends of the tire, and means for adjustably connecting the heads, substantially as shown and described. 4th. In a tire tightener, the combination of a housing or casing open at its outer side and provided with longitudinal flanges extending inward at the open side of the housing, and opposite slidable heads provided with opposite grooves adapted to receive the respective longitudinal flanges of the housing, said heads being adapted to be connected through the open side of the housing and to the respective ends of the tire, substantially as shown and described. 5th. In a tire tightener, the combination of a housing open throughout its outer longitudinal side, and provided with a longitudinal brace bar located intermediate of the opposite lateral closed sides of the housing, and longitudinal flanges projecting inward at the open outer side of the housing, opposite slidable heads mounted within the housing and adapted to be connected through the open side thereof and to the respective ends of the bar, each head being provided with a longitudinal groove located intermediate of the sides thereof, and opposite longitudinal grooves provided in the side edges of the head, the intermediate grooves being adapted to receive the longitudinal brace bar, and the opposite side grooves to receive the longitudinal flanges of the housing, substantially as shown and described. 6th. In a tire tightener, the combination of a casing open throughout its outer side and provided with longitudinal flanges projecting inward from the opposite closed sides and at the open outer side of the housing, means for adjustably connecting the ends of the tire, and filling plates adapted to be fitted between the ends of the tire and provided with opposite L-shaped lugs or hooks adapted to engage the respective longitudinal flanges of the housing, substantially as shown and described.

**No. 69,697. Pneumatic Tire. (Bandage pneumatique.)**



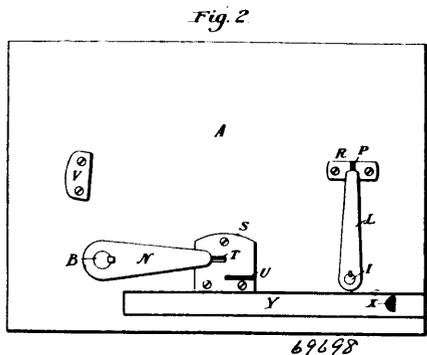
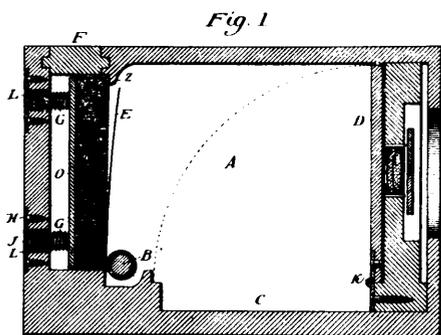
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John Baker, Meacham, Illinois, U.S.A., 18th December, 1900; 6 years. (Filed 10th September, 1900.)

*Claim.*—1st. In a tire, the combination with a rim provided with an outer convex face having a central annular side groove, of an open tube adapted to be mounted thereon, said tube comprising a tread portion and two annular flaps adapted to overlap each other on the rim, one of said flaps being provided with an annular shoulder adapted to fit within said central annular groove in said rim, and the other of said annular flaps being provided in its edge with an annular metal band adapted to compress a portion of said first-named flap into one of said side grooves in said rim, and a free annular band contained within said tire and adapted to engage and

compress a portion of said last named flap into said other side groove of said rim. 2nd. In a tire, the combination with a rim provided with an outer laterally convex face having an annular middle groove, of a tire comprising a band the edge portions of which form overlapping flaps, one of said flaps being provided with an annular shoulder adapted to enter said groove in said rim, an annular metallic band mounted in the edge of said other flap and being of less diameter than the greatest diameter of said rim and adapted to engage and compress said first named flap against said rim, and a free annular band of less diameter than the greatest diameter of said rim within said tire adapted to engage and compress said last named flap against said rim. 3rd. In a tire, the combination with a rim provided with an outer laterally convex face having a central annular groove and annular side grooves, of a tire comprising an open tube the edge portions of which form overlapping flaps, one of said flaps being adapted to rest upon said rim and being provided with an annular shoulder adapted to fit said annular groove, devices carried by said other flap and adapted to engage and compress part of said first named flap into one of said side grooves, and devices freely movable within said tire and adapted to be engaged thereby to compress a portion of said last named flap into said other side groove when said tire is inflated.

**No. 69,698. Camera. (Camera.)**

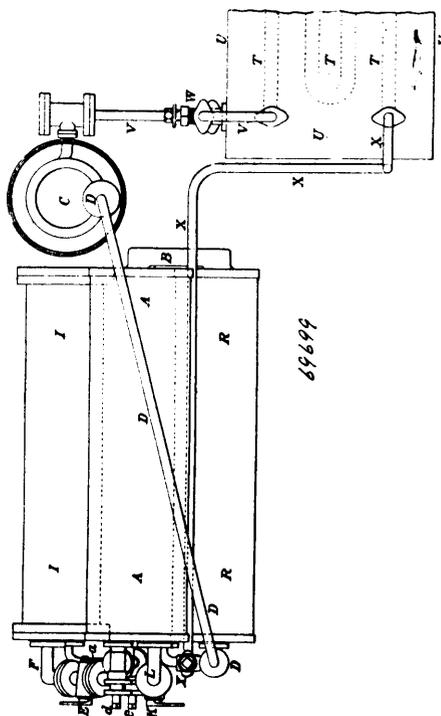


David Henderson Houston, Hunter, Illinois, U.S.A., 18th December, 1900; 6 years. (Filed 9th January, 1900.)

*Claim.*—1st. Combined in a camera, a case, the movable back in the magazine, said movable back adjusted to spring, a closable aperture in the magazine, a friction roller adjusted to rest against the lower part of the side of the first plate in the magazine, the camera case having a recess below the said first plate, whereby the said friction roller can pull down the said first plate in the magazine to a position below that of the other plates in the magazine. 2nd. Combined in a camera, a case, a friction roller placed to bear against the side of the first plate in the camera magazine, said friction roller having a core of hard material, the said core of hard material inserted into a piece of rubber pipe, and of a camera case having a recess adapted to allow the first plate in the magazine to pass from the position of the other plates in the magazine. 3rd. Combined in a camera, a case, a magazine having a closable aperture adapted to allow access to the said magazine, a movable back in the magazine, said movable back adjusted to spring, a friction roller adjusted to rest against one side of the first plate in the magazine, said friction roller having its axis passed through one side of the camera case, a handle on the said axis, the camera case having an interior recess adapted to allow the first plate in the magazine to move from its position sufficiently to allow the opposite side of the said first plate to be free from the plate rest, the camera case having a closable aperture connecting with the plate box, said plate box located in the interior of the camera, the adjustable swinging cover of the said plate box, said adjustable swinging cover having its axis at its front edge, said axis of said swinging cover passed through the side of the

camera case, a handle on the said axis of the said swinging cover, and of a lense and shutter fitted to the camera. 4th. Combined in a camera, a case, a magazine having a closable aperture adapted to allow access to the said magazine, a movable back in the magazine, said movable back adjusted to spring, a friction roller adjusted to rest against one side of the first plate in the magazine, said friction roller having its axis passed through one side of the camera case, a handle on the said axis, the camera case having an interior recess adapted to allow the first plate in the magazine to move from its position sufficiently to allow the opposite side of the said first plate to be free from the plate rest, the camera case having a closable aperture adapted to allow access to the exposed plates, and of a lense and shutter fitted to the camera. 5th. Combined in a camera, a friction roller bearing against one side of the foremost sensitized plate, said friction roller adjusted so that the said roller when rotated one way will draw the first plate in the magazine from the plate rest, and when said roller is reversely rotated the first plate in the camera may be thrown from the magazine into the interior of the camera. 6th. Combined in a camera, a case, a friction roller placed to bear against one side of the first plate in the camera magazine, said friction roller having a core of hard material, the said core of hard material covered with soft material adapted to make the friction roller adhesive on its surface, and of a camera case having an interior recess adapted to allow the first plate in the magazine to be oscillated by the friction roller. 7th. Combined in a camera, a case, a friction roller having the outer surface adapted for friction by a fluted, or sanded surface, said friction roller placed to bear against one side of the first plate in the camera magazine, and of a camera case having an interior adapted to allow of the said first plate in the magazine to be oscillated by the friction roller.

**No. 69,699. Refrigerating Apparatus. (Appareil réfrigérant.)**



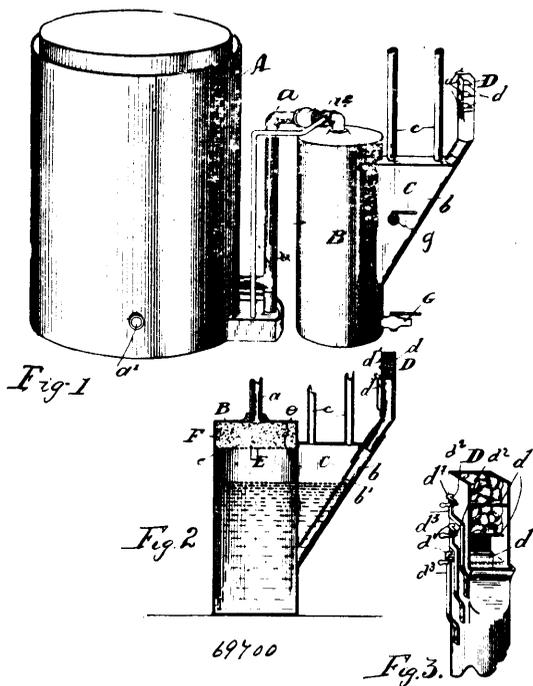
Henry Lyon, 38 Whitevale Street and John Burrell Talbot-Crosbie, Renfrew, Scotland, 18th December, 1900; 12 years. (Filed 13th June, 1899.)

*Claim.*—1st. In apparatus for refrigerating by the evaporation condensation, expansion and absorption of ammonia, the combination of parts comprising a generator or vessel for heating and evaporation a strong solution of ammonia, a condenser connected by a pipe to the generator, expansion tubing connected to the condenser and immersed in brine or the like, an absorber placed at a higher level than the generator and connected to the expansion tubing, an intermediate vessel connected by a pipe to the absorber to receive the solution of ammonia therefrom, and at a higher level than the generator, a pipe connecting the intermediate vessel with the generator, a pressure equalizing pipe connecting the absorber and generator an additional pressure equalizing pipe connecting said pipe with the intermediate vessel, stop valves on the various connecting pipes, means for heating the generator, and means for cooling the absorber, substantially as described. 2nd. In a refrigerating

apparatus, the combination with the generator, the absorber placed at a higher level than the generator, an intermediate vessel placed between the generator and absorber and at a higher level than the generator, pipes connecting the generator, the absorber and the intermediate vessel, of a pressure equalizing pipe connecting the generator and absorber, and an additional pressure equalizing pipe connecting said pipe with the intermediate vessel, said connecting pipes being provided with suitable valves, substantially as described.

**No. 69,700. Acetylene Gas Generator.**

(Générateur à gaz acétylène.)

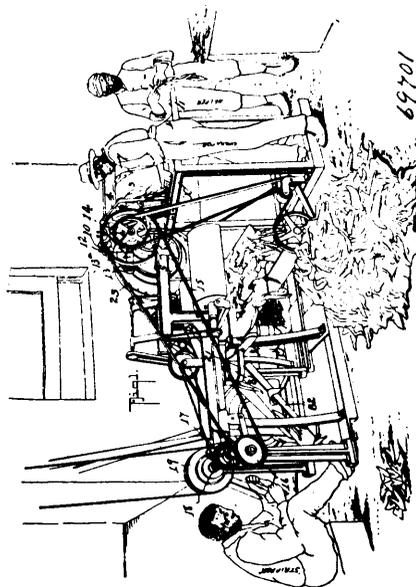


Alvin Gardner, Frederick A. Hurd, Robert Code and Frederick Thompson, all of Cookshire, Quebec, Canada, 18th December, 1900 : 6 years. (Filed 17th August, 1900.)

*Claim.*—1st. An acetylene gas generator, comprising a casing, an obliquely set chute fitted to the side of and designed to communicate with the said casing, a waste discharge pipe located near the bottom of the said casing and a gas outlet pipe located at the top of the casing and having a check valve therein and a safety pipe from the gas outlet pipe between the check valve and the generator, leading to the water seal, as shown. 2nd. An acetylene gas generator, comprising a casing, an obliquely set chute fitted to the side of and designed to communicate with the casing, having a longitudinal opening in the upper side thereof and a water seal compartment located over the said opening, waste pipes entering the upper portion of the said compartment, a discharge pipe located at the lower end of the generator casing and a gas outlet pipe located at the upper end of the casing, as and for the purpose specified. 3rd. An acetylene gas generator, comprising a casing, an obliquely set chute communicating with and fitted to the side of the casing, a waste pipe located at the bottom of the casing, an outlet pipe located at the top of the casing, a perforated partition located within the casing above the level of the water, a suitable filtering material supported thereby, as and for the purpose specified. 4th. The combination with the generator having an obliquely set chute, as described, a waste pipe and a gas outlet pipe, of a carbide holder comprising a vertical series of shelves pivotally swung in the mouth of the chute and means for temporarily locking same in a horizontal position, as and for the purpose specified. 5th. The combination with the generator, having an obliquely set chute, as described a waste pipe and an outlet pipe for the gas, of a carbide holder comprising a vertical series of shelves connected to rods pivotally supported in the mouth of the chute, each rod having L-shaped outer end, a spring catch designed to support the outer end of the rod and the shelf horizontal, as and for the purpose specified.

**No. 69,701. Tobacco Stemming Machine.**

(Machine à écarter les feuilles de tabac.)



The Universal Stripping Machine Company, assignee of Alphonso Ross Allison and Charles E. Buck, all of Richmond, Virginia, U.S.A., 18th December, 1900; 6 years. (Filed 27th February, 1899.)

*Claim.*—1st. In a tobacco stemming machine, in combination with the stripping mechanism and the initial leaf feeding and stem drawing means, of supplemental draw rolls adapted to engage the stem as it is drawn through the wipers to relieve the initial stem drawing mechanism, substantially as shown and for the purposes described. 2nd. In a tobacco stemming machine, in combination with the stripper mechanism, and means for feeding the leaf therebetween and drawing the butt end of the stem therethrough, of supplemental drawing devices adapted to engage the said butt end of the stem and complete the action of drawing the balance of the stem between the wipers. 3rd. In combination with the wiper mechanism, and the rotary stem conveyer and drawing disc, of supplemental rolls adapted to engage the stem and simultaneously move the stem laterally and vertically between the wipers. 4th. The combination with the wiper mechanism and the rotary leaf carrier, substantially as shown, of a pair of supplemental rolls having co-acting faces, said rolls being arranged at an angle to the wiping line of the strippers, and adapted to engage the stem as it is partially drawn up from the strippers and complete this drawing action as specified. 5th. The combination in a machine as described with the wiping mechanism, consisting of a pair of card clothing endless belts having co-acting opposing surfaces, the card teeth constituting such surfaces being in clearly defined longitudinal rows, the supplemental rolls and the rotary carrier, said carrier having its stem clamping means arranged to become disengaged from the step as the supplemental rolls take it, substantially as shown and for the purposes described. 6th. The combination in a machine as described, with the wiping mechanism, the supplemental rolls and the rotary carrier, said carrier having its stem clamping means arranged to disengage from the stem as the supplemental rolls take it, of means for deflecting the stem, as it passes from the supplemental rolls and conveying it to one side of the machine. 7th. The combination with the wiping mechanism, the supplemental draw rolls, a rotary carrier, said carrier being arranged to release the stems as they are gripped by the supplemental rolls, of means for deflecting the stripped leaf particles to one side of the machine, and devices for discharging the stems as they leave the supplemental rolls to the opposite side of the machine. 8th. The combination with the wiping mechanism, the carrier and the supplemental rolls, said carrier having its grippers arranged to release the stems as they are engaged by the supplemental rolls, of a take off apron movable outward from the supplemental rolls, and devices for deflecting the stems into the apron as they leave the said rolls. 9th. The combination with the wipers, the rotary carrier and the supplemental rolls arranged substantially as described, of an endless apron 30, and the transverse travelling stripper chain 33, having fingers to engage the stems as they pass up from the supplemental rolls, as specified. 10th. In a machine as described, the combination with means for deflecting and discharging the stripped stem lengthwise to one side of the machine, of supplemental stripper means adapted to receive the stem from the discharging means, and operating to clean any leaf particles adhering to the leaf stem butt, substantially as shown and for the purpose described. 11th. In a machine as

described, the combination with the stem discharging apron 30, of the draw rolls  $b^1$ , and the stripper rolls  $c^1$ ,  $c^1$ , for the purpose described. 12th. In a machine as described, the combination with the pivotal clamp members forming a part of the rotary carrier, of a cleaner 36, and means for rotating it within the clamping spaces of the carrier, substantially as shown and described. 13th. In a machine as described, the combination with the rotary carrier pivotal clamp members, of a rotary cleaner 36, said cleaner having a portion running adjacent to the inner or gripping surface of the clamp members, said surface being parallel with the said inner surface of the clamp members, and means for rotating the said cleaner, substantially as shown and described. 14th. In a machine as described, the combination with the rotary carrier pivotal clamp members, of a rotary cleaner 38, said cleaner having a portion running adjacent to the inner or gripping surface of the clamp members, said surface being parallel with the said inner surface of the clamp members, means for rotating the said cleaner, and a scraper mechanism for cleaning the fixed gripping faces of the carrier, all being arranged substantially as shown and for the purposes described.

**No. 69,702. Steel Castings. (Moulage en acier.)**

Andres Gustav Lundin, Boston, Massachusetts, U.S.A., 20th December, 1900; 6 years. (Filed 27th April, 1900.)

*Claim.*—1st. As an improved article of manufacture, steel castings containing an admixture of from .18 to .3 per cent of silicon, .1 per cent to 4 per cent of manganese, and 3 per cent or less of aluminum. 2nd. As an improved article of manufacture, steel castings consisting of the product of steel scrap melted and cooled, and an admixture consisting of the following combination, viz., 1.5 per cent to 2.5 per cent of ferro-silicon containing twelve per cent silicon, .125 per cent to 5 per cent of ferro-manganese containing 80 per cent of manganese, and 3 per cent or less of aluminum, substantially as described.

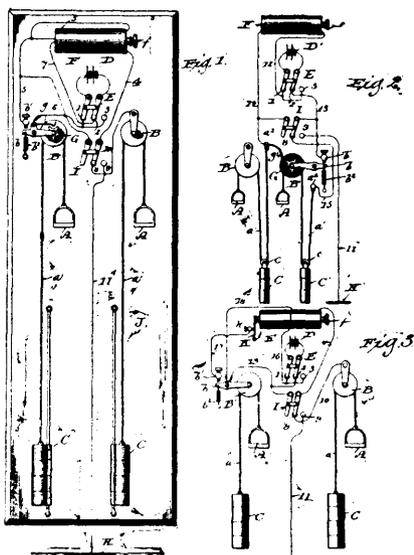
**No. 69,703. Steel Casting. (Moulage en acier.)**

Andres Gustav Lundin, Boston, Massachusetts, U.S.A., 20th December, 1900; 6 years. (Filed 27th April, 1900.)

*Claim.*—1st. As an improved article of manufacture, steel castings containing an admixture of from 1 per cent to 4 per cent of copper, .18 per cent to .3 per cent of silicon, .1 per cent to .4 per cent of manganese, and 3 per cent or less of aluminum. 2nd. As an improved article of manufacture, steel castings consisting of the product of steel scrap melted and cooled, and an admixture consisting of the following combination, viz., 1 per cent to 4 per cent of copper, 1.5 per cent to 2.5 per cent of ferro-silicon containing 12 per cent silicon, .125 per cent to .5 per cent of ferro-manganese containing 80 per cent of manganese, and 3 per cent or less of aluminum, substantially as described.

**No. 69,704. Electric Exercising Apparatus.**

(Appareil électrique à exercice.)



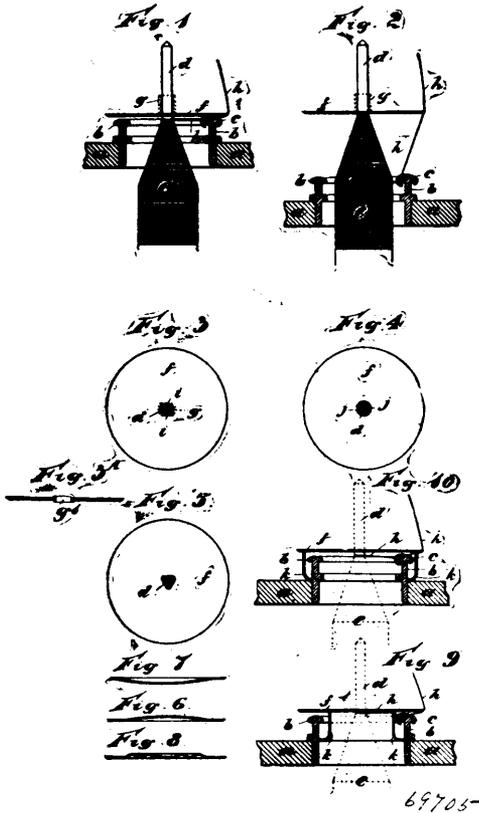
Charles Lyman Fortier, Milwaukee, Wisconsin, U.S.A., 20th December, 1900; 6 years. (Filed 24th February, 1900.)

*Claim.*—1st. The combination with an exerciser comprising a movable electrode and retracting resistance, of a source of electricity

generated independently of the exerciser, and automatic means for producing momentary pulsations of current through said electrode. 2nd. The combination with an exerciser comprising a movable electrode and retracting resistance, of a source of electricity generated independently of the exerciser, and means for adjusting the strength of current through the electrode. 3rd. The combination with an exerciser comprising a movable electrode and retracting resistance, of a source of electricity generated independently of the exerciser, and an induction coil and circuit interrupter for increasing the physiological effect of the current. 4th. The combination with an exerciser comprising a movable electrode and retracting resistance, of a source of electricity generated independently of the exerciser, an induction coil and circuit interrupter for intensifying the physiological effect of the current and means for varying the strength of the current. 5th. The combination with an exerciser, comprising a movable electrode and retracting resistance, of a source of electricity generated independently of the exerciser, and a circuit controller constructed and arranged to close circuit when the exerciser is put in operation and to automatically break the circuit when the exerciser is not in use, substantially as and for the purposes set forth. 6th. The combination with an exerciser, comprising two or more electrodes, one or more of which is movable, and retracting resistance for each exercising electrode, of a source of electricity generated independently of the exerciser, and a switch for closing or opening the circuit through one or more of said electrodes, substantially as and for the purpose set forth. 7th. The combination with an exerciser, comprising a movable electrode and retracting resistance, of a source of electricity generated independently of said exerciser, and means for changing the direction or polarity of the current through said electrode, substantially as and for the purposes set forth. 8th. The combination with an exerciser comprising a pair of movable electrical conducting handles and retracting resistance connected with said handles, of a source of electricity generated independently of the exerciser, an extra electrode for application to a part of the operator, and a switch arranged to direct the current through said handles or through said extra electrode and the handles of the exerciser, substantially as and for the purposes set forth. 9th. The combination with an exerciser comprising a pulley having a movable frame or support constituting a part of a circuit controller, a conducting handle or electrode attached to a flexible cord passing over said pulley and provided with retracting resistance, an electrical contact arranged to be engaged by the pulley frame when the handle of the exerciser is subjected to a pull, and a source of electricity generated independently of the exerciser, substantially as and for the purposes set forth. 10th. The combination with an exerciser comprising a pulley and a movable electrode attached to a flexible cord or the like passing over said pulley, of a source of electricity generated independently of the exerciser, and a circuit interrupter consisting of a break wheel actuated by said pulley, and a contact adapted to be engaged by said break wheel and to successively close and break the circuit including said source of electricity, substantially as and for the purposes set forth. 11th. The combination with an exerciser comprising pulleys and conducting handles attached to cords passing over said pulleys, of a source of electricity generated independently of the exerciser, an induction coil for increasing the strength or intensity of the current, a circuit interrupter consisting of a break wheel actuated by one of said pulleys and a contact arranged to be engaged thereby for successively opening and closing the circuit through said induction coil, and an automatic circuit controller adapted to close the circuit when the exerciser is in operation and to break the circuit when the exerciser is not in operation, substantially as and for the purposes set forth. 12th. The combination with an exerciser comprising pulleys and conducting handles having flexible connections passing over said pulleys, with retractile resistance, of a source of electricity generated independently of the exerciser, an induction coil for increasing the strength or intensity of the current, a pole changing switch for reversing the direction of the current through said handles, a circuit interrupter consisting of a break wheel actuated by one of said pulleys, and of a contact adapted to be engaged thereby, and an automatic circuit controller for closing the circuit when the exerciser is in operation and opening the circuit when the apparatus is not in use, substantially as and for the purposes set forth. 13th. The combination with an exerciser comprising a pair of pulleys and conducting handles having flexible connections passing over said pulleys, with retracting resistance, of a source of electricity generated independently of the exerciser, an induction coil for increasing the strength of the current, a circuit interrupter for successively breaking and closing the circuit through said induction coil, an automatic circuit controller adapted to close the circuit when force is applied to one of said handles and to open the same when said handle is released, an extra electrode for application to a part of the operator, and a switch for changing the course of the circuit through said extra electrode and the handles or through the handles only, substantially as and for the purposes set forth. 14th. The combination with an exerciser comprising a pair of pulleys and conducting handles having flexible connections passing over said pulleys, with suitable retracting resistance, of a source of electricity generated independently of the exerciser, an induction coil for increasing the strength of the current, a pole-changing switch for reversing the direction of the current, a circuit interrupter consisting of a break wheel actuated by one of the pulleys, and of a contact adapted to be successively engaged by said break wheel,

an automatic circuit controller adapted to close the circuit when one handle of the exerciser is subjected to a pull and to open the circuit when said handle is released, an extra electrode for application to any desired part of the operator, and a switch for changing the course of the current through said extra electrode and handles, substantially as and for the purposes set forth.

**No. 69,705. Machine for Spinning, Doubling or Twisting.** (*Machine à filer, doubler et retordre.*)



Phineas Pearson Craven, Ardwick, Manchester, England, 20th December, 1900; 6 years. (Filed 10th October, 1899.)

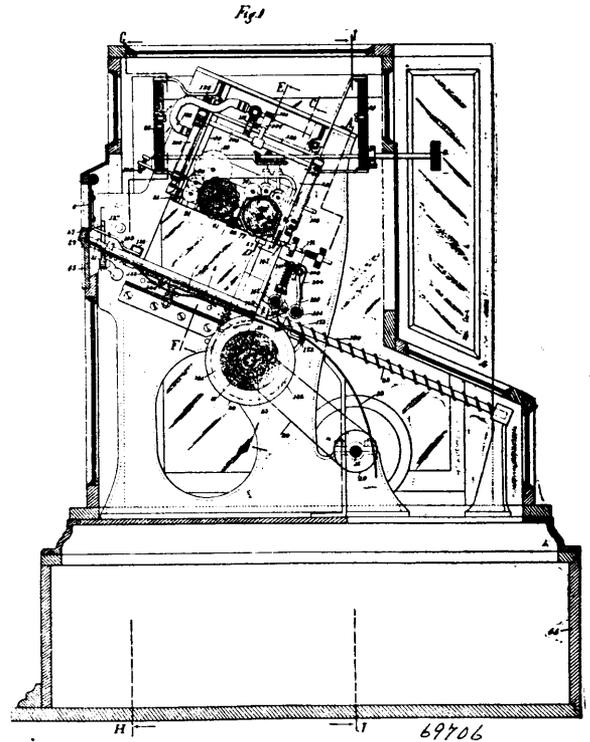
*Claim.*—1st. In ring spinning, doubling or twisting machine, the employment of a disc *f* mounted on the spindle with or without a tube *g*, or eyelet *g'* so as to be perfectly free to be canted or tilted thereon, and to be carried round thereby, substantially as and for the purpose described. 2nd. In ring spinning, doubling or twisting machines having discs mounted on their spindles the use in combination with the rings of such machines of projections *k* placed inside or outside such rings, for the purpose of lifting the discs on the spindles, substantially as described. 3rd. In ring spinning, doubling or twisting machines the mechanism for preventing the cop bottoms becoming too thick before the bottoming-peg has gone out of action, which consists in the employment of a projection *x* on the building motion drum, arranged and operating so as to accelerate the winding up of the coping chain *x* on to the building motion drum *v* while the cop bottom is being formed, substantially as described. 4th. In ring spinning, doubling or twisting machines the mechanism for preventing the cop bottoms becoming too thick before the bottoming peg has gone out of action, which consists in the employment of a disc or roller 1 mounted on the ring-rail shaft or coping-rail shaft *s*, a projection 4 on the said disc or roller 1 and a pawl lever 2 and pawl 5 acting on the building motion ratchet wheel 6 so as to accelerate the winding up of the coping chain *x* on to the building motion drum *v* while the cop bottom is being formed, combined and operating substantially as described.

**No. 69,706. Apparatus for Insuring, Registering and Franking Letters.** (*Appareil à enregistrer et affranchir les lettres.*)

Albéric Franc, Sanary, Var, and Francisque Voland, Lyon, both of France, 20th December, 1900; 6 years. (Filed 24th September, 1900.)

*Claim.*—1st. A machine for registering or insuring letters automatically, comprising a stamping device for imprinting identical indications on the letter and on two bands of paper, a device for holding the letter while it is being marked and then advancing it

into a receiving box, a device for holding each of the bands of paper while it is being marked and for then feeding it forward, a device



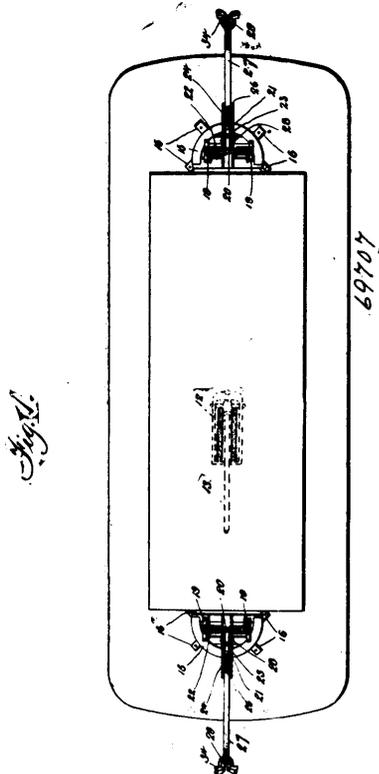
for rolling up in the machine the printed part of one of the bands, a device for causing the other band to issue from the machine and for cutting off the part printed, devices for preventing fraudulent manipulation and controlling mechanism for causing all these parts to operate in the desired order. 2nd. In a machine of the kind herein described, a printing device carried by a carriage 14 and comprising a bar 56 fixed to the carriage and carrying printing plates 53, 54, 55, which mark on the letter and the paper bands invariable inscriptions, two arbors 65 and 66 on which are mounted printing wheels which mark the letter and the bands with the date, number of the collection, the amount of the insurance and a running number, mechanisms with actuating buttons outside the machine for controlling the printing wheels which indicate the date, the collection and the amounts of the insurance, an automatic controlling mechanism for the numbering wheels and an inking device. 3rd. In a machine of the kind herein described provided with a printing mechanism carried by a carriage 14 and carrying numbering wheels 62, 63, 64, an automatic controlling mechanism for the same, numbering wheels comprising gear wheels 86, 87, 88 fixed to the said numbering wheels, the gear wheels 89, 90, 91 engaging with the aforesaid gear wheels and mounted on arbors which extend right along the carriage 14, which arbors also carry toothed wheels 92, 93, 94 a triple rack 95 pivoted to the frame of the machine and capable of imparting to the said wheels 92, 93, 94 suitable fractions of a revolution, while the carriage 14 is ascending and a device for causing the said rack to advance and recede from the said wheels 92, 93, 94 at the required moment. 4th. In a machine of the kind herein described in which numbering wheels mounted in a carriage 14 are controlled by a movable rack 95 acting through the intermediary of gear wheels, a device for causing the said rack to approach and recede from the said gear wheels comprising a traction spring 96, keeping the said rack disengaged with the said wheels, the tail 100 fixed to the said rack and obliging it to move back when the said tail is struck by the lower edge of the carriage 14, the spring finger 101 which keeps the rack against the tension of the said spring 96, and the projection 104 on the carriage 14, which projection disengages the finger 101 from the said rack allowing the latter to be pulled back by the spring 96. 5th. In a machine of the kind herein described, a device for inking the three series of printing wheels carried by the carriage 14 comprising the fixed inkholder 111, the tube 103 carried by the carriage 14 and connected with the inkholder by the flexible pipes 109, 110, a mechanism for communicating to the tube 103 a reciprocating motion, three inking rollers to which the ink is supplied from the tube 103 and which, during the movements of the carriage 14 are caused to pass under the three series of printing wheels by the action of the reciprocating movement of the tube 103, and a device for preventing the inking of the inking rollers while the carriage 14 is at rest.

6th. In a machine of the kind herein described in which series of printing wheels mounted in a carriage 14 are inked by rollers which receive ink from the reciprocating tube carried by the carriage, inking devices comprising each an inking roller 116 turning on a hollow perforated axis 114, rods 113 and 313, fixed to the ends of this axis and capable of sliding in the arms 105 and pushed upwards by springs 311, the hollow rod or pipe 113 being connected with the tube 103 by a flexible tube 112, an arbour 106, to which the arms 105 are fixed and which is carried by the carriage 14, a connection between said arbour 106, and the tube 103, such that the reciprocating of this tube 103 oscillates the arms 105, and a guide 318 for guiding the inking rollers on the carriage 14. 7th. In a machine of the kind herein described, in which printing devices mounted in a carriage 14 are inked by rollers actuated by reciprocating tube 103, a mechanism serving to impart reciprocating movement to the said tube, comprising rack teeth 119, 120, formed on this tube, pinions 121, 122, arbours 123 and 124, carrying these pinions and carried by the carriage 14, pinions 125, 126 carried on the said arbours and racks 127, 128 arranged in fixed positions so as to engage successively the pinions 125, 126. 8th. In a machine of the kind herein described, having inking rollers carried by a carriage 14 and inked by rollers which receive ink from a fixed holder, a device serving to prevent the flow of ink when the carriage 14 is at rest consisting of a flexible tube 129 of which one end opens in the ink holder above the level of the liquid while the other end is closed by the carriage 14, when said carriage arrives at its top position. 9th. In a machine of the kind herein described, having printing wheels carried by a carriage 14, a controlling mechanism for this carriage, comprising the handle 15, the chain wheel 17, connected with this handle by the chain 300 and the rods 16, the arbour 18, carrying said chain wheel, the arbour 22, transmitting gear between these two arbours, the two pinions 23, 24 keyed on to the arbour 22, racks 25 and 26, gearing with the said pinions and united elastically to the carriage, and the spring 27 which coils itself when the handle is pulled, and which afterwards returns by the aforesaid mechanism to its original position. 10th. In a machine of the kind herein described, a device serving to hold the letter while it is being marked and then to advance it into a receptacle comprising the spring table 7, the comb 8 for stopping the letter, the advancing roller 30, a mechanism for imparting rotation to this roller after the marking has occurred, and a device for forcing the letter against the roller and depressing the comb 8. 11. In a machine of the kind herein described, having a comb 8, which stops the letter and an advancing roller 30, a device serving to force the letter against the roller 30, and to depress the comb 8, comprising the movable frame 140, kept raised by the springs 341, the roller 142 mounted through springs on the said frame, the pins 23 carried by the said frame and a device for causing the frame to descend and keeping it depressed during the advancement of the letter. 12th. In a machine of the kind herein described, having printing rollers carried by a carriage 14, a comb 8 which stops the letter, an advancing roller 30 and a movable frame 140 carrying parts which, as the frame descends, depress the comb and force the letter against the roller, a device serving to depress said frame 140, and to keep it depressed during the advance of the letter, comprising projections 139, carried by the carriage 14, a spring catch 151 carried by the frame and the projection 147, on the carriage 14. 13th. In a machine of the kind herein described, in which all the actions are automatically performed when a handle is manipulated, a device for preventing this handle from being actuated unless the letter has been introduced, comprising an arbour 47, pins 46 carried on this arbour, which pins at the moment of the introduction of the letter are encountered by the letter and depressed, a notched disc 50 keyed on an arbour 22, which is united by gearing with the handle, and a pawl 48 attached to the arbour 47, and ordinarily engaged in the notch of the plate 50, but disengaged therefrom when a letter is introduced and moves the said pins 46. 14th. In a machine of the kind herein described, having printing wheels carried by a carriage 14, an opening for the introduction of letters and a device for preventing this introduction when the carriage 14, is not in its raised position, comprising the flap 6 provided with slightly spring arms 137, an adjustable projection 136 carried by the carriage 14, spring catches 138, and a rod carried by the carriage 14, which rod can force back the said catch. 15th. In a machine of the kind herein described, having a roller 30 for advancing the letter into a receptacle, a device for preventing the withdrawal of the letter and assuring its advancement, comprising the sliding frame 31, provided with teeth 29 and racks 133 carried on guide rods 32, and under the action of springs 150, and rollers 132 fixed on the roller 30 and provided with teeth on a portion of their periphery. 16th. In a machine of the kind herein described, having a stamping device designed to impress identical indications on the letter and on bands of paper a device serving to hold one of these bands of paper while it is being printed and then to feed it forward comprising a feeding roller 35 a table 36, a second feeding roller 41, a mechanism for pressing at the necessary moment the band of paper against these feeding rollers, so as to keep the said papers stationary and mechanism for rotating the rollers 35 and 41. 17th. In a machine of the kind herein described having a printing device for imprinting identical indications on the letter and on bands of paper, a device serving to hold the band of paper while it is being printed and then to feed it forward, comprising a table 36, feed rollers 35 and 41, a mechanism for rotating these rollers and a mechanism for pressing at the right moment the paper band against the feeding rollers holding it sta-

tionary, such mechanism comprising the ribs 178 formed on a part of the periphery of the said feeding roller 35, the lever arms 165, 166, 167, 168, the rollers 169, 170, the pressing pad 176 carried by the said lever arms and the springs 175 keeping the rollers 169, 170, against the feeding rollers, substantially as described. 18th. In a machine of the kind herein described having a device which, when a handle is pulled, imprints identical indications on a letter introduced into the machine as well as on bands of paper which pass over feeding rollers 35 and 41, a mechanism for rotating said feed rollers, which comprises a sleeve 158, a controlled mechanism with pawls uniting the sleeve to the said handle, a coiled spring 163 uniting the roller 35 to the said sleeve, a return movement mechanism uniting the roller 35 to the roller 41 and a device for preventing and permitting at the right moments the rotation of the feeding rollers. 19th. In a machine of the kind described herein, the combination with a printing device carried by carriage 14 for printing identical indications on a letter and on two paper bands with a device serving for advancing the letter after it has been marked having a movable frame 140 with a device serving for feeding forward each band of paper after it has been marked having a roller 35 under the action of a coiled spring 163, of a device serving to prevent and permit at the required moments rotation of the roller 35, comprising the pin 171 fixed to the said roller 35, the hooked arm 172 carried by the arbour 152, the arms 173 also carried by the said arbour 152, the roller 143 connected with the frame 140 by the spring arms 144 and serving to press the letter against the said arms 173 in order to depress these arms and cause the said arms 172 to oscillate, the notch 164 in the roller 35 and the bevelled pin 141 carried by the frame 140 and engaging in this notch when the frame descends, substantially as and for the purpose set forth. 20th. In a machine of the kind herein described having a printing device for printing identical indications on a letter and on two bands of paper, a mechanism for rolling up the printed band 39 comprising the arbor 182 united by gearing to a handle, the arm 183 fixed on the said arbor 182, the sleeve 184 mounted loosely on the said arbor 182 and carrying at one of its ends the ratchet wheel 185 and at the other the drum 183 provided with a pin 190, the drum 43 mounted loosely on the sleeve 184 and carrying a pawl 193 as well as a ratchet wheel 194 with which engage a pawl 195 pivoted to the frame of the machine, the spring barrel 188 and the cord 187 connecting this barrel with the drum 186, substantially as and for the purpose set forth. 21st. In a machine of the kind herein described having a printing device printing identical indication on a letter and on paper bands a mechanism for issuing from the machine and cutting off the printed part of the band 40 comprising a table 196 having a groove, the toothed plate 37 moving down on to this table and a device for moving the said plate at the right moments. 22nd. In a machine of the kind herein described the combination with the carriage 14 carrying the printing device for printing identical indications on a letter and on bands of paper with the device for feeding each band of paper comprising the feeding rollers 35<sup>x</sup> and 41<sup>x</sup> on which rollers the band is pressed by the rollers 169<sup>x</sup> 170<sup>x</sup> with means for lifting these rollers from the said feeding rollers 35<sup>x</sup> 41<sup>x</sup> and with a movable plate 37 for cutting off the printed part of one of the bands, of a device for moving at the right moments the said plate pressing springs 198, arms 199, 200 pivoted on a fixed rod 201 and engaging with the plate 37, the hooked lever 203 of the arm 206 bears under the action of a spring 207 on a roller 170<sup>x</sup> of the projection 208 carried by the carriage 14, all substantially as and for the purposes described. 23rd. A machine for insuring or registering automatically letters comprising an essential parts a printing device for printing identical indications on a letter and on two bands of paper, a device for holding the letter while it is being printed, feeding it forward into the box, a device for holding each of the bands of paper while it is being printed and then feeding them forward, a mechanism for rolling up in the machine the printed part of one of the bands of paper, a mechanism for issuing from the apparatus and cutting off the printed part of the other band, a controlled mechanism constituted by a handle and causing all these parts on the machine to actuate in the desired manner and a device which prevents the moving of the controlled mechanism, until the amount of the fee to be paid has been introduced into the machine. 24th. In a machine of the kind herein described the combination with the controlled mechanism worked by hand and with the printing mechanism carrying a device which indicates the registration, of a device which prevents the moving of the controlled mechanism until there has been introduced into the machine the amount of the fee, comprising the lever 209 with a projection 191, the plate 211 pivoted on this lever, the money shoot 212, the spring 210, the projection 213 which stops the handle and tips up the plate 211, and mechanism uniting the spring 210 to a device which indicates the amount of registration in order to put a tension on this spring proportional to the sum to be paid. 25th. The combination with a machine of the kind herein described of an automatic franking mechanism which comprises as essential parts a plate 220 for receiving the letter to be franked, a lever 221 carrying this plate, a plate for receiving the money 222 carried by a lever 224 and kept raised by the lever 221, a stamping device 227 actuated by a handle the rod 226 of which is held by the lever 224 so long as the plate 222 is not receiving the money, and a device for tipping the plates 220 and 222 when the handle is actuated. 26th. In a machine of the kind herein described provided with a franking mechanism having a plate 220 for receiving the letter and uniting to a system of levers, a duplicate arrangement of the said levers, the two levers differing from each other in the

ration between the lengths of their arms, substantially as and for the purposes set forth.

**No. 69,707. Trolley for Electric Railway Cars.**  
(*Trolley pour chemins de fer électrique.*)



Alphonse Piton, St. Sauveur de Quebec, Quebec, Canada, 20th December, 1900; 6 years. (Filed 7th April, 1900.)

*Claim.*—1st. In an electric railway, the combination with a trolley pole, and a cable, of a spring repressed arm having detachable connection with said cable and acting in opposition to the spring of said trolley pole, substantially as and for the purpose set forth. 2nd. In an electric railway, the combination with a spring actuated trolley pole, and a cable, of a spring repressed tension arm supported independently of said pole, and means for connecting the cable detachably to said arm, substantially as and for the purpose set forth. 3rd. In an electric railway, a tension device for the pole cable comprising a base, a tension arm mounted thereon, means for normally forcing said tension arm in one direction, and a cable connector carried by said arm, substantially as described. 4th. In an electric railway, a tension device for the trolley pole cable, comprising a base, a tension arm pivoted thereon, a spring actuated finger mounted on the base, and having slidable engagement with said arm, and a cable connector carried by the arm, substantially as described. 5th. In an electric railway, a tension device for the trolley pole cable comprising a base, a tension arm pivoted thereto, a rock shaft having a finger engaging slidably with said tension arm and a spring for normally depressing the finger and the tension arm, substantially as described. 6th. In an electric railway, a tension device for the trolley pole cable comprising a base, a tension arm pivoted thereto and provided with a longitudinal groove, a rock shaft, a finger fast with said shaft and provided with a roller shoe adapted to the groove of the tension arm, and a spring, substantially as described. 7th. In an electric railway, a tension device for the trolley pole cable comprising a base provided with a horizontal socket arm, a tension arm pivoted to occupy said socket arm, and a spring operatively related to the tension arm to normally force the latter toward the socket arm, substantially as described. 8th. In an electric railway, a tension device for the trolley pole cable, comprising a yieldable arm, a socket casting at the free end of said arm, and a cord knob adapted to the socket casting, substantially as described. 9th. In an electric railway, a tension device for the trolley pole cable comprising a yieldable arm, a socket casting provided with the communicating slot and socket, and the cord knob adapted to fit in the socket and to have the cord enter the slot, substantially as described. 10th. In an electric railway, a tension device for the trolley pole cable comprising a yieldable arm, a socket casting provided with a slot and with guides on opposite sides of the slot, and a cord knob adapted to the socket in the casing, substantially as described. 11th. In an electric railway, the combination of a trolley head provided with the

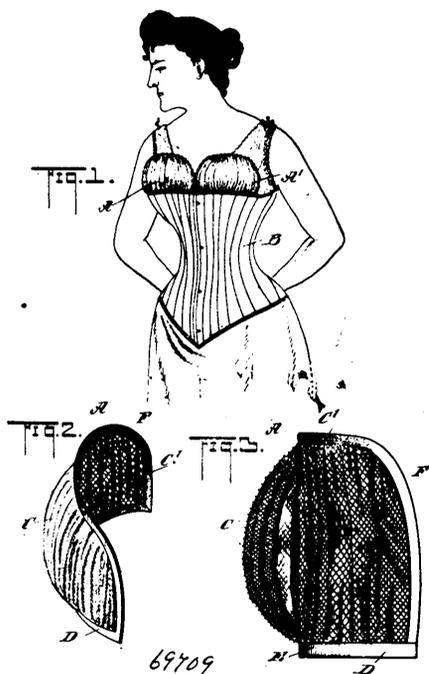
extended arms, a wheel, and guard springs fastened to the head and having their free ends slidably confirmed in said arms, substantially as described. 12th. In an electric railway, the combination of a trolley head provided with the slotted arms and the capped pins, a wheel, and the guard springs coiled around said pins, arched above the wheel, and slidably connected to the slotted arms, substantially as described. 13th. In an electric railway, the combination of a trolley head provided with studs, springs coiled around the studs and extended upwardly in advance of said head, a wheel, and a scraper supported by the springs in advance of the wheel, substantially as described.

**No. 69,708. Wax Taper for Friction Matches.**  
(*Bougie de cire pour allumettes à friction.*)

Juan Craveri, Buenos Ayres, Argentine Republic, 20th December, 1900; 6 years. (Filed 27th November, 1900.)

*Claim.*—A composition of matter for making wax matches and the like, consisting of white ceresin forty parts, purified colophony fifteen parts, sulfate of lime thirty-two parts, oxid of zinc seven parts, and nitrate of potassium six parts, substantially as described.

**No. 67,709. Bust Form.** (*Buste.*)



Emily H. Wright, New York City, New York, U.S.A., 20th December, 1900; 6 years. (Filed 30th November, 1900.)

*Claim.*—A bust form comprising a spherical body consisting of an inner shirred fabric and an outer shirred fabric, a pocket or sheath to which the lower edges of said fabrics are secured, the pocket extending from one end of the body to the other, a flexible curved bottom piece secured in said pocket to give the desired curvature to the body, and a band extending along the top and side edges of said body, the shirred fabrics being drawn together at their upper and side edges and fastened to the said band to hold the fabrics in a shirred position the ends of the said band being secured to the ends of the pocket, as set forth.

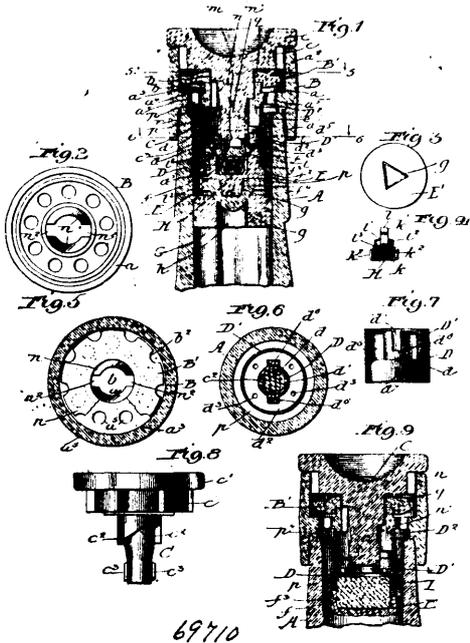
**No. 69,710. Bottle Stopper.** (*Bouchon de bouteille.*)

Charles Nathan Brisco, Chicago, Illinois, U.S.A., 20th December, 1900; 6 years. (Filed 30th November, 1900.)

*Claim.*—1st. In a stopper, the combination of a valve guard, a valve stem, a valve, a mutable body forming a connecting portion between valve and stem, and an extensible housing inclosing and protecting said body and operated by said valve stem, substantially as and for the purpose set forth. 2nd. In a stopper, the combination of a valve guard provided with a central perforation, a valve stem extending through said perforation, a valve, a mutable body forming a connecting portion between valve and stem, and a housing inclosing said body from liquid contact, except by way of said central perforation, substantially as and for the purpose set forth. 3rd. In a bottle stopper, the combination of a valve guard having a central perforation, a valve stem extending therethrough, a valve, a

mutable body forming a connecting portion between valve and stem, a sleeve section carried by said stem and enclosing said body, and a

tion disc rigidly secured to the shaft between the side pieces and within the pulley rim, a bearing ring attached to the inner side of



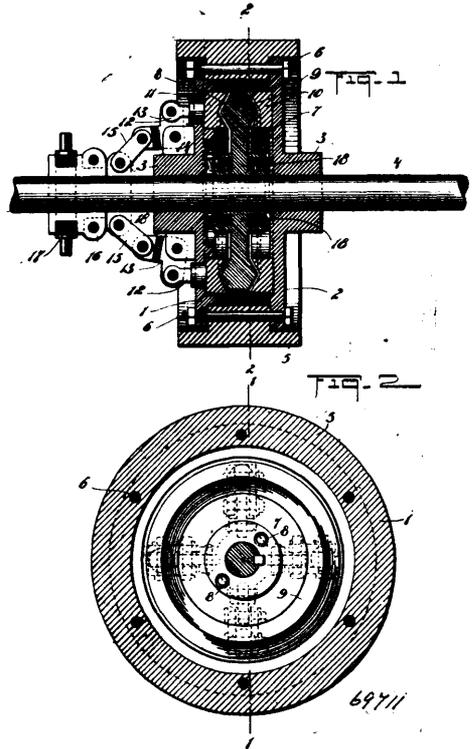
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sleeve section depending from the valve guard and telescoping with said first-named sleeve, substantially as and for the purpose set forth. 4th. In a bottle stopper, the combination of a valve guard having a central perforation, a valve stem extending therethrough, a valve provided on its upper side with a recess, a valve stem extension provided on its lower side with a recess, a mutable body supported in said recesses and forming a connecting portion between valve stem extension and valve, and an extensible housing for said body having liquid tight joint with said valve, substantially as and for the purpose set forth. 5th. In a bottle stopper, the combination of a valve guard, a valve stem working therethrough, a valve stem extension provided with a recess and with perforations leading thereto from above, a detachable valve, a mutable body supported from said recess and forming a connection between valve stem extension and valve, and an extensible housing having liquid tight connections with valve and valve guard and enclosing said valve stem extension, substantially as and for the purpose set forth. 6th. In a bottle stopper, the combination of a valve guard having an upper surface recess, a central perforation and flanking pouring orifices, a supplemental guard in said recess and having a central perforation registering with said first-named central perforation and provided with a sloping surface, a valve stem, a packing ring surrounding said stem and bearing on said supplemental guard, means for raising and lowering the guard, a valve, a mutable body connecting valve and valve stem, and an extensible housing inclosing said body and having liquid tight connections with valve guard and valve, substantially as and for the purpose set forth. 7th. The combination with a bottle neck, of a valve seat therein, a valve section seated thereon having an angular recess on its upper surface, a valve guard, a valve stem working therethrough, and a valve section supported by said stem and having an angular projection engaging the recess of said first-named section, substantially as and for the purpose set forth. 8th. The combination of a valve guard, a valve stem extending through the same, upper and lower cams on said guard, cams on said stem engaging the upper cams of the guard and serving to raise the stem when the latter is rotated in one direction, lugs on said stem engaging the lower cam and serving to lower the stem when the latter rotated in the opposite direction, and a detachable valve carried by said stem, substantially as and for the purpose set forth. 9th. The combination of a valve guard, a valve stem working therethrough, a valve stem extension provided with a recess, a spring retainer provided with one set of arms engaging the walls of one of said recesses and with another set of arms engaging the walls of the other recess, a mutable body serving to hold one set of arms expanded, a valve spring normally held against action by said retainer, and a housing, substantially as and for the purpose set forth.

No. 69,711. Pulley. (Poulie.)

Thomas John O'Brien, Cairo, Illinois, U.S.A., 20th December, 1900; 6 years. (Filed 1st October, 1900.)

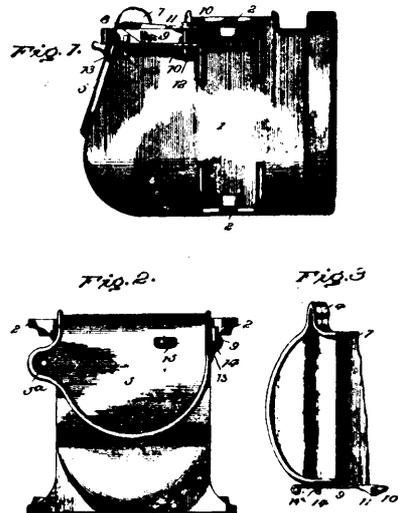
Claim.—A clutch pulley, comprising side pieces loosely mounted on a shaft, a rim rigidly secured to both of the side pieces, a fric-



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tion one of the side pieces and adapted for engagement with the disc, stems a bearing ring inmovable on the inner side of the other side piece and adapted to engage with the disc, extending outwards from the movable ring, angle levers having pivotal connection with said stems and also with the side pieces through which the stems extend, a sleeve loosely mounted on the shaft and in which the shaft may rotate, and link connections between said sleeve and the angle levers, substantially as described.

No. 69,712. Journal Box. (Cousinnet de tourillon.)



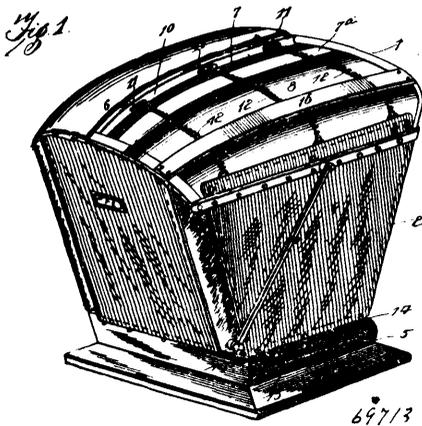
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Perry Brown, Wilmington, Delaware, U.S.A., 20th December, 1900; 6 years. (Filed 29th September, 1900.)

Claim.—1st. A journal box having an opening in its front and provided with side and bottom flanges, the side flanges forming

guides and the bottom flange serving to retain the lubricant in the box, in combination with a lid having grooves at each side, the walls of which tightly embrace both sides of the guides, and whose inner lower edge enters the lubricant receptacle, substantially as described. 2nd. A journal box having its bottom under the journal or axle substantially semi-circular in cross section and the interior of the front end of the box under the feed opening rounded off, whereby no sharp corners are presented on the interior to catch or interfere with the lubricant, substantially as described. 3rd. A journal box having a feed opening formed by the metal of its front side, in combination with a door or lid pivoted to the said box and arranged to be swung around and close the said feed opening, the said door or lid having a flange forming a deep groove around its sides and bottom, the walls of which grooves tightly embrace both the sides and bottom of the metal forming the feed opening, and the inner wall of which groove enters the lubricant receptacle below the upper edge of the metal forming the lower portion of said feed opening and thus effectually prevents the escape of the lubricant, substantially as described. 4th. A journal box provided with a rib on its top and having a feed opening formed by the metal of its front side, in combination with a door or lid pivoted to the said box and arranged to be swung around and close the said feed opening, the said door or lid having a flange forming a deep groove around its sides and bottom, the walls of which grooves tightly embrace both the sides and bottom of the metal forming the feed opening, the inner wall of which groove enters the lubricant receptacle and extends below the upper edge of the metal forming the lower portion of said feed opening, and a hood formed on said swinging door and arranged to overlap the rib on the top of the box, substantially as described. 5th. A journal box provided with a rib on its top, and having a feed opening formed by the metal of its front side, in combination with a door or lid pivoted to said box and arranged to be swung around and close the said feed opening, the said door or lid having a flange forming a deep groove around its sides and bottom, the walls of which groove tightly embrace both the sides and bottom of the metal forming the feed opening, the inner wall of which groove enters the lubricant receptacle and extends below the upper edge of the metal forming the lower portion of said feed opening, a hood formed on said feed opening, a hood formed on said swinging door and arranged to overlap the rib on the top of the box, and a catch arranged to lock the door shut, substantially as described. 6th. In a journal box having a feed opening, a door closing the same, a spring catch, and a double acting catch engaging said spring catch and arranged to actuate the latter in opening and closing, substantially as described. 7th. In a journal box having a feed opening, a door closing the same, a spring catch and a catch having oppositely inclined acting faces arranged to co-operate with said spring catch, substantially as described.

**No. 69,713. Vehicle Top.** (*Soufflet de voiture.*)

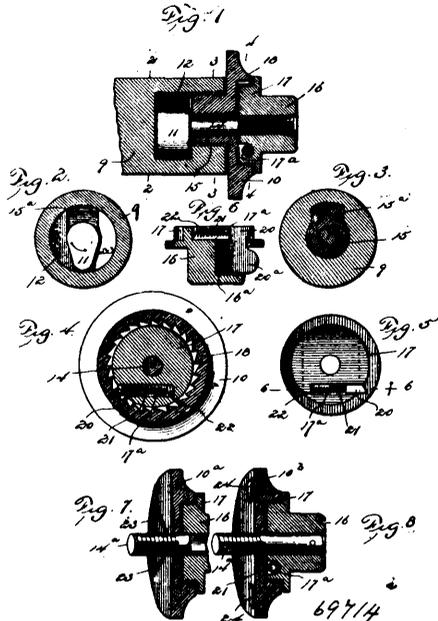


George W. Atkins, Milton, Delaware, U.S.A., 20th December, 1900; 6 years. (Filed 26th September, 1900.)

*Claim.*—1st. A carriage top provided with curved plates concealed within it and spaced from the cover to provide ways and forming guides, the side curtains supported by and guided on the curved plates, and the transversely disposed coiled springs secured to the top and connected to the upper edges of the side curtains and adapted to draw the same upward, and means for securing the curtains in their closed positions, substantially as described. 2nd. A carriage top provided with a curved plate concealed within it and forming a curtain support and guide, a curtain adapted to be raised and lowered and arranged to move over the said plate, and coiled springs secured to the top and to the upper edge of the curtain and

arranged longitudinally of the line of movement of the same, substantially as described. 3rd. A carriage top provided with a central rib or bar having openings, plates concealed within the carriage top and conforming to the configuration of the same and forming curtain guides or supports, the side curtains arranged to move over the plates, and the transversely disposed coiled springs extending through the openings of central rib or bar, and having their outer portions arranged at the upper faces of the plates and connected with the curtains, the inner portions of the of the springs being secured to the top beneath the plates, substantially as described.

**No. 69,714. Hub-attaching Device.** (*Appareil à assujettir les moyeux.*)



John A. Weitsel, Danville, & Ulysses G. Smith, Williamsport—both of Pennsylvania, U.S.A., 20th December, 1900; 6 years. (Filed 1st October, 1900.)

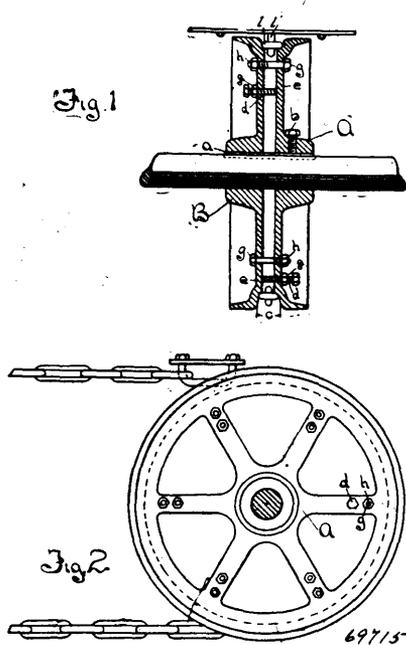
*Claim.*—1st. In a hub attaching device, the combination of a collar having an annular flange formed thereon, and the flange being ratcheted, means for holding the collar in place, a head in connection with said means and mounted to turn on the collar, the head comprising a circular base which fits within the annular flange of the collar and an outer portion adapted to receive a wrench, and a pawl carried by the head and having a portion projected beyond the said outer portion of the head, and pawl working with the ratcheted flange of the collar. 2nd. In a hub attaching device, the combination of a collar, and means for holding the collar in position such means comprising a head mounted to turn on the collar and having an angular portion to be engaged by a wrench, and a pawl carried in the head and working with the collar to hold the head, the pawl having a portion projected above the angular portion of the head to be engaged by the wrench, whereby to throw the pawl as the wrench is applied. 3rd. In a hub attaching device, the combination of a collar having a ratcheted flange, and means for holding the collar in place, such means comprising a head turning on the collar and having an angular portion to be engaged by a wrench and a pawl mounted in the head and working with the ratcheted flange of the collar, the pawl having a portion projected from the angular portion of the head, whereby as the wrench is engaged with such angular portion of the head the pawl is actuated to disengage the ratcheted flange of the collar. 4th. In a hub attaching device, the combination of a collar and means for holding the collar in place, such means comprising a spindle extended centrally through the collar, a head attached rigidly to the spindle and having an angular portion to be engaged by a wrench, and a pawl carried by the head and engaging the collar to hold the head and flange, a portion of the pawl being projected from the angular portion of the head to be engaged by the wrench, whereby to operate the pawl.

**No. 69,715. Pulley.** (*Poulie.*)

Michael Garland, Bay City, Michigan, U.S.A., 20th December, 1900; 6 years. (Filed 26th September, 1900.)

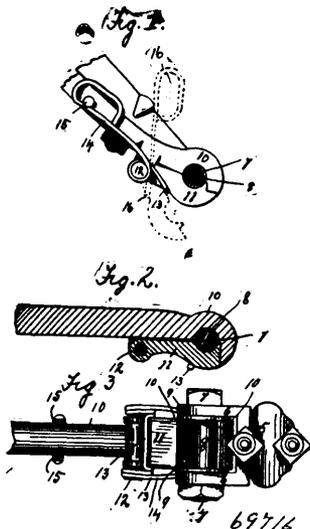
*Claim.*—A pulley for driving conveyer chains, comprising two sections, each substantially of the form of half solid chain pulley that has been devised on the plane of its chain groove, means carried by said pulley for adjusting the space between said sections, and means

carried by said pulley for clamping the sections into their adjusted position, whereby the groove is conformed in width to the width of



the conveyor chain links and is adjustably adapted to grip the links. 2nd. In a conveyor pulley comprising a fixed section and a section movable along the shaft toward or from the fixed section, means for adjusting said sections relatively to each other, comprising in combination, set bolt screwed into one section and bearing against the other section, and bolts passing through both sections for clamping said sections in position, substantially as described. 3rd. A separable grooved pulley for conveyors and the like, comprising two sections, each section being of the form of half a solid grooved pulley that has been devided on the plane of its groove, one of said sections being fixed to the pulley shaft and the other section being movable along the shaft, set bolts carried by one of said sections and bearing against the other section, and the bolts passing through both sections for clamping them together, substantially as described.

No. 69,716. Thill Coupling. (Armon de limonière.)

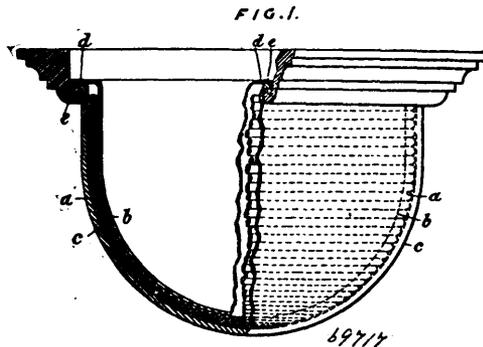


George Peck Beasley, Maysville, Kentucky, U.S.A., 20th December, 1900; 6 years. (Filed 26th September, 1900.)

Claim.—In till and pole couplings a coupling body having a hook-shaped bearing with an opening at one side, a door pivoted to the

body to close the said opening, a spring hung as a lever to bear upon the door and pivotted to the coupling body and catches upon the said body to engage the lever ends of the said springs, substantially as described.

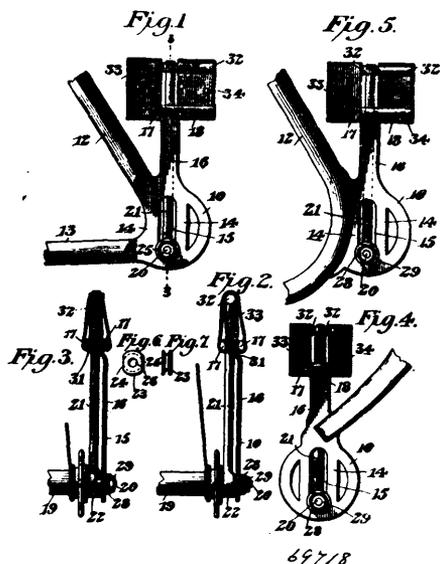
No. 69,717. Lamp Shade or Globe. (Abat-jour de lampe.)



William Lumsden Strachan, 88 St. James street, London, England, 20th December, 1900; 6 years. (Filed 3rd July, 1900.)

Claim.—1st. A lamp shade formed by the combination with a bowl-shaped light refracting medium formed of a spirally wound glass rod, of inner and outer concentric and spaced glass bowls secured together and fitting closely within and about the spiral rod, the intervening space between the bowls being sealed to that the spiral rod is enclosed and protected, substantially as described. 2nd. A lamp shade or globe, comprising inner and outer concentric and spaced walls secured together to form a hermetically sealed space between them, and a light refracting and diffusing medium formed of a series of contacting coils of glass arranged in the space between the said walls and in contact therewith, substantially as described. 3rd. A lamp shade or globe, consisting of two bowl-shaped glass bodies of different sizes and fitting one within the other to form a space between them, the upper edges of the bowls being flanged and resting one upon the other, and a series of connected coils of glass arranged in the space between the bowls and in contact therewith, the several coils being in contact with one another, substantially as described.

No. 69,718. Spring Frame Bicycle. (Cadre de bicyclette.)

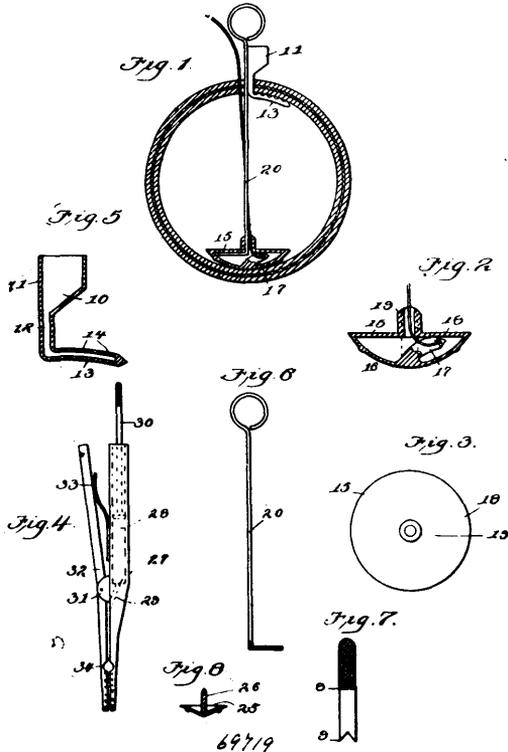


William B. Spencer, Chicago, Illinois, U.S.A., 21st December, 1900; 6 years. (Filed 16th October, 1900.)

Claim.—1st. In a spring frame bicycle, the combination with a frame plate having a vertical guideway, of a bearing block provided with the arc-shaped grooved faces and the straight side faces which intersect with said arc-shaped faces and interrupt the continuity of the grooves therein, the width of the block between the straight faces being less than the space in the guideway, and said block being adjustable in and removable from said guideway, a wheel

axle fitted to said bearing block, means for clamping the axle and block together, and resilient suspending devices, substantially as described. 2nd. In a spring frame bicycle, the combination of a frame plate having a guideway and an upwardly extending arm or branch, 16, provided at its upper end with a guide or clip, a bearing block fitted in said guideway of the frame plate to slide freely therein, an axle clamped to said block, a wheel hub, a vertical stem passing through the guide or clip and provided at its lower end with an eye or boss which is fitted on the axle and is clamped between the bearing block and the cone of said wheel hub, arms on the upper ends of the frame plate branch and the vertical stem, and resilient devices connecting said arms, substantially as described.

**No. 69,719. Pneumatic Tire Repairer.**  
(Réparateur de bandage pneumatique.)



George Reading, New Haven, Connecticut, U.S.A., 21st December, 1900; 6 years. (Filed 12th October, 1900.)

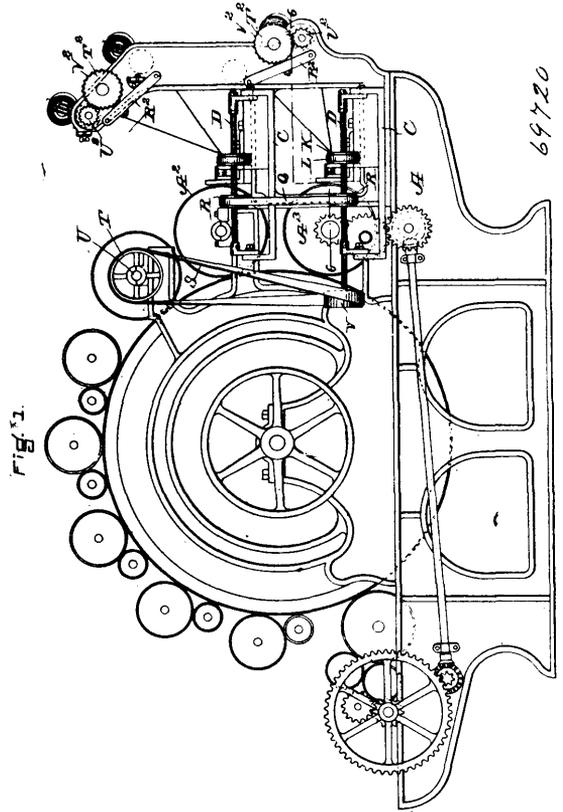
*Claim.*—1st. In a bicycle tire repairer, the combination, with hollow plug having a convex bottom and a flat top the top being provided with centrally located tubular projection and the bottom being provided with a stem in alignment with the projection, and of a larger diameter than the bore of the same, the upper end of the stem being tapered, of a flexible cord secured to the top of the stem and extending through the projection, substantially as described. 2nd. In a bicycle tire repairer, the combination, with a hollow substantially semi-spherical plug, the top of which is provided with centrally located tubular projection and the bottom is provided with a stem upon the interior in alignment with the projection, of a cord secured the plug to and extending through the tubular projection, and an insertion tool, the outer end of which is provided with a handle and the inner end is bent into laterally extending roughened projection for engaging with the inner surface of the flat top to rotate the plug upon the interior of the tire, substantially as described.

**No. 69,720. Machinery for Making Yarn.**  
(Machine à faire le fil.)

William Henry Drury, Waltham, Massachusetts, U.S.A., 21st December, 1900; 6 years. (Filed 30th October, 1899.)

*Claim.*—1st. In a machinery for making yarn from fibrous materials, the combination with means for carding the material and subdividing the same into numerous narrow sections, of mechanism whereby said fibrous sections are continuously front drawn, and means whereby the fibrous sections as they pass to the drawing mechanism are severally spun and twisted into yarn, substantially as and for the purposes hereinbefore set forth. 2nd. In machinery for making yarn from fibrous materials the combination with means for carding the material and sub-dividing the same into numerous and narrow sections, and mechanism whereby said fibrous sections are continuously front drawn, of a series of spinning tubes whereby said fibrous

sections as they pass to the drawing mechanism are severally spun and twisted into yarn, means whereby said tubes are restrained from



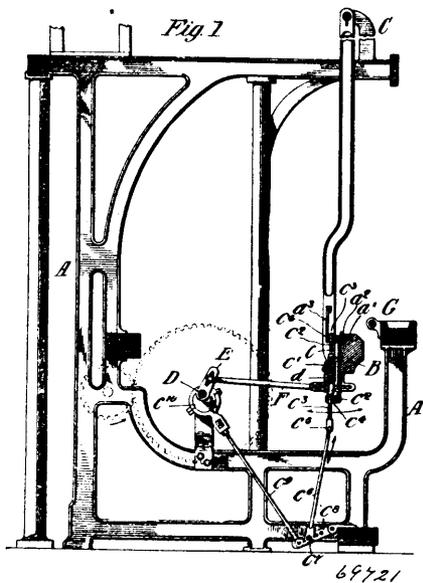
lengthwise movement and a power driven endless belt which supports and drives said spinning tubes, substantially as and for the purposes hereinbefore set forth. 3rd. In machinery for making yarn from fibrous materials the combination with means for carding the material and sub-dividing the same into numerous narrow sections from and mechanism whereby said fibrous sections are continuously front drawn, of a series of spinning tubes and an endless spinning belt through which tubes and between the meeting faces of which belt the said fibrous sections successively pass on their way to the drawing mechanism and are thereby severally twisted and spun into yarn, and means for actuating said spinning tubes and said spinning belt, substantially as and for the purposes hereinbefore set forth.

**No. 69,721. Loom. (Métier)**

George Francis Kuett, Paterson, New Jersey, U.S.A., 21st December, 1900; 6 years. (Filed 27th March, 1900.)

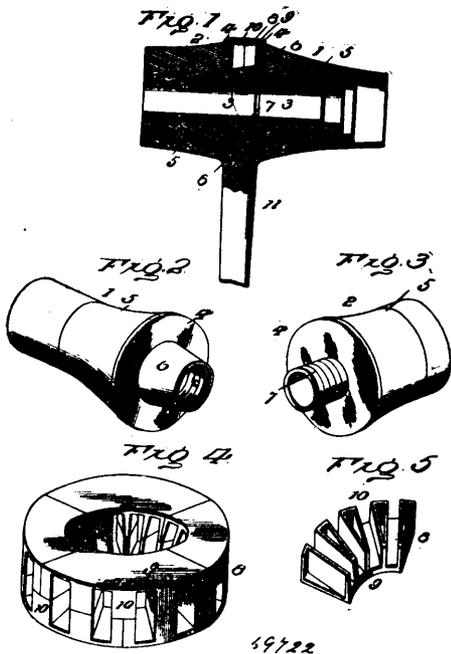
*Claim.*—1st. In a loom, the combination, substantially as herein before set forth, of the following elements: a lay, a reed mounted thereon, a filling inserting needle movable lengthwise of the lay, a filling loop engaging needle, means for reciprocating it in a path transverse to that of the filling inserting needle, and provisions for moving said loop engaging needle, towards the reed and the edge of the warp. 2nd. In a loom, the combination, substantially as herein before set forth, of the following elements: a lay, a reed mounted thereon, a filling inserting needle, a tension device, a take up interposed between the tension device and filling inserting needle, and a filling loop engaging needle adapted to yield towards the reed and the edge of the warp. 3. In a loom, the combination, substantially as herein before set forth, of the following elements: a lay, a reed mounted thereon, filling inserting needles for inserting filling into the warp from opposite sides thereof, tension devices for the filling take-ups interposed between the tension devices and filling inserting needles, and filling loop engaging needles yieldable towards the reed and the edge of the warp. 4th. In a loom, the combination, substantially as herein before set forth, of the following

elements: a lay, a reed mounted thereon, a series of filling inserting needles, tension devices for the filling, take ups interposed between



the tension devices and filling inserting needles, and a series of filling loop engaging needles collectively movable to engage and quit the filling and individually movable towards and from the reed and the edge of the warp.

No. 69,722. Vehicle Wheel. (Roue de vehicules.)

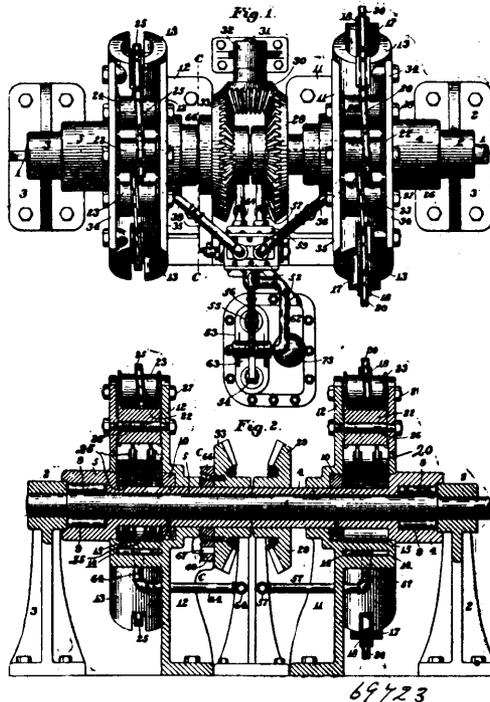


John Calvin Smith, Massapeag, Connecticut, U.S.A., 21st December, 1900; 6 years. (Filed 3rd October, 1900.)

Claim.—1st. In a wheel or the like, a sectional hub, means for connecting the parts of the hub, a conical spreader in the plane of the spokes, and a spoke annulus composed of ring formed of segment sections disposed to break joint, each segment section being composed of a plate and spaced wedge shaped lugs or projections, the segment sections of the rings being disposed with the plates outermost and the lugs and projections facing inward and the spaces between the said lugs unitarily forming sockets to receive the tenons of the spokes, substantially as set forth. 2nd. The herein

described hub composed of similarly formed sections, each consisting of a box portion having a flange at its inner end and a wooden sleeve fitted upon its outer end portion, an exteriorly threaded tubular extension at the inner end of one box portion and interiorly threaded to receive the exteriorly threaded tubular extension, and a sectional spoke annulus adapted to be clamped between the flanges of the box portions of the hub sections and to be expanded by the aforementioned conical spreader, as and for the purpose set forth.

No. 69,723. Hydraulic Motor. (Moteur hydraulique.)



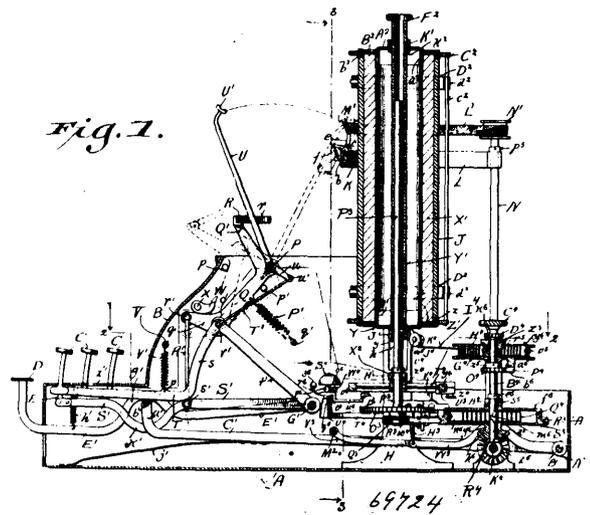
Wilbert Clarence Trussell, Boston, and Henry Farnsworth Sawtelle, Leominster, both in the State of Massachusetts, U.S.A., 21st December, 1900; 6 years. (Filed 3rd October, 1900.)

Claim.—1st. The combination of a shaft to be revolved, a sleeve mounted upon and revoluble about said shaft, a clutch mechanism constructed and arranged to automatically couple said sleeve to said shaft when moving in one direction, and to uncouple the same when moving in the opposite direction, a hydraulic jack mechanism arranged in a fixed position radial to said shaft, a sheave carried by the outer end of the piston of said jack mechanism, a plurality of guide pulleys arranged outside of said sleeve, a flexible connection extending about and bearing upon said sheave and pulleys and firmly connected to and wound about said sleeve, and means for forcing liquid into the cylinder of said jack mechanism to force said piston outward and thereby unwind said flexible connection from said sleeve and rotate said sleeve and shaft. 2nd. In a hydraulic motor, the combination with the shaft to be revolved, of a sleeve mounted upon and revoluble about said shaft, a clutch mechanism constructed and arranged to automatically couple said sleeve to said shaft when moving in one direction, and to uncouple the same when moving in the opposite direction, a plurality of hydraulic cylinders arranged in fixed positions radial to the axle of said shaft, with open outer ends, a piston fitted to and movable endwise in each of said cylinders, a sheave mounted upon a suitable journal pin carried by each of said pistons, a plurality of guide pulleys, a flexible connection extending about and bearing upon said several sheaves and guide pulleys and firmly connected to said sleeve and adapted to be wound upon and unwound from said sleeve, a curved chamber connecting the inner ends of said cylinders, and means for forcing a liquid into said curved chamber, and thence to said cylinders to move said pistons outward and thus unwind said flexible connection from said sleeve and rotate said sleeve and shaft. 3rd. The combination with a shaft to be rotated, of a sleeve mounted upon and revoluble about said shaft, a clutch mechanism constructed and arranged to automatically couple said sleeve to said shaft when moving in one direction, and to uncouple the same when moving in the opposite direction, a fixed frame provided with an opening for said sleeve, a chamber surrounding said sleeve with an outlet at one side, a plurality of cylinders arranged radially to the axis of said shaft with open outer ends, and a segmental chamber connecting the interiors of all said cylinders at their inner ends, a piston fitted

to and movable endwise in each of said cylinders, a sheave mounted in the outer end of each of said pistons, a plurality of guide pulleys between two of said cylinders, a flexible connection, as a chain, extending about and bearing upon said sheaves and guide pulleys and firmly connected to, and adapted to be wound upon said sleeve, a double acting force pump for forcing a liquid into said cylinders to move said pistons outward, a pipe connecting said pump with said segmental chamber, a discharge pipe leading from said segmental chamber, and suitable valves for controlling the inlet and discharge of said liquid. 4th. The combination of a shaft to be revolved, a pair of sleeves mounted end to end upon said shaft and revoluble therein, a clutch mechanism carried by each of said sleeves and constructed and arranged to automatically couple its sleeve to said shaft to move it in one and the same direction, and uncouple the same when moving in the opposite direction, a train of gearing connecting said two sleeves, so that when one revolves in one direction the other will revolve in the opposite direction, a plurality of cylinders arranged around each of said sleeves in fixed positions and radial to the axle of said shaft and having open outer ends, a piston mounted in each of said cylinders and movable endwise therein, a sheave carried by the outer end of each piston, a plurality of guide pulleys arranged between two of each set of said cylinders, a flexible connection as a chain firmly secured to one of said sleeves and extending about and bearing upon the sheaves and pulleys surrounding said sleeve, a similar flexible connection firmly secured to the other of said sleeves and extending about and bearing upon the sheaves and pulleys surrounding its sleeve, segmental chambers connecting the inner end of each set of cylinders, a double acting force pump provided with a supply reservoir, supply pipes connecting the discharge of said pump with each of said segmental chambers suitable discharge pipes connecting each of said segmental chambers with said reservoir, suitable valves for controlling the inlet and discharge of said liquid, and means for automatically operating said valves to change the flow of said liquid from a direction to and from one set of cylinders to a direction toward and from the other set of cylinders. 5th. In combination with a shaft to be revolved continuously in the same direction, a pair of sleeves mounted thereon end to end and geared together to revolve in opposite directions, clutch mechanisms constructed and arranged to automatically couple said sleeves in said shaft when moving in one direction and to uncouple the same when moving in the opposite direction, two sets of hydraulic cylinders arranged one set around and radial to the axis of each of said sleeves, pistons fitted to an movable endwise in said cylinders, a flexible connection, as a chain, firmly attached to each of said sleeves and each arranged to be acted upon by one set of pistons to rotate its sleeve in one direction, a double acting force pump, a supply reservoir, pipes and passages connecting the discharge of said pump with the inner ends of each set of cylinders, and pipes and passages connecting the inner ends of each set of cylinders with said reservoir, of a valve casing set in a fixed position between said pump and two sets of cylinders and connected to said supply and discharge pipes, and having formed therein two ports upon each of its four sides, the two ports upon one of its sides being in axial line with the ports upon its opposite side, a plug valve fitted to the bore of said casing and movable about its axis therein, and having four transverse passages formed therethrough at right angles to its axis and at different angles to each other, and so arranged that when said plug is at one extreme of its movement about its axis two of said passages that are at right angles to each other will register with two pairs of ports in said casing while the other two pairs of ports are closed, and when said plug is moved about its axis to the other extreme of its movement, the two pairs of ports previously closed will be opened, and those before opened will be closed, whereby the liquid discharged from the pump is alternately forced into the two sets of cylinders and discharged from the opposite set of cylinders, and means for automatically moving said plug valve about its axis when either sleeve has moved a sufficient distance about its axis in a forward direction. 6th. In combination with a shaft to be revolved, a pair of sleeves mounted end to end upon said shaft, a clutch mechanism carried by each of said sleeves and adapted to automatically couple its sleeve to said shaft when moved in one direction and to uncouple the same when moved in the opposite direction, gearing connecting said sleeves together to cause them to revolve in opposite directions, the two frames 11 and 12 provided with the chambers 14 and 15 and opening 16, a plurality of cylinders 13 carried by each of said frames and communicating at their inner ends with the segmental chamber 14, a plurality of pistons 17 in the cylinders on each frame, a sheave 18 carried by each piston, the pulleys 22, 23, and 24 mounted on each of the frames 11 and 12, the chain 20 mounted upon the sheaves 18 and pulleys 22, 23, and 24 carried by the frame 11, and firmly attached at its ends to the sleeve 4, the chain 25 similarly mounted on the sheaves and pulleys on the frame 12, the valve casing 38 mounted in a fixed position and provided with the ports 41, 42, 43, and 44, the plug valve 45 provided with the transverse passages 46, 47, 48, and 49, the pin 72 set in said valve 45, the disc 66 provided with the tooth 67, and mounted upon and revoluble with one of said sleeves, the lever 70 engaging at one end the pin 72 and pivoted at its other end to one end of the rod 69, provided with the tooth 68 at its other end and mounted on a suitable guide bearing beneath the axis of said disc 66, chambered castings 50 and 61 secured to the bottom and front sides respectively of said valve casing, the pump 53 provided with a reservoir, the pipe 52 connect-

ing said pump to the chambered casting 50, the pipe 62 connecting said reservoir to the chambered casting 61, the pipes 36 and 39 leading respectively from the right and left hand chambers 14 to the upper ports 43 and 42 respectively, and the pipes 57 and 64 leading respectively from the chamber 14 in the right and left hand frames 11 and 12 to the ports 44 and 41 respectively in the rear face of said casing 38. 7th. In combination with a shaft to be revolved, a pair of hydraulic jack mechanisms arranged at different distances from the end of said shaft, and connecting devices between said mechanism and said shaft, all constructed, arranged and operating to intermittently and alternately act upon said shaft to move it about its axis a given distance in the same direction, a double acting force pump, pipes leading from said pump to both of said hydraulic jack mechanism, a reservoir from which said pump draws its supply of liquid, return pipes leading from each of said jack mechanism to said reservoir, a single valve in communication with each of said pipes and constructed and arranged to be moved into two different positions, and when in one position to cause the liquid from said pump to be forced into the left jack mechanism and the liquid discharged from the right jack mechanism to flow into said reservoir, and when moved into its other position, to cause the liquid to be forced by said pump in the right jack mechanism and the liquid discharged from the left jack mechanism to flow into said reservoir, and means for automatically changing the position of said valve at predetermined intervals. 8th. In a hydraulic mechanism, the combination with two jack mechanisms, a force pump, a reservoir, pipes connecting said pump and said reservoir to each of said jack mechanisms, the valve casing 38 provided with the four pairs of ports 41, 42, 43 and 44, and the chambers 51, 37, 40 58, 65, and 60, communicating with said pipes, and the single plug valve 45 provided with the transverse passages 46, 47, 48, and 49, each arranged to register with one pair of said ports when said valve is in one or the other of its two positions, and means for automatically changing the position of said valve.

**No. 69,724. Type Writing Machine. (Clavigraphic.)**



Ole H. Lee, Milwaukee, Wisconsin, U.S.A., administrator of the Estate of Walter H. Hanson, of the same place, 21st December, 1900; 6 years. (Filed 17th April, 1900.)

*Claim.*—1st. In a type writing machine, the combination of a vertically disposed horizontally rotatable platen, the type bars, type bar actuating mechanism, and mechanism for rotating said platen, actuated by the actuation of said type bar actuating mechanism, substantially as described. 2nd. In a type writing machine, the combination of a vertically disposed horizontally rotatable platen, type bars, type bar actuating mechanism, a motor tending constantly to rotate said platen, and mechanism actuated by the actuation of said type bar actuating mechanism for permitting the rotation of said platen by said motor, substantially as described. 3rd. In a type writing machine, the combination of a vertically disposed horizontally rotatable platen, type bars, type bar actuating mechanism, a spring tending constantly to rotate said platen, mechanism actuated by the actuation of said type bar actuating mechanism for permitting the rotation of said platen by said spring, substantially as described. 4th. In a type writing machine, the combination of a vertically disposed horizontally rotatable platen, type bars, type bar actuating mechanism, mechanism actuated by the actuation of said type bar actuating mechanism for rotating said platen, and mechanism for raising said platen and rotating the same the required distance to provide the necessary margin, substantially as described. 5th. In a type writing machine, the combination of a vertically

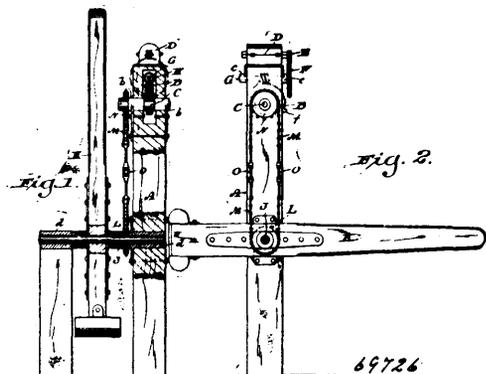
disposed horizontally rotatable platen, type bars, type bar actuating mechanism, a spring acting constantly to rotate said platen, mechanism actuated by the actuation of said type bar actuating mechanism for permitting the rotation of said platen by said spring, a spring acting constantly to move said platen longitudinally, and mechanism for permitting the longitudinal movement of said platen by said spring, substantially as described. 6th. In a type writing machine, the combination of a vertically disposed horizontally rotatable platen, type bars, type bar actuating mechanism, mechanism for rotating said platen actuated by the actuation of said type bar actuating mechanism, mechanism for moving said platen longitudinally, and a lever and key for operating said last-mentioned mechanism, substantially as described. 7th. In a type writing machine, the combination with a horizontally disposed keyboard, comprising a series of type keys and a spacer bar supported in a suitable frame, vertical standards rising from each side of said frame back of the keyboard connected by a yoke-shaped cross piece and provided with suitable guides or ways, a platen supporting slide having side bars vertically movable in said guides or ways, and upper and lower connecting cross pieces, a vertically arranged platen supported in said slide, vertically disposed revolving shafts back of said platen, ribbon spools on the upper ends of said shafts, a ribbon holder on the said yoke shaped cross piece in front of the said platen, a ribbon extending from spool to spool around and in front of said platen, and through said ribbon holder, said ribbon being vertically disposed with respect to its width, and a series of type bars arranged in front of the platen and connected at their lower ends to the type keys levers, and with their free upper ends adapted to move toward and from the said ribbon holder in the arc of a circle. 8th. In a type writing machine, the combination with a vertical platen, and a ribbon, of a ribbon holder comprising a suitable support, transversely perforated lugs projecting upward from said support, a pivot journaled in said perforated lugs, a bell crank lever having an upper and a lower arm united by a sleeve mounted on said pivot, means for normally depressing the free outer end of said lower arm, and two pairs of tongues, or forks, projecting from said upper arm to receive the ribbon between them. 9th. In a type writing machine, the combination with the key board, type keys, and keys levers, of a vertically arranged platen, a yoke shaped cross piece in front of the same, a ribbon holder, pivotally secured to and rising from said cross piece, and having two pairs of tongues or forks projecting from the upper end thereof to receive the ribbon between them, means for keeping said ribbon holder normally away from contact with the platen, and a series of type bars connected to said key levers and adapted to strike against the ribbon between the forks of the ribbon holder and carry said ribbon against the platen, with every depression of a type key. 10th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen, type bars, and operating keys therefor, of means for raising the platen, and means for regulating the ascent thereof, means for checking the said ascent, and means for lowering said platen, all at the will of the operator. 11th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen, of a series of open annular paper clamps carried by and rotating with the platen and having frictional contact with said platen. 12th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen, of a series of open annular spring bands provided with a series of rollers carried by and rotating with the platen and having frictional contact with said platen. 13th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen, of a series of open annular paper clamps having frictional contact with said platen carried by and rotating with said platen, and a vertical feed roller arranged in a line parallel to that of said platen, and near the openings in the said annular paper clamps. 14th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen, of a series of open annular flat spring bands surrounding said platen, and carrying a series of rollers in contact therewith and being carried by and rotated with the platen, and a vertical feed roller arranged in a line parallel to that of said platen and near the openings in the said bands. 15th. In a type writing machine, the combination with a vertically arranged horizontally revolving platen having flat rings at each end thereof, of a vertical rod uniting said flat rings and stationary therein, a vertical feed roller revolvably journaled in said flat rings, and a series of open annular slotted spring bands surrounding said platen and movably supported on said vertical rod, and with the openings of said bands adjacent to said feed roller, together with a series of rollers mounted in the slots of said bands and having frictional contact with said platen. 16th. In a type writing machine, the combination with a suitable frame, and a platen supporting slide movable therein, of a vertically disposed platen comprising a hollow cylinder with an exterior covering of india-rubber, a circular base piece having a vertical annular flange fitting within the said hollow cylinder and a vertical central tube extending upward through and above said hollow cylinder, and below said base-piece, and said tube having a bore square in cross section, an annular plate surrounding the said annular flange of the base piece and resting on the circumferential portion thereof, and having an upwardly off-set outer edge, a flat ring held between the base plate and superimposed annular plate, a cap piece forming the counter part of the base piece, and provided with a central opening for the passage of the central vertical tube

therethrough, an annular plate resting on the top of the platen just below the cap piece and having a downwardly off-set outer edge, a flat ring held between the cap piece and the last named annular plate, a vertical shaft square in cross section passing through the said vertical central tube, on which shaft said platen is vertically moveable, a hand wheel in the upper end of said shaft and a series of operating wheels on the lower projecting end of said shaft. 17th. In a type writing machine, the combination of a frame, a platen, a pair of bell crank levers pivotally supported and connected by a bar, a series of type bars pivoted on said bar, type keys and connections between the same and the type bars, a shift key, and operative connections between the latter and said bell crank levers, substantially as described. 18th. In a type writing machine, the combination with a horizontally disposed key board and vertically arranged platen, type keys, key levers, type bars and a shift key and shift key levers, all properly connected together, with a suitable frame or casing therefor, of a pair of bell crank shift levers pivotally connected to said frame or casing, and to said levers, and means for shifting the type bars independently of the shift key, as well as for locking the shift levers in their shifted position, and for releasing them from such position and restoring the parts to normal condition. 19th. In a type writing machine, the combination with a horizontally disposed key board and vertically arranged platen, and suitable supporting frames therefor, of a pair of bell crank shift levers pivoted, one on each side, to the side pieces of the upper part of the frame or casing on the inner side thereof, a shift key on one side of the key board, a retracting spring connecting the shift lever with the side piece on the frame on that side, stops or pins projecting inwardly from the side pieces of the frame, on both sides, to limit the backward movement of the shift levers, posts projecting obliquely forward from each shift lever and connected by a transverse bar having right angled ends projecting rearwardly, an arc shaped rod connecting the upper ends of the long arms of the shift levers, a series of type bars pivotally arranged on said rod and having obliquely disposed feet projecting downward and rearward beyond said rod, a transverse shaft journaled in the side pieces of the frame, key levers connecting said transverse shaft with the type keys of the keyboard, links connecting the feet of said type bars to the said key levers, a shift key lever on one side of the frame connected at its forward end to the lower end of the shift key and at its rear end to said transverse shaft, another shift key lever on the opposite side of the frame, connected at the rear end to said transverse shaft, and at its forward end pivotally connected by a link to the short arm of the bell crank shift lever on that side, and another link similarly connecting the other bell crank shift lever with the other shift key lever. 20th. In a type writing machine, the combination with a suitable frame or casing and a bell crank shift lever pivotally connected thereto, and type keys and levers and type bars pivotally connected together and to said shift lever, of a retracting spring connected to the long arm of said shift lever and to said frame or casing, a locking cam rigidly secured to one end of a shaft journaled in the adjacent side piece of said frame or casing above and in vertical line with short arm of said shift lever, and a finger rigidly secured to the other end of said shaft, said cam and finger projecting at practically right angles to each other. 21st. In a type writing machine, the combination with a horizontally disposed key board and a vertically disposed platen, and series of type keys, key levers, shift key and shift key levers, of a pair of bell crank shift levers, an arc shaped rod connecting the upper ends of the long arms of said shift levers, and a series of type bars pivotally arranged on said rod and linked to said key levers, the free ends of said type bars, each bearing two printing characters, slanting in opposite directions from the centre of said ends, whereby, when any one of said type bars makes impact against the platen, the character struck will always stand exactly vertical and give a direct horizontal impression, whether the said type bar is in its normal or shifted condition. 22nd. In a type writing machine, the combination with a horizontally disposed key board and vertically disposed platen, of vertical standards on each side of said platen, said standards having vertical grooves therein, and being united, near their upper ends, by a yoke shaped cross piece, a platen supporting slide, having slide bars adapted to move vertically within the said grooves in the standards, and united by upper and lower cross bars, between which the said platen is supported, and one of said side bars having a vertical series of teeth or notches, a vertically movable shaft extending entirely through the centre of said platen and through the said cross bars, and so secured to the platen that the latter is capable of moving freely up and down on said shaft, but incapable of revolution independently of said shaft, a line spacing mechanism having dogs in adjustable engagement with the toothed or notched side bar, and means for automatically elevating the platen and supporting slide on the withdrawal of one of said dogs from its contact with said side bar. 23rd. In a type writing machine, the combination with a horizontally disposed key board, a vertically disposed platen, and type bars arranged to present the type vertically to the platen, of a key and connecting mechanism for raising said platen at the termination of each line, so so as to continuously and successively revolve the platen in one direction only, from start to finish of the sheet being written upon, by the successive depressions of the different keys only. 24th. In a type writing machine, the combination with a horizontally disposed key board, a vertically disposed platen, and type bars arranged to present the type vertically to the platen, of a single key and connecting mechanism, for automatically raising the platen at the ter



lock passageway furnished with a shoulder or projection on the front wall, of a gravity lock having a shoulder or projection on the front side adapted to engage said shoulder on the draw head to prevent the lock from jumping upward, said gravity lock being made tapering in cross sections with its largest part towards the shoulder to aid holding said shoulders in engagement substantially as specified. 21st. The combination with a pivoted knuckle, of a draw head having a lock passageway furnished with a shoulder, or projection and an enlargement below the shoulder, of a gravity lock having a shoulder or projection adapted to engage said shoulder in the draw head to prevent the lock from jumping upward, the rear side of said lock having an offset and a curved or cam shaped face, substantially as specified. 22nd. The combination with a pivoted knuckle, of a draw head having a lock passageway furnished with a shoulder or projection and an enlargement below the shoulder, of a gravity lock having a shoulder or projection adapted to engage said shoulder in the draw head to prevent the lock from jumping upward, the rear side of said lock having an offset and a curved or cam-shaped face, and a movable shield or protecting plate interposed between the lock and the tail of the knuckle and bearing against the upper wall of the draw head, substantially as specified.

**69,726. Gearing. (Engrenage.)**

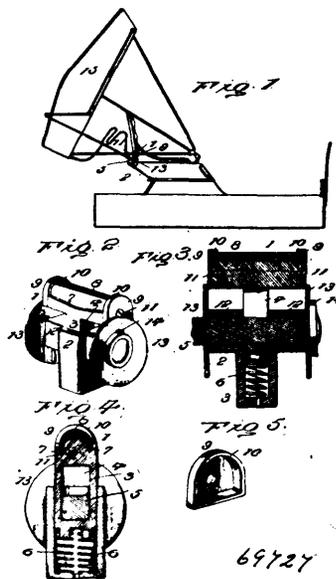


Frederick William Mase and Niels Rasmusson, both of Oshkosh, Wisconsin, U.S.A., 21st December, 1900; 6 years. (Filed 4th September, 1900.)

*Claim.*—1st. A worm sector having fragmentary terminal teeth and spring controlled slip cogs normally out of alignment with said terminal teeth at a distance equal to one tooth interval of said sector, together with a sector actuating worm pinion operative against either slip cog in the direction of its yield to eventually bring the same into alignment with the corresponding terminal tooth of the aforesaid sector ready to recoil into the worm groove of said pinion when cleared by the thread. 2nd. A worm sector having fragmentary terminal teeth and spring controlled slip cogs normally out of alignment with said terminal teeth at a distance equal to one tooth interval of said sector, a sector actuating worm pinion operative against either slip cog in the direction of its yield to eventually bring the same into alignment with the corresponding terminal tooth of the sector ready to recoil into the worm groove of said pinion when cleared by the thread, and stop lugs on the aforesaid sector arranged against the aforesaid pinion. 3rd. A worm sector having fragmentary terminal teeth and guide slots, as well as elongated transverse apertures communicating with the slots, spring controlled carriers engaging said apertures, cogs extending outward from the carriers through said slots at a distance from said terminal teeth equal to one tooth interval of the sector, and a sector actuating worm pinion operative against either cog in the direction of its yield to eventually bring the same into alignment with the corresponding terminal tooth of the aforesaid sector ready to recoil into the worm groove of said pinion when cleared by the thread. 4th. A gear device having at least one slip cog normally out of alignment with a fragmentary fixed tooth of the same device at a distance equal to one tooth interval of said device, and another gear device constituting a driver for the one aforesaid, this driver being operative against said slip cog in the direction of its yield to thereby cause the same to eventually align with said fragmentary fixed tooth ready to recoil from the same as soon as cleared by said driver. 5th. A gear device having spring controlled slip cogs each arranged to be normally out of alignment with a fragmentary fixed tooth of the same device at a distance equal to one tooth interval of said device, and another gear device constituting a driver for the

one aforesaid, this driver being operative against either of said slip cogs in the direction of its yield to thereby cause the same to eventually align with a corresponding fragmentary fixed tooth of the driven gear device ready to recoil from the same as soon as cleared by said driver. 6th. A gear device having a spring controlled slip cog, and another gear device constituting a driver for the one aforesaid, this driver being operative against the slip cog in the direction of its yield to spring resistance, whereby said cog is eventually cleared by said driver and automatically returned to normal position from time to time as long the aforesaid driver continues to operate in said direction.

**No. 69,727. Vehicle Top Rest. (Appui de soufflet de voiture.)**



William Y. Armstrong and Benjamin M. Anderson, both of Hutchinson, Kansas, U.S.A., 21st December, 1900; 6 years. (Filed 6th September, 1900.)

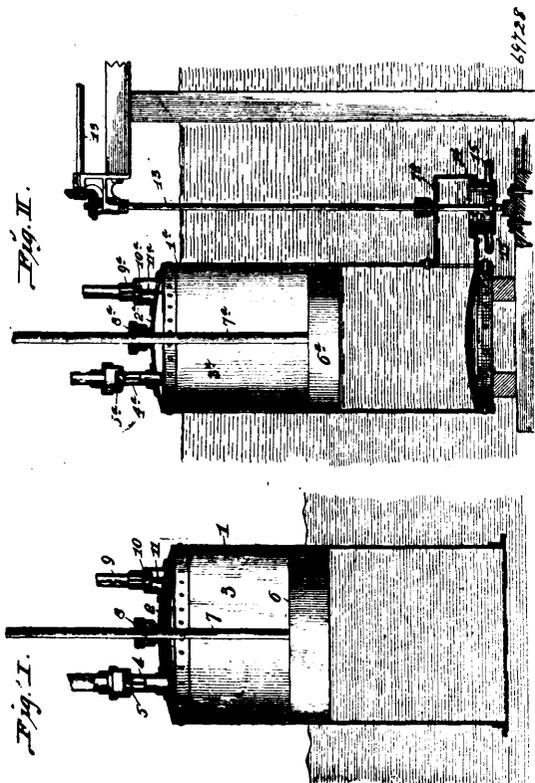
*Claim.*—1st. In a rest for vehicle tops, and in combination with a supporting rail or bar, a socket mounted upon said rail, an impact block movably mounted with reference to the socket, and washers secured to the aforesaid rail and adapted to embrace opposite portions of the socket and impact block and adapted to direct the latter in its movements, substantially as set forth. 2nd. In a rest for folding vehicle tops, and in combination with a socket, an impact block movably mounted with reference to the socket and having its top side convex and provided at its edges with longitudinal flanges and a covering applied to the convex side of the impact block and having its edge portions fitted into the spaces formed between the said flanges and the convex portion of the impact block, substantially as described. 3rd. In a rest for folding vehicle tops, a socket, an impact block movably mounted with reference to the socket and having a convex portion and longitudinal flanges, a covering applied to the convex portion of the impact block and having its edges confined by the aforesaid flanges, and cap plates secured to the ends of the impact block and having their rims encircling the end portions of the covering and impact block, substantially as set forth. 4th. A rest for folding vehicle top, comprising a socket having offstanding collars at the upper ends of opposite sides, an impact block having a slotted shank loosely fitted in the said socket, a spring located in the socket and exerting an outward pressure against the inner end of the said shank, a bar passing through the slot of the shank and the aforementioned collars, a covering applied to the top side of the impact block and cap plates secured to the ends of said block, and encircling the latter and the end portions of the covering, substantially as set forth.

**No. 69,728. Air Compressor. (Compresseur à air.)**

Patrick Henry Montague and Bryan O'Bear, both of St. Louis, Missouri, U.S.A., 21st December, 1899; 6 years. (Filed 21st December, 1899.)

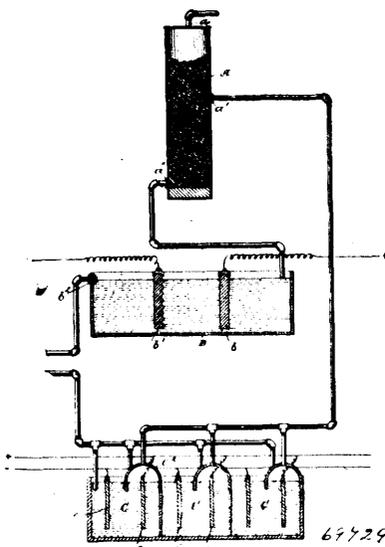
*Claim.*—An air compressor comprising a tank adapted to receive air and into which water may be admitted to compress said air, a

water inlet, a pump applied to said water inlet exterior of said tank, said pump being arranged to permit the entrance of water to said



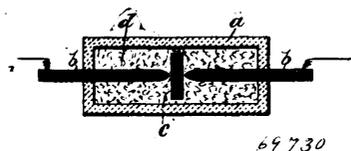
tank and being adapted to serve as an extractor to withdraw the water from the tank, and means for operating said pump, substantially as described.

**No. 69,729. Electrolytic Separation of Copper and Nickel.** (*Séparation électrolytique de cuivre et nickel.*)



set forth. 2nd. A step in a process of obtaining nickel, which consists in electrolyzing a solution of nickel chlorid having a temperature of between thirty and sixty degrees, centigrade, substantially as set forth. 3rd. A step in a process of obtaining nickel, which consists in electrolyzing a non-acid solution of nickel chlorid, substantially as set forth. 4th. A step in a process of obtaining nickel, which consists in electrolyzing a neutral solution of nickel chlorid, substantially as set forth. 5th. A step in a process of obtaining nickel, which consists in electrolyzing a strong solution of nickel chlorid, substantially as set forth. 6th. A step in the process of obtaining nickel, which consists in electrolyzing a nickel chlorid solution having a density of from thirty to fifty degrees, Baumé, substantially as set forth. 7th. In a process of obtaining nickel, electrolyzing a hot and neutral solution of nickel chlorid, substantially as set forth. 8th. In a process of obtaining nickel, electrolyzing a hot and strong solution of nickel chlorid, substantially as set forth. 9th. In a process of obtaining nickel, electrolyzing a neutral and strong solution of nickel chlorid, substantially as set forth. 10th. A process of obtaining nickel, which consists in electrolyzing a hot, neutral, and strong solution of nickel chlorid, substantially as set forth. 11th. A process of obtaining nickel, which consists in electrolyzing a hot, neutral, and strong solution of nickel chlorid with an insoluble anode, substantially as set forth. 12th. A process, substantially as set forth, of separating copper and nickel, which consists in electrolyzing a solution of copper and nickel chlorids with an anode of copper and nickel metal, thereby forming a solution of nickel chlorid, and plating out of the copper, heating, strengthening, and neutralizing the nickel chlorid solution, and, finally, electrolyzing such treated nickel chlorid solution, substantially as set forth. 13th. A step in process of obtaining copper from copper nickel metal, which consists in subjecting the copper nickel metal to the action of chlorin gas and a solvent for cuprous chlorid substantially as set forth. 14th. A step in a process of obtaining copper from copper nickel metal, which consists in subjecting the copper nickel metal simultaneously to the action of chlorin gas and a solvent for cuprous chlorid, substantially as set forth. 15th. A process of separating copper and nickel, which consists in electrolyzing a solution of copper and nickel chlorids with an anode of copper and nickel, thereby forming a solution of nickel chlorid, separating the chlorin from the nickel, subjecting copper nickel metal to the combined action of the chlorin so formed and a solvent for cuprous chlorid, to form the copper bath, substantially as set forth. 16th. A process of obtaining copper, which consists in electrolyzing a solution containing cuprous chlorid and a chlorid of another metal, with an anode containing said other metal, substantially as set forth. 17th. A process of obtaining copper from copper nickel metal, which consists in electrolyzing a solution of cuprous and nickel chlorid with an anode of copper nickel metal, substantially as set forth. 18th. A process of obtaining copper from copper nickel metal, which consists in electrolyzing a solution of cuprous and nickel chlorid with an anode containing nickel, whereby additional nickel chlorid is formed, and copper is plated out of the solution, substantially as set forth. 19th. A process of obtaining copper from copper nickel metal, which consists in treating copper nickel with a solvent for cuprous chlorid and with chlorin simultaneously, and electrolyzing the resultant solution with an anode containing nickel, substantially as set forth. 20th. A process of obtaining copper from copper nickel, which consists in treating copper nickel with a solvent for cuprous chlorid and with chlorin simultaneously, and electrolyzing the resultant solution with a copper nickel metal anode, substantially as set forth.

**No. 69,730. Carbide of Calcium Manufacture.** (*Fabrication de carbure de calcium.*)



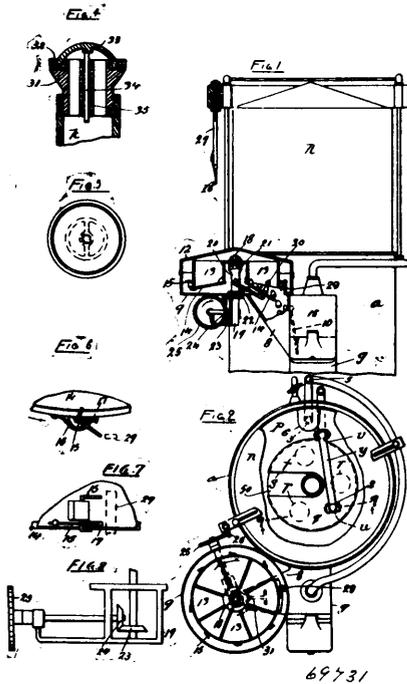
The Etiothene Gas Company, Sydney, assignee of Edward Tooth, 42 Wells Street, Redfern, near Sydney, both in New South Wales, Australia, 21st December, 1900; 6 years. (Filed 21st April, 1900.)

*Claim.*—In the manufacture of carbide of calcium, mixing hydrocarbonaceous materials, as set forth, to a semi-liquid or plastic and mouldable consistency, and subjecting the same in a refractory mould, or casing, to the influence of an electric current by means of carbon points inserted through said refractory moulds or casing to a carbon disc or diaphragm medially therein, substantially as herein described and explained.

The Canadian Copper Company, assignee of David Henry Browne, all of Cleveland, Ohio, U.S.A., 21st December, 1900; 18 years. (Filed 23rd March, 1899.)

*Claim.*—1st. A step in a process of obtaining nickel, which consists in electrolyzing a hot solution of nickel chlorid, substantially as

**No. 69,731. Acetylene Gas Apparatus.**  
(Générateur de gaz acétylène.)

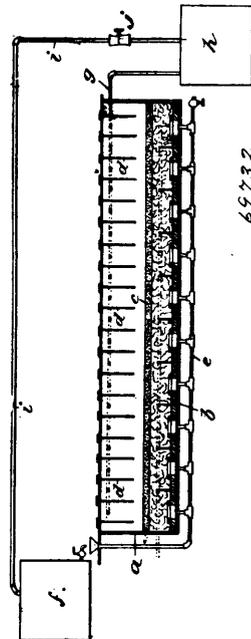


The Eclipse Acetylene Gas Company, assignee of William Ross, all of Montreal, Quebec, Canada, 21st December, 1900; 6 years. (Filed August 14th, 1899.)

*Claim.*—1st. An acetylene gas apparatus comprising a generating chamber a well located beneath said chamber, and a removable wire mesh partition for separating said chamber and well. 2nd. An acetylene gas apparatus comprising a generating chamber containing a body of water, a gas holder variable in capacity to accommodate the gas ready for use, means under control of said holder for intermittently feeding predetermined quantities of calcium carbide into said chamber, said feeding means consisting of a series of revolving receptacles having doors in their bottoms, a chute leading from a point over which each of said receptacles passes, means for automatically opening each door as it registers with said chute and means for automatically closing each door after the contents of its receptacle has been precipitated. 3rd. In an acetylene gas apparatus a valve adapted to automatically close the communicating pipe between the generating chamber and holder, when the pressure in the holder exceeds that in the generating chamber. 4th. An acetylene gas apparatus comprising a generating chamber containing a body of water, a gas holder variable in capacity to accommodate the gas ready for use, a rotary feed device for intermittently feeding predetermined quantities of calcium carbide into said chamber, a bracket rigidly supported adjacent to said holder, a spindle rotatably supported in said bracket a mitre gear mounted rigidly upon said spindle, a horizontal spindle mounted rotatably in said bracket, a mitre gear mounted upon one end of said horizontal spindle and intermeshing with said first-mentioned mitre gear, a ratchet wheel mounted rigidly upon the other end of said spindle, a bracket arm mounted rigidly upon the gas holder, and a pawl fulcrumed to said bracket arm and engaging said ratchet wheel upon an excessive fall in the gas pressure in said holder, substantially as described and for the purpose set forth. 5th. A carbide feeding device for acetylene gas machines consisting of a circular box 9, a circular tray located within said box, a series of radial compartments formed upon said tray, a series of doors 14 in the bottoms of said compartments, a series of crank catches 15 with arms 17 and springs 16 for temporarily supporting said doors, a rigid stop 29 in the line of travel of said crank catches, a sleeve 20 secured within and concentrically of said box, a spindle 18 taking downwardly through said sleeve and having said tray secured rigidly upon its upper end, means for rotating said tray, means for disengaging said catches and allowing the doors to drop and means for automatically returning said doors to their normal position, substantially as described. 6th. An acetylene gas apparatus consisting of a generating chamber containing a body of water, a gas holder comprising a movable part and variable in capacity to accommodate the gas ready for use, a rotary feed device consisting of a circular box, a circular tray located within said box, a series of radial compartments formed upon said tray, a series of doors in the bottoms of said compartments, a series of crank catches

for temporarily supporting said doors, a rigid stop in the line of travel of said crank catches, a sleeve secured concentrically of said box, a spindle taking downwardly through said sleeve and having said tray secured rigidly upon its upper end, a bracket projecting beneath and supporting said spindle, means actuated by the movable part of the gas holder, for rotating said feed device and a chute extending from said feed device to the generating chamber, substantially as described. 7th. In an acetylene gas apparatus an automatic check valve for the gas conducting pipe consisting of a horizontal valve seat at the upper end of said pipe and having an annular groove *m*, a guiding bracket extending across the pipe, a bell valve resting in said groove and a valve stem secured at its upper end to the interior of said bell and extending downwardly through said guiding bracket, substantially as described and for the purpose set forth. 8th. An acetylene gas apparatus comprising a generating chamber a well located beneath said chamber, and a removable wire mesh partition for separating said chamber and well and for supporting the carbide in said generating chamber.

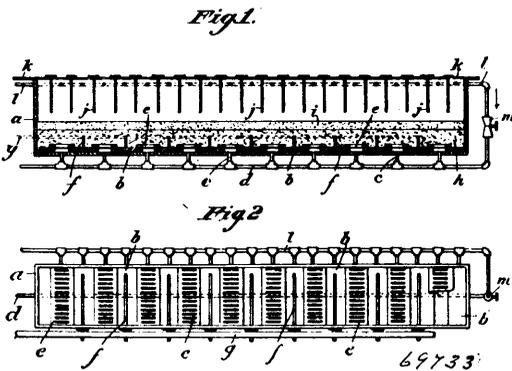
**No. 69,732. Method of Recovering Metals by Electrolysis.** (Méthode d'obtenir des métaux par l'électrolyse.)



Hans A. Frash, New York City, New York, U.S.A., 21st December, 1900; 6 years. (Filed 13th August, 1900.)

*Claim.*—1st. The method of producing an electrolyte of metals whose hydroxides are soluble in a solution of alkali, by electrolyzing a solution of the salts of an alkali, such as ammonium sulphate, in the presence of an anode bearing the metals to be extracted. 2nd. The method of recovering metals, such as copper and nickel, from matte or ore, by electrolysis, which consists in disintegrating or pulverizing the metal-bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted utilizing it as an anode, and electrolyzing a solution of the salt of an alkali, such as ammonium sulphate, substantially as described. 3rd. The method of recovering metals, such as copper and nickel, from matte or ore, by electrolysis, which consists in disintegrating or pulverizing the metal-bearing matte or ore so as to render it freely permeable to the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode, and covering it with a disintegrated electrically neutral substance, substantially as described. 4th. The method of recovering metals, such as copper and nickel from matte or ore by electrolysis, which consists in disintegrating or pulverizing the metal-bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode, covering it with a disintegrated electrically neutral substance, such as sand, and circulating an electrolyte through the anode and the sand. 5th. The method of recovering metals, such as copper and nickel, from matte or ore, by electrolysis, which consists in disintegrating or pulverizing the metal-bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode, covering it with a disintegrated electrically neutral substance, such as sand, and suspending in the electrolyte a number of cathode plates upon which the metal is collected.

**No. 69,733. Electrolytic Apparatus for Recovering Metals.** (*Appareil électrolytique pour obtenir des métaux.*)



Hans A. Frasch, New York City, New York, U.S.A., 21st December, 1900; 6 years. (Filed 13th August, 1900.)

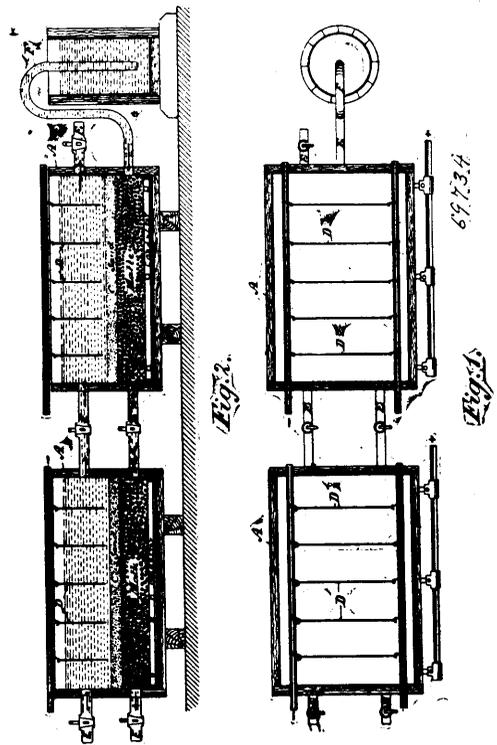
*Claim.*—1st. An electrolytic bath, having an anode extending continuously over its bottom and consisting of a body of disintegrated ore or similar metal-bearing substance, such as matte in granular or powdered form, and allowing the free passage of the electrolyte through the body of the anode. 2nd. An electrolytic bath, having an anode extending continuously over its bottom and consisting of a body of disintegrated ore or similar metal-bearing substance, such as matte in granular or powdered form, and a diaphragm, freely permeable by the electrolyte. 3rd. An electrolytic bath, having an anode extending continuously over its bottom and consisting of a body of disintegrated ore or similar metal-bearing substance, such as matte in granular or powdered form and freely permeable by the electrolyte, and means for circulating the electrolyte through the anode. 4. An electrolytic bath, having an anode extending continuously over its bottom and consisting of a body of disintegrated ore or similar metal-bearing substance, such as matte in granular or powdered form, and a diaphragm of sand freely permeable by the electrolyte. 5th. An electrolytic bath, having an anode extending continuously over its bottom consisting of a body of disintegrated ore or similar metal-bearing substance, such as matte in granular or powdered form, and freely permeable, and a series of cathodes.

**No. 69,734. Method of Producing Alkali.** (*Méthode de production d'alcali.*)

Hans A. Frasch, New York City, New York, U.S.A., 21st December, 1900; 6 years. (Filed 13th August, 1900.)

*Claim.*—1st. The method of producing alkali by electrolyzing a solution of a salt of an alkali, such as sodium chloride, in the presence of an anode consisting of a mineral substance bearing metals capable to bind chlorine. 2nd. The method of producing alkali and simultaneously extracting metals from matte or ore by electrolysis, which consists in electrolyzing a solution of the salt of an alkali and using matte or ore containing the metals to be extracted as an anode and thereby forming the salt of the metal to be extracted and free alkali. 3rd. The method of extracting metals, such as copper and nickel from matte or ore and simultaneously producing alkali by electrolysis, which consists in the use of an electrolyte consisting of a solution of a salt of an alkali, an anode containing the metal to be extracted, a cathode suspended in the electrolyte, and means to circulate the electrolyte at will, above or below the diaphragm. 4th. In the process of producing alkali and extracting metals such as copper and nickel from matte or ore by electrolysis, the method which consists in disintegrating or pulverizing the metal bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode. 5th. In the process of producing alkali and extracting metals, such as copper and nickel from matte or ore by electrolysis, which method consists in disintegrating or pulverizing the metal bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted, utilizing it as an anode and covering it with a chemically inert electrically indifferent disintegrated substance which is permeable by the electrolyte, substantially as described. 6th. In the process of producing alkali and extracting metals such as copper and nickel from matter or ore by electrolysis, the method which consists in disintegrating or pulverizing the metal bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode, covering it with a disintegrated electrically neutral substance, such as sand, and circulating an electrolyte through the anode below the diaphragm and in con-

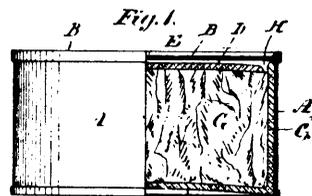
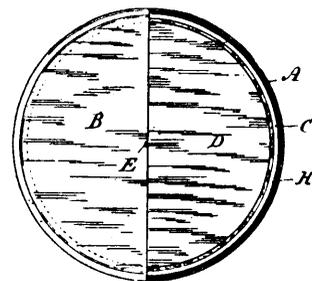
tact with the cathode above the diaphragm. 7th. In the process of producing alkali and extracting metals such as copper and nickel



from matte or ore by electrolysis, the method which consists in disintegrating or pulverizing the metal bearing matte or ore so as to render it freely permeable by the electrolyte, distributing such mass over the bottom of the vessel in which the electrolysis is conducted and utilizing it as an anode, covering it with a disintegrated electrically neutral substance, such as sand, and circulating an electrode through the anode below the sand and in contact with the cathode above the sand and electrolyzing a solution of the salt of an alkali.

**No. 69,735. Can for Packing Meat, Fruit or Fish.**

(*Bidon pour empaqueter les viandes, fruits ou poissons.*)

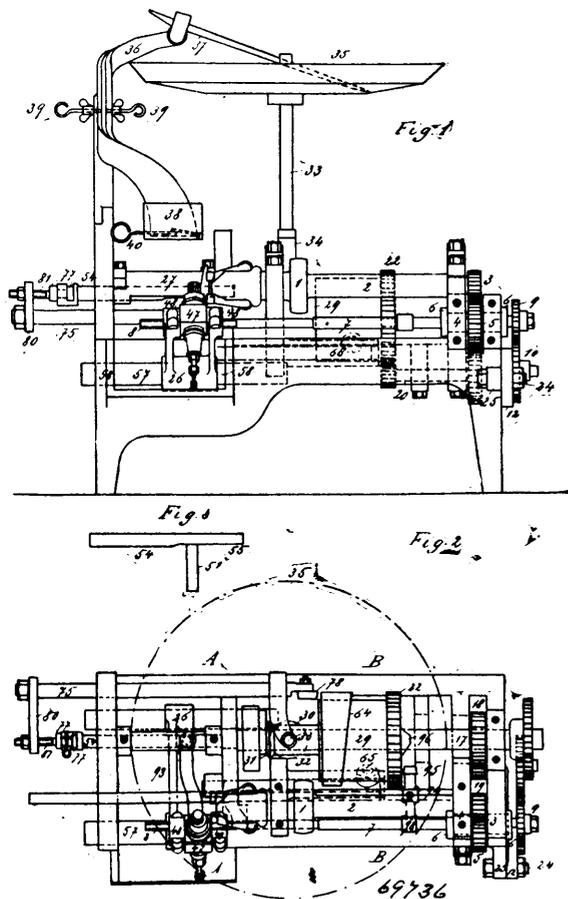


Samuel M. Okell, Victoria, British Columbia, Canada, 22nd December, 1900; 6 years. (Filed 7th May, 1897.)

*Claim.*—The herein described can or packing vessel consisting of an outer metallic shell, an earthenware receptacle conforming in shape to and adapted to be removably fitted within said metallic shell, said inner receptacle having imperforated sides and bottom whereby contact of the contents thereof with the outer metallic shell is prevented, an earthenware top for the inner receptacle adapted to permit the escape of vapor from said receptacle, and a cover for the metallic shell adapted to be rigidly and hermetically secured to the sides of said shell and to hold the top of the inner receptacle in place by contact therewith.

**No. 69,736. Wood Screw Cutting Machine.**

(Machine à faire les vis en bois.)



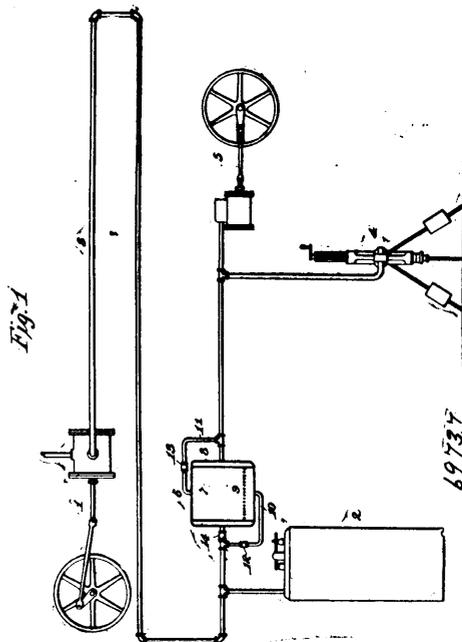
Robert Dicke, Milspe, Westphalia, Germany, 22nd December, 1900; 6 years. (Filed 28th August, 1899.)

*Claim.*—1st. An automatic machine for worming wood screws having a rotary cutter which revolves in an inclined plane to the blank and worming it in one reciprocating movement in such a manner that the cutting operation for the point takes place more slowly than the cutting of the remaining part of the blank as shown and for the purpose set forth. 2nd. An automatic wood screw cutting machine for worming wood screws having mounted a carriage 26 axially movable by round bars, 57 in the machine frame, which is periodically and with different speed shifted to and fro by means of an adjustable bar 62, a roller 65, a cam 64, with different pitches and a counter cam 70, said carriage 26 having pivotally secured a tool carrier 47 with the rotary cutter 27, which is moved more or towards the blank by a guiding bolt 54 and adjustable rod 51, the bolt 54 being made removable either by withdrawing or lifting it for the purpose described and set forth. 3rd. An automatic machine for worming wood screws having a drum 29, said drum being fitted with an adjustable pitch 71, regulating arm 71, pivoted to the face of the flange 64 and adjusted by means of the screws 73 and 74, as and for the purpose described. 4th. An automatic machine for worming wood screws having a guide bolt 54 for tapering the blank, said bolt being axially shifted during the cutting operation by the recess 82 and projection 79 of the cam flange 64 of drum 29, acting on a rod 75, said rod having connection with the guide bolt 54 by an arm 80 and adjusting screws 81, as illustrated, and for the purpose described. 5th. An automatic machine for worming wood screws

having a feeding channel 36 fitted with set screws 39 in order to prevent slipping through of thicker blanks than intended and a clutch 38 having a set screw 40 in order to prevent feeding of longer blanks than intended, as illustrated.

**No. 69,737. Apparatus for Reheating Air.**

(Appareil pour réchauffer l'air.)



Thomas Alva Edison, Llewellyn Park, New Jersey, U.S.A., 22nd December, 1900; 6 years. (Filed 18th April, 1900.)

*Claim.*—1st. An apparatus for heating air, comprising an air pipe, a reheater interpolated in said pipe whereby air therein will be heated by radiation, a by-pass in the pipe extending through said reheater whereby a portion of the air will be directly reheated and will support combustion of a combustible therein, and means to cause a drop in pressure of the air between the reheater and the point of use, whereby the air will be automatically caused to flow through said by-pass, substantially as set forth. 2nd. An apparatus for heating air, comprising a pipe supplying compressed air from a source of supply to a translating device, a reheater in said pipe for heating the air therein by radiation, a solid combustible in the reheater, a by-pass including the reheater for permitting a portion of the air to pass through the reheater to support combustion and to be heated directly, and means to permit a drop in the air pressure between the reheater and the translating device to automatically cause air to flow through the by-pass in quantity depending upon the consumption at the translating device, substantially as set forth. 3rd. In an apparatus for heating air, the combination with an air pipe supplying compressed air from a source of supply to a translating device, a reheater interpolated in said pipe for reheating the air by radiation, a by-pass leading through said reheater, a grid in the reheater for holding a solid or semi-solid combustible, movable doors in the ends of the reheater to permit the introduction of fresh material and the removal of any ash, and a screen in the upper part of the reheater, substantially as set forth. 4th. In an apparatus for heating air, the combination with an air pipe supplying compressed air from a source of supply to a translating device, a reheater interpolated in said pipe for reheating the air by radiation, a by-pass leading through said reheater, a grid in the reheater for holding a solid or semi-solid combustible, movable doors in the ends of the reheater to permit the introduction of fresh material and the removal of any ash, and an insulating lining for the reheater at its upper part, substantially as set forth.

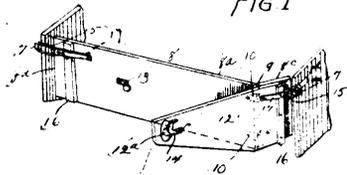
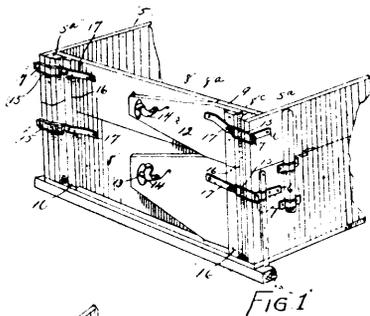
**No. 69,738. End Gate for Wagon Bodies.**

(Arrière-panneau de tombereau.)

William Chater, Denver, Colorado, U.S.A., 22nd December, 1900; 6 years. (Filed 17th October, 1900.)

*Claim.*—The combination with a wagon body, of an end gate composed of two hinged parts, one of which is provided with an

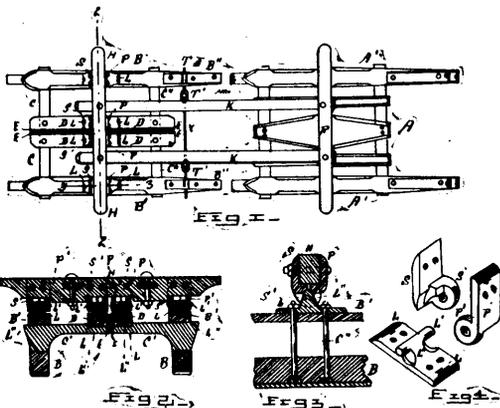
extension overlapping the other, means for locking the extension to the adjacent part, the said parts being provided with exterior cleats



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or projections, and links passing over said projections, and hooks attached to the sides of the wagon bed on the outside and cooperating with the links, for the purpose set forth.

No. 69,739. Bob Sled. (Traineau.)



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Aaron Drown, Barton, Vermont, U.S.A., 22nd December, 1900; 6 years. (Filed 17th October, 1900.)

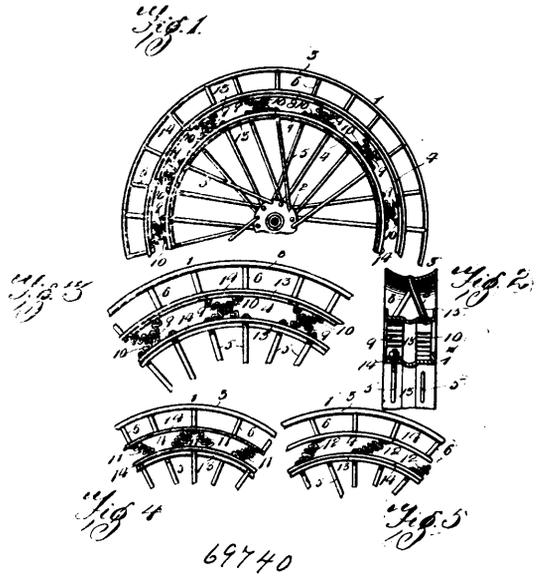
Claim.—In a sled or sleigh of the character described, the combination with the two independently rocking runners of a section, and the bolster H extending across said runner, of the joints each comprising the plate L, L', formed with the pivot or pintle L' and secured to the upper parts of said section, and the plates P, S, provided with the sockets P', S' and secured to the front and rear sides respectively of the bolster without vertically perforating or extending vertically any securing appliance through the same at said joints, substantially as described.

No. 69,740. Wheel. (Roue.)

James Napoleon Johnson, Hattiesburg, Mississippi, U.S.A., 22nd December, 1900; 6 years. (Filed 19th October, 1900.)

Claim.—1st. In a wheel of the class described, the combination with a hub, a rim, and inner and outer spokes, of an elastic girdle connected with the spokes and composed of concentric rings or bands, and the interposed springs disposed at an angle to the radius of the wheel, and having their ends located opposite different points of the periphery of the wheel, and forming the sole connection between the rings or bands and adapted to rotate partially in reverse directions, said springs being also capable of being compressed and distended longitudinally by the strains to which the wheel is subjected in starting, propelling and stopping a vehicle or

machine, substantially as described. 2nd. In a wheel of the class described, the combination with a hub, a rim, and inner and outer



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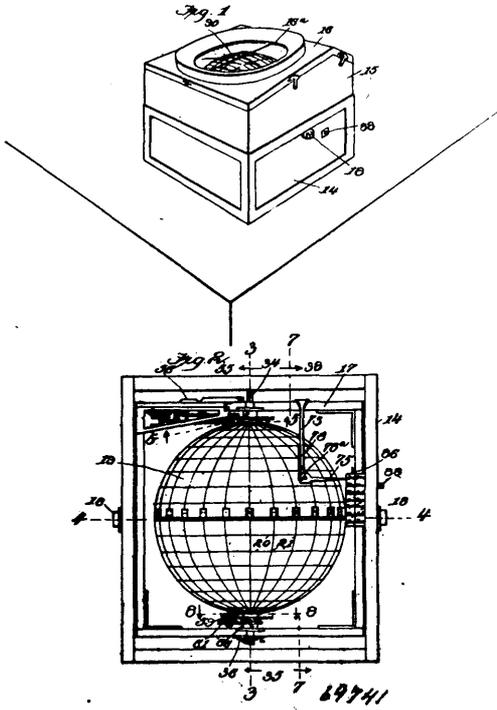
spokes, of a girdle composed of concentric rings or bands, and interposed springs forming the sole connection between the rings or bands and provided with a longitudinal series of transverse loops and arranged at an angle to the radius of the wheel with their ends opposite different points of the periphery of the latter, and adapted to be distended and compressed longitudinally, substantially as and for the purpose described. 3rd. In a wheel of the class described, the combination with a hub, a rim, and inner and outer spokes, of a girdle composed of concentric rings or bands, and the oppositely disposed interposed springs forming the sole connection between the rings or bands and arranged at an angle to the radius of the wheel with their ends opposite different points of the periphery of the latter and adapted to be compressed and distended longitudinally, substantially as and for the purpose described. 4th. In a wheel of the class described, the combination with a hub, a rim, and inner and outer spokes, of a girdle composed of concentric rings or bands, and the interposed springs forming the sole connection between the rings or bands and arranged in pairs, the members of each pair being disposed in opposite directions and at an angle to the radius of the wheel, with their ends opposite different points of the periphery of the latter, substantially as and for the purpose described. 5th. In a wheel of the class described, the combination of a ring or band having a central stiffening rib and provided at opposite sides thereof with smooth portions, said ring or band being also provided with side flanges, and the springs secured to the smooth portions and supported by the side flanges, substantially as described. 6th. A wheel of the class described comprising a hub, a rim, inner and outer spokes and a girdle composed of inner and outer concentric rings or bands each provided with a central stiffening rib and having outwardly extending flanges forming smooth side faces, and springs interposed between the rings or bands and supported at their inner ends by the side flanges of the inner ring or band, substantially as described.

No. 69,741. School Globe. (Globe pour école.)

Simond Johnson and Kelly Jameson, both of Spanish Fork, Utah, U.S.A., 22nd December, 1900; 6 years. (Filed 17th April, 1900.)

Claim.—1st. The combination with a rectangular box or casing, of a rectangular frame suspended thereon on pivots passing through the sides of the casing into the sides of the frame, a globe pivotally mounted in the frame with its pivot at right angles to that of the frame, and a clock mechanism secured to the frame and connected to the pivots of the globe, substantially as described. 2nd. The combination with a casing, of a swinging frame pivoted therein, a globe in the frame, a hollow shaft projecting into the globe at each end, a frame carried at the inner ends of said hollow shafts, a spring coiled in said frame and secured thereto, and a solid shaft passing through the spring and hollow shafts projecting at the poles of the globe and journaled in the ends of the swinging frame, substantially as described. 3rd. In a time globe, two hemispheres comprising the body thereof meeting at the equatorial line and having a groove formed at its meeting edges, plates projecting from the edges, overlapping each other and provided with registering holes, a chain in the groove having overlapping ends provided with perforations registering with those of the plates, and a pin passing into the globe through all of the registering perforation, and serving to secure the two hemispheres and chain, substantially as described. 4th. The combination with the casing, of a swinging longitudinal frame

therein, the globe journalled at its poles in the frame, a clock mechanism secured inside of the swinging frame, a spring inside



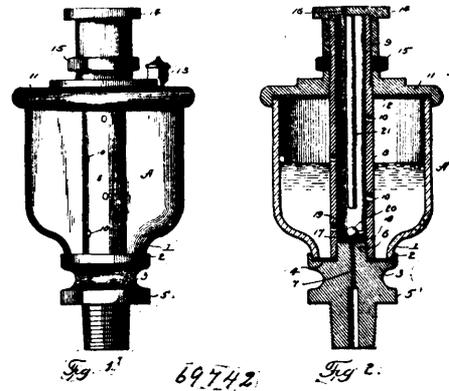
of the globe, and connections between the clock mechanism and spring for operating the mechanism by said spring, substantially as described. 5th. The combination with a globe, of a frame within which the globe is journalled at its pole, a case in which the frame is journalled in line with the equatorial diameter of the globe, a plate on the casing having the months indicated thereon, and a pointer carried by the swinging frame and movable over said plate when the frame is moved on its equatorial journals to indicate when the globe is at the proper inclination from the horizontal for each successive month, substantially as described. 6th. The combination with the casing, of the frame swung therein on equatorial journals, the globe mounted in the frame on polar journals, the month plate secured to the casing at one of its sides in line with the journals of the frame and curved on the arc of a circle having the frame axis as a centre, a longitudinal arm secured to the end of the frame and longitudinal overhanging the globe, and a rigid finger or pointer projecting laterally from said arm and adapted to indicate on the month plate when the globe frame is swung on its equatorial journals, substantially as described. 7th. The combination with the casing, of the frame swung therein on an equatorial axis, the globe swung in the frame on a polar axis or shaft, a clock mechanism outside the globe and connected up therewith to actuate the globe on its polar axis, a spring inside the globe to drive the clock mechanism, and means at the south pole of the globe to prevent backward rotation thereof, substantially as described. 8th. The combination with the casing, of the frame swung therein on an equatorial axis, the globe swung in the frame on a polar axis or shaft, a clock mechanism outside the globe and connected up therewith to actuate the globe on its polar axis, a spring inside the globe to drive the clock mechanism, figures arranged around the equator of the globe to indicate the hours of the day and night, a cover for the casing, a transparent pane in the top thereof, and a meridian line thereon, immediately over the polar axis of the globe, substantially as described. 9th. The combination with the swinging frame, and the globe swung on polar axis therein, of a clock mechanism inside one end of the frame geared to the polar axis of the globe, a dial on the outside of the frame for hours and minutes, a second dial separate therefrom, arbors of the clock mechanism projecting through the frame and said dials and hour, minute and second hands on said arbors, substantially as described.

**No. 69,742. Oil Cup. (Gobelet à huile.)**

David E. Smith, Oswego, Pennsylvania, U.S.A., 22nd December, 1900; 6 years. (Filed 23rd October, 1900.)

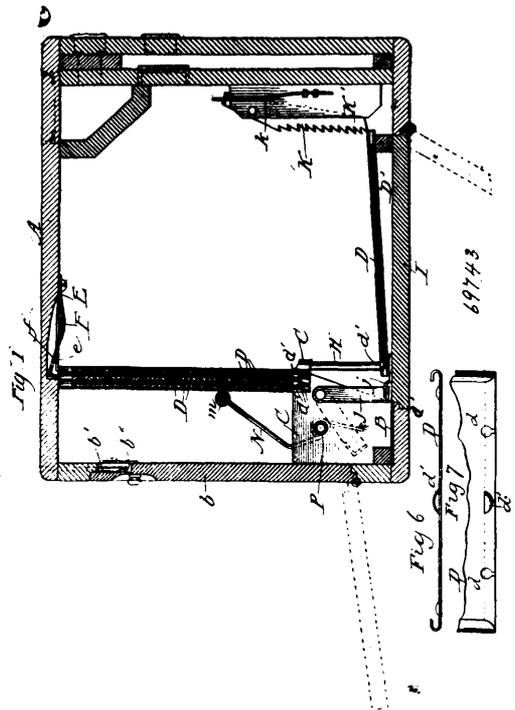
*Claim.*—1st. The combination with a base ring, a cylinder, a tube projecting outside of said cylinder, a cap and a valve seat having an oil duct therein, of a ball valve, a nut on the upper end of the tube adjustable thereon and provided with a spindle which depends into the tube, the space from the spindle to the tube being

less than the diameter of the ball valve, whereby to limit the movements of the ball valve, which space is regulated by the adjustment



of the nut up and down on the tube. 2nd. The combination with a base ring having an oil duct therethrough and provided with a screw threaded nipple, a perforated tube screwed on the nipple, a cylinder and a cap, the cylinder being held between the cap and the base ring, of a valve seat having a duct which leads into the duct in the base ring and provided with a concaved upper surface, a ball valve resting in the concaved seat and adapted to normally close the duct, a nut adapted to screw on the upper end of the tube, said nut having an air vent and provided with a depending spindle located centrally in the tube, the nut being adjustable on the tube whereby the size of the valve space is regulated.

**No. 69,743. Magazine Camera. (Camera à magasin.)**



John Charles Fyfe, Chicago, Illinois, U.S.A., 22nd December, 1900; 6 years. (Filed 17th April, 1900.)

*Claim.*—1st. A camera case having a suitably closed opening in its rear end, an opening in its bottom, and suitable means for closing the same, in combination with means for automatically moving a series of plate holders into focus, and means for releasing and dropping out of focus the forwardmost of said plate holders, one at a time as exposed, onto the said means for closing the opening in the bottom of the case. 2nd. A camera case having a suitably closed opening in its rear end, an opening in its bottom, and a door or cover for closing the same in combination with means for automatically moving a series of plate holders into focus, and means for

releasing and dropping out of focus the forwardmost of said plate holders, one at a time, as exposed, and retaining devices for the same connected to said door. 3rd. A camera case having a suitably closed opening in its rear end, and an opening in its bottom, a door for closing said bottom opening, and longitudinal parallel trams located in the rear of said bottom opening, in combination with means for automatically moving a series of plate holders forward into focus upon said trams, and means for releasing the forwardmost of said plate holders, one at a time, and dropping the same into retentive position upon said door. 4th. A camera case having a suitably closed opening in its bottom, a door for closing said bottom opening, means for retaining one or more plate holders thereon, and longitudinal parallel trams located to the rear of said bottom opening, in combination with means for automatically moving forward a series of plate holders into focus upon said trams, and means for releasing the forwardmost of said series of plate holders, one at a time after exposure, into retentive position of said door. 5th. A camera case having a suitably closed opening in its rear end, and an opening in its bottom, a door for closing said bottom opening, retaining posts located near and projecting upwards from its rear end of said door, and longitudinal parallel trams located to the rear of said bottom opening, in combination with means for automatically moving a series of plate holders forward into focus, and means for releasing the forwardmost of said series of plate holders after exposure one at a time and dropping the same into said door whereon they are retained from independent displacement by said posts. 6th. A camera case having a suitably closed opening in its rear end, and an opening in its bottom, parallel trams located to the rear of said bottom opening the forward edges of which are provided with suitable vertical eyes near their upper ends, a door for closing said bottom opening and posts secured to and projecting therefrom and adapted to enter said eyes, in combination with means for automatically moving a series of plate holders forward into focus, and means for releasing the forwardmost of said series of plate holders after exposure one at a time, whereby the same falls forward onto said door and is retentively held from independent displacement thereon by said posts. 7th. A camera case having a suitable closed opening in its rear end and an opening in its bottom, longitudinal parallel trams located to the rear of said bottom opening, a door for closing the same and posts projecting therefrom in such position as to align with said trams, in combination with means for automatically moving a series of plate holders forward into focus upon said tram, and means for releasing the forwardmost of said series of plate holders after exposure one at a time, whereby they fall forward onto and are retentively held from independent displacement upon said door by said posts. 8th. In a camera, the combination with longitudinal parallel trams, and means for automatically moving a series of plate holders forward upon the same to the focal point, of longitudinally arranged tongues of slightly different length having their free ends down-turned and successively and alternately engaging the upper edge of the forwardmost of said plate holders. 9th. In a camera the combination with longitudinal parallel trams, and means for automatically moving a series of plate holders forward upon the same to the focal point, of longitudinally arranged spring sheet metal tongues of slightly different length having their forward ends rigidly secured and their rear ends down-turned and successively and alternately engaging the upper edge of the forwardmost of said series of plate holders. 10th. In a camera the combination with longitudinal parallel trams, and means for automatically moving a series of plate holders forward upon the same to the focal point, of longitudinally arranged tongues of slightly different lengths having their forward ends rigidly secured and their rear ends down-turned, and a transverse shaft adapted to engage said tongues and cause the down-turned ends of the same to successively and alternately engage the upper edge of the forwardmost of said series of plate holders. 11th. In a camera the combination with longitudinal parallel trams, and means for automatically moving a series of plate holders forward upon the same to the focal point, of longitudinally arranged tongues of spring sheet metal of slightly different lengths, the forward ends of which are rigidly secured and the rear ends of which are down-turned, and a transverse shaft having a flattened portion which passes over and bears down upon one of said tongues and passes over and bears up against the other of said tongues so that when turned it causes one of the tongues to move downwards and the other of said tongues upwards, as set forth. 12th. In a camera the combination with the camera case having a suitably closed opening in its rear end, an opening in its bottom, suitable means for closing the same, and means for automatically moving a series of plate holders into focus, of longitudinally arranged tongues of slightly different length arranged above said plate holders which are of slightly different length and have their ends down-turned and successively and alternately engaging the upper edge of the forwardmost of said series of plate holders, as and for the purpose set forth. 13th. In a camera the combination with a case having a suitably closed opening in its rear end, and an opening in its bottom, suitable means for closing the same, parallel longitudinal means located to the rear of the bottom opening of said case, and means for automatically moving a series of plate holders into focus on said trams, of longitudinally arranged tongues of slightly different length, having their continuous ends rigidly secured and their free ends downturned and successively and alternately engaging the upper edge of the forwardmost of said series of

plate holders whereby the same is held in focus and released to drop into retentive position on said door. 14th. In a camera, the combination with a case having a suitable closed opening in its rear end, and an opening in its bottom, suitable means for closing the same, longitudinal parallel trams, and means for automatically moving a series of plate holders successively into focus thereon, of longitudinally arranged tongues having their continuous ends downturned, and a transverse shaft adapted to engage said tongues and cause the down-turned ends of the same to successively and alternately engage the upper edge of the forwardmost of said series of plate holders, whereby the same are brought into focus and successively released and dropped into retentive position upon said door. 15th. In a camera, the combination with the case having a suitably closed opening in its rear end, and an opening in its bottom, a door for closing said bottom opening having retaining posts secured to and arising therefrom, and longitudinal parallel trams with the forward edges of which the top of said posts engage, of longitudinally arranged tongues of slightly different length having their continuous ends rigidly secured and having their free ends down-turned and adapted to successively and alternately engage the upper edge of the forwardmost of said series of plate holders to hold the same in focus and release the same, whereby they fall into retentive position over said posts upon said door. 16th. In a camera, the combination with a case having a suitably closed opening in its rear end and an opening in its bottom, a door for closing said bottom opening having retaining posts secured to and arising therefrom, and longitudinal parallel trams, with the forward edges of which the top of said posts engage, of longitudinally arranged tongues of slightly different lengths having their continuous ends rigidly secured and having their rear ends down-turned, a transverse shaft adapted to engage said tongues and causes the downturned ends of the same to successively and alternately engage the upper edge of the forwardmost of said series of plate holders of said trams whereby they are consecutively held in focus and then released to drop into retentive position over said posts on said door. 17th. In a camera, the combination with the plate holder releasing device and a transverse shaft for actuating the same, one end of which extends beyond its bearings and has suitable cogs projecting therefrom, of a registering cog wheel engaged by the cogs on said shaft and having a series of concentrically arranged numerals on its outer face, as and for the purpose set forth. 18th. In a camera, the combination with a series of longitudinally arranged tongues the continuous ends of which are rigidly secured and the free ends of which are down-turned, and a transverse shaft engaging said tongues so that when turned it causes the down-turned ends of the camera, one end of said shaft extending beyond its bearings and having cogs projecting therefrom, of a registering cog engaged by said shaft and having a series of concentric graduations arranged on its outer face, as and for the purpose set forth. 19th. In a camera, the combination with longitudinally arranged tongues, the continuous ends of which are rigidly secured and the free ends of which are downturned, a transverse shaft adapted to engage said tongues so that they alternately engage the plate holders in said camera, and having one end extended beyond its bearings and provided with cogs projecting therefrom, and a shield shape pendant hand grasp pivotally connected to the outer ends of said shaft, of a registering cog engaged by the cogs on said shaft and provided with a series of graduations on its outer face which as it is moved are exposed, one at a time, through a suitable opening in said pendant shield. 20th. In a camera, the combination with a case having a suitably closed opening in its rear end, longitudinal parallel trams, and means for consecutively retaining in and releasing from the focal position on said trams each of a series of plate holders movable on the same, of a crank shape torsional normally forwardly pressing spring for automatically moving said plate holders intermittently forward, as and for the purpose set forth. 21st. In a camera, the combination with a case having a suitably closed opening in its rear end, longitudinal parallel trams, and means for consecutively retaining in and releasing from the focal position on said trams each of a series of plate holders movable on the same, of a crank shape torsional normally forwardly pressing spring for automatically moving said plate holders intermittently forward, and hooks secured in suitable position adjacent to the lower edge of the opening in the rear of said case, which are adapted to engage and hold said spring when the same is moved to the limit of its rearward movement and held out of engagement with said plate holders, as and for the purpose set forth.

#### No. 69,744. Acetylene Gas Generator.

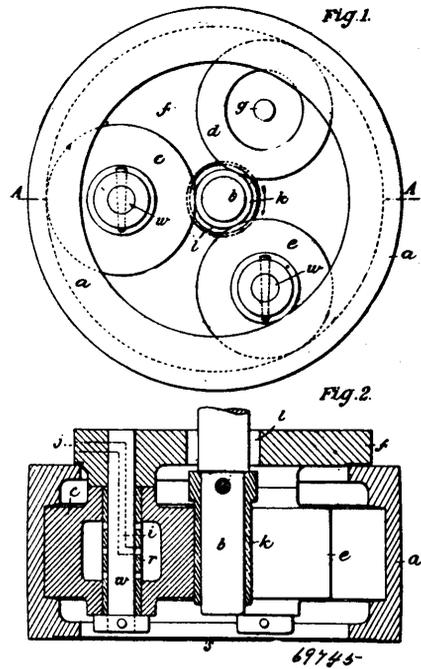
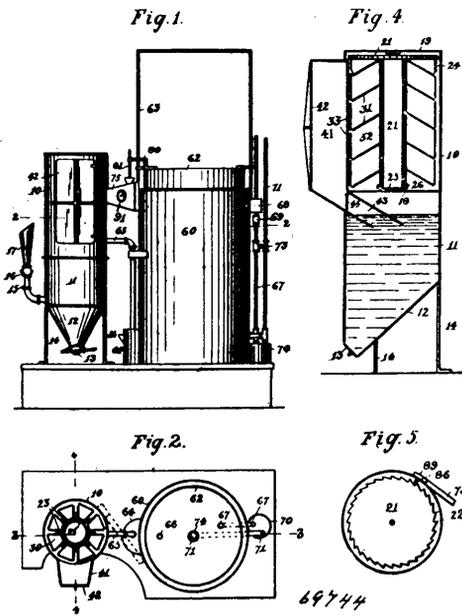
(Générateur de gaz acétylène.)

François Xavier Nadon and John P. Logue, both of River Desert, Quebec, Canada, 22nd December, 1900; 6 years. (Filed 4th April, 1899.)

*Claim.*—1st. In an acetylene gas generator, a revolvable cylinder journaled in the upper part of the said generator, having a series of removable carbide chambers, provided with sloping floors and carried by said cylinder, doors closing each of the said chambers, the said cylinder adapted to be rotated by a ratchet wheel operated by the falling of a lever and ratchet moved by the gas holder, and means for opening the door of one of the said chambers and discharging its contents into the water at each fall of the inverted cylinder of the gas holder, substantially as set forth. 2nd. An acetylene gas generator consisting of a casing divided into two com-

partments, a revoluble cylinder journaled in the upper part, carrying a series of removable carbide receptacles, each receptacle being

and shaft, said loose hollow rollers being of a different size from the other rollers, and studs on said frame entering said hollow rollers,

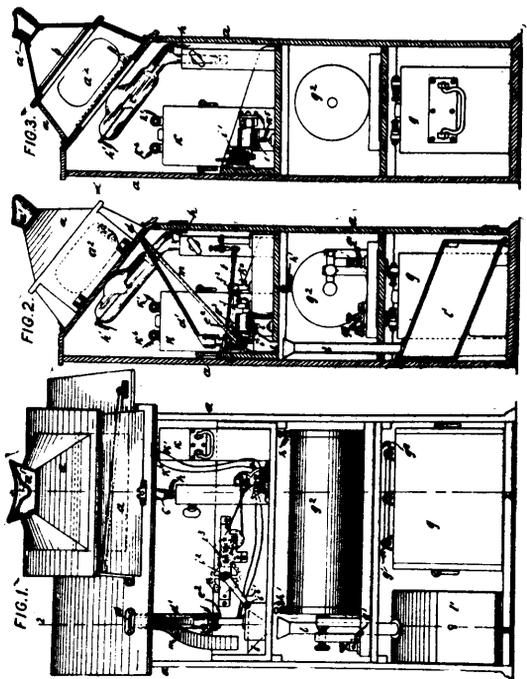


divided by sloping floors into a number of chambers, doors closing the said chambers, means for opening the door of one of the said chambers at each movement or rotation of the said cylinder, in combination with a chute leading from the upper part of the generator to the lower part or tank, said chute terminating below the water line in the tank and a hinged door or valve interposed in said chute, substantially as described and shown. 3rd. In an acetylene gas generator, the combination with a cylinder revolubly journaled in the upper part of the generator casing, a ratchet wheel carried on the upper part of the said cylinder, radial wings dividing the surface of the cylinder into vertical compartments, of carbide receptacle having sloping floors adapted to be held in these compartments, substantially as set forth. 4th. In an acetylene gas generator the combination with the casing of the generator divided into two compartments by a horizontal floor, the upper one having a chamber communicating with it at the front, a door opening into this chamber of the fastenings 36 of the doors of carbide chamber carried by a revolving cylinder, a rod 50 stepped or bent so as to engage only one fastening at the time, substantially as set forth. 5th. In an acetylene gas generator the combination with the door 33 of the carbide chamber 32, of the forked catch 34, the cross shaped fastener 36 pivoted to the side of the chamber, the cross arms 37 engaging the said forked catch, the shank 38 projecting beyond the cross arms and adapted to be engaged by a rod 50, substantially as set forth. 6th. In an acetylene gas generator the combination with a revoluble cylinder carrying carbide receptacles, a ratchet wheel 21 carried on the top of the said cylinder, a bell crank lever operating said ratchet wheel, said bell crank lever being operated by a vertical rod 81 carried in an arm secured to the inverted cylinder of the gas holder, and a spring 83 returning the lever to its normal position after each operation, substantially as set forth. 7th. In an acetylene gas generator the combination with the arm 82 of the pawl 88, adapted to engage the ratchet wheel 90, the ratchet wheel 90 connected to the indicator 91, substantially as shown and set forth.

substantially as described. 4th. In a friction gearing, the combination with a revoluble shaft, a frame loosely encircling said shaft, and a ring also encircling the shaft, of a self-tightening roller loosely carried between the shaft and the ring, and two other motion transmitting rollers revolving on fixed centres, and so disposed as to act as antifriction roller bearings for said shaft, substantially as described.

No. 69,746. Coin-controlled X-ray Apparatus.

(Appareil à X-ray actionné par une pièce de monnaie.)



No. 69,745. Friction Gearing. (Engrenage à friction.)

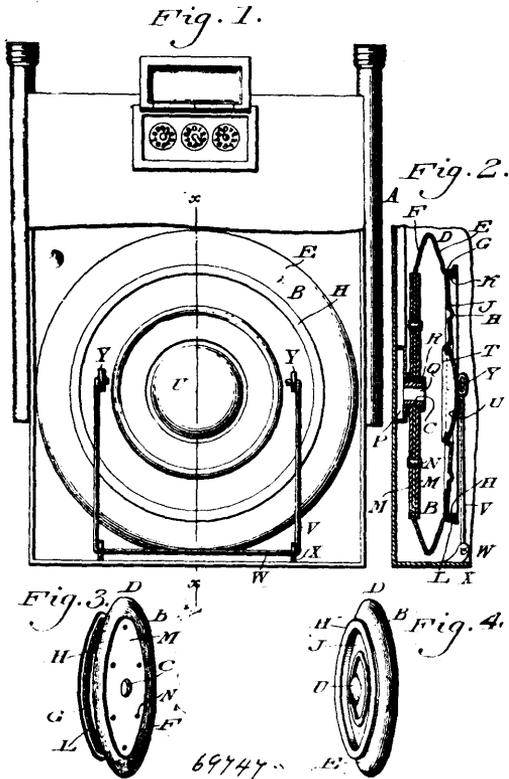
Charles Williamson Milne, London, assignee of Thomas Foster, Owen's College, Manchester, England, 22nd December, 1900; 6 years. (Filed 11th August, 1900.)

Claim.—1st. In a friction gearing, the combination with a revoluble shaft, a frame loosely encircling said shaft, and rollers mounted on said frame engaging said shaft, of a ring encircling said rollers, a loose roller also within said ring, one of said rollers being of a different size from the other rollers, substantially as described. 2nd. In a friction gearing, the combination with a revoluble shaft, a frame loosely encircling said shaft, and rollers mounted on said frame engaging said shaft, of a ring encircling said rollers, a loose hollow roller within said ring and engaging said ring and shaft, one of said rollers being of a different size from the other rollers, and a stud on said frame entering the said hollow roller, substantially as described. 3rd. In a friction gearing, the combination with a revoluble shaft, a frame loosely encircling said shaft, and rollers mounted on said frame engaging said shaft, of a ring encircling said rollers, loose hollow rollers within said ring engaging said ring

Fritz Neugebauer and Friederich Distelhorst, both of New York City, New York, U.S.A., 22nd December, 1900; 6 years. (Filed 26th September, 1900.)

*Claim.*—1st. In a coin-controlled X-ray apparatus, the combination of a lever adapted to be tilted by the weight of a coin, with a pair of contacts adapted to be closed by the lever, one contact being adapted to place the bulb in circuit and the other contact being adapted to place a motor in circuit, combined with means actuated by the motor for dislodging the coin, substantially as specified. 2nd. In a coin-controlled X-ray apparatus, the combination of a lever with a tilting pan carried thereby, a motor adapted to be placed in circuit by the turning of the lever, and means actuated by the motor for tilting the pan, substantially as specified. 3rd. In a coin-controlled X-ray apparatus, the combination of a lever with a spring-actuated tilting pan carried thereby, an arm movable with the pan, a motor adapted to be placed in circuit by the turning of the lever, and means actuated by the motor for engaging the arm and tilting the pan, substantially as specified.

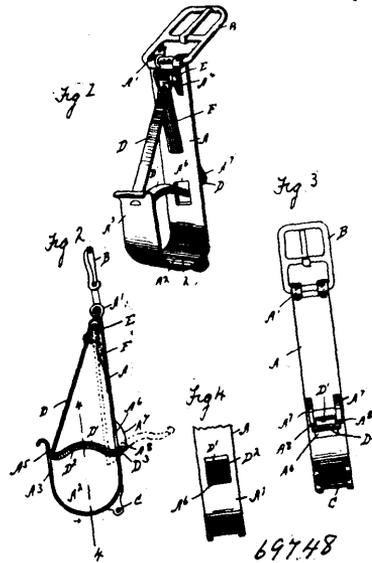
No. 69,747. Gas Meter. (Gazomètre.)



Valentine Kopenski and Ebenezer F. Griffiths, both of Philadelphia, Pennsylvania, U.S.A., 22nd December, 1900; 6 years. (Filed 3rd October, 1900.)

*Claim.*—1st. A gas meter diaphragm composed of a single piece of material, and comprising a side wall having its peripheral portion consisting of two members, one of said members being laterally deflected and extending outwardly from the edge of said wall proper, the other of said members extending inwardly from the outer edge of the first mentioned member and diverging therefrom, a laterally deflected flange at the inner edge of said last mentioned member, and a plate having a flange secured to said flange. 2nd. In a gas meter, a diaphragm composed of a single piece of material and having an opening in the centre thereof, the peripheral edges of said diaphragm being deflected, a plate having a flange engaged by said edges, fastening devices for holding said diaphragm in position upon said flange, plates attached to the opposite sides of the outer portion of said diaphragm, an inlet pipe for the interior of said diaphragm, an exteriorly threaded nipple holding said pipe in position, a nut engaging said nipple and adapted to abut against the inner of said plates, whereby the parts are held in assembled position. 3rd. A gas meter diaphragm composed of a single piece of material and comprising a side wall having its peripheral portion consisting of two members, one of said members being laterally deflected and extending outwardly from the edge of said wall proper, the other of said members extending inwardly from the outer edge of the first mentioned member and diverging therefrom, a laterally deflected flange at the inner edge of last mentioned member, a plate forming the other side wall of the diaphragm and having a lateral flange situated within the flange of said member, said flange of the plate being provided with an annular recess and fastening devices for securing said flanges together, said fastening devices compressing the flange of said member into the recess of said other flange.

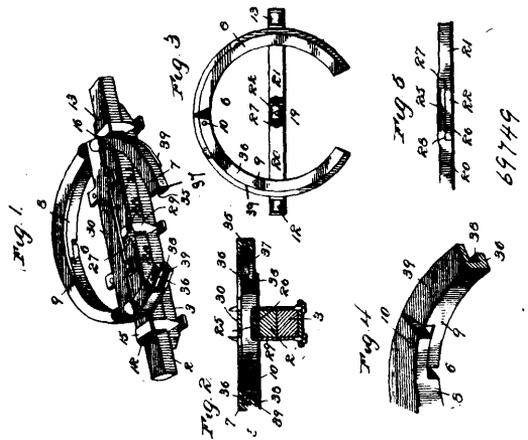
No. 69,748. Shaft Tug. (Boucleteau de limonière.)



James O'Connell and Thomas Heinrich, both of Mount Sterling, Kentucky, U.S.A., 22nd December, 1900; 6 years. (Filed 4th October, 1900.)

*Claim.*—1st. A shaft tug, comprising a shank, having a shaft bearing on its lower end, a spring pressed tongue pivoted on the shank and having a cross piece extending from one member of the bearing to and through the other, and means carried by the members of the bearing for engaging the tongue at the cross piece and holding the tongue against upward movement when pressure is exerted thereupon by the shaft, and to relieve the pivot of the tongue of undue strain, substantially as shown and described. 2nd. A shaft tongue, comprising a shank, having an approximately oval shaft bearing, lugs on the back of the shank on opposite sides of an opening in the rear member of the bearing, and a spring pressed tongue pivoted to the upper end of the shank and formed at its lower end with a cross piece extending from one member of the bearing through said opening, to engage with its rear free end, the said lugs, as set forth. 3rd. A shaft tug, comprising a shank having an approximately oval shaft bearing, lugs on the back of the shank on opposite sides of an opening in the rear member of the bearing, a spring pressed tongue pivoted on the upper end of the shank and formed at its lower end with a cross piece extending from one member of the bearing through said opening, to engage with its rear, free end, and the said lugs and a lug on the front member of the bearing for engaging the forward, lower end of said tongue, substantially as shown and described.

No. 69,749. Fifth Wheel. (Roue d'avant train.)

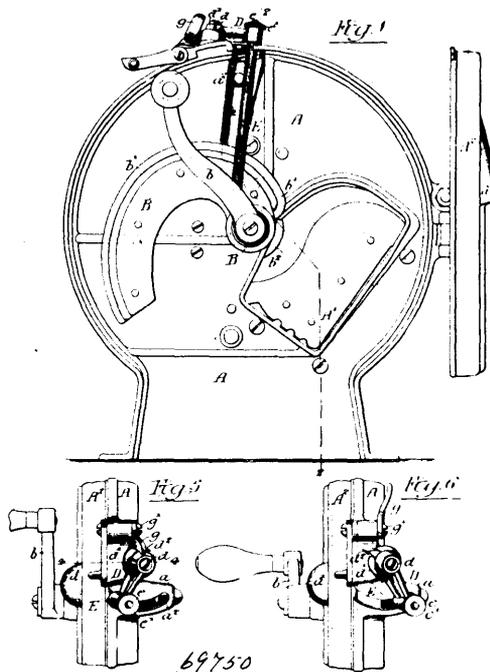


John L. Taylor and Eugene S. Murrell, both of West Superior, Wisconsin, U.S.A., 22nd December, 1900; 6 years. (Filed 5th October, 1900.)

*Claim.*—1st. A fifth wheel, including two sections, one of which is supported upon the other, and one of said sections consisting of two

jointed parts, and a bar connecting said parts and having a joint. 2nd. A fifth wheel, including two sections, one of which is supported by the other and connected by a tongue and grooved joint, and one of said sections consisting of two hinged parts, and a bar connecting said hinged parts and having a joint. 3rd. In a fifth wheel, including two superposed sections, one of which consists of two pivoted parts, and a cross bar connecting said parts and having a joint. 4th. A fifth wheel, including two sections, one of said sections consisting of two jointed parts and a bar connecting said jointed parts, and provided with a lap joint. 5th. A fifth wheel, consisting of two parts connected by a tongue and grooved joint, one of said sections consisting of parts pivotally connected. 6th. A fifth wheel, consisting of two sections connected by a duplex joint, one of said sections consisting of two jointed parts connected by a cross bar provided with a joint. 7th. A fifth wheel, consisting of two superposed parts or sections connected by a duplex tongue and grooved joint, one of said sections being made up of two pivoted parts, substantially as described. 8th. A fifth wheel, consisting of two interlocked superposed sections, one of which consists of parts pivotally connected, substantially as described. 9th. A fifth wheel, consisting of two sections connected by a tongue and grooved joint, one section consisting of two jointed parts connected by a jointed cross bar and adapted to be secured to the axle, the other section being of one piece and having a cross bar adapted to be secured to the head block. 10th. A fifth wheel, consisting of two sections connected by a tongue and grooved joint, one section consisting of a circular single piece, the other of two jointed parts connected by a jointed cross bar, the jointed section sliding on and around the inside of the single section. 11th. A fifth wheel consisting of two sections, one section being made of a circular single piece and having a groove around its inner face, the other section consisting of two parts hinged together and having a tongue around its outer outer face which is adapted to slide in the groove of the outer section.

**No. 69,750. Sharpening Devices for the Knives of Food Cutters and Shavers.** (*Appareil à aiguiser les coutaux de hache-noriture.*)

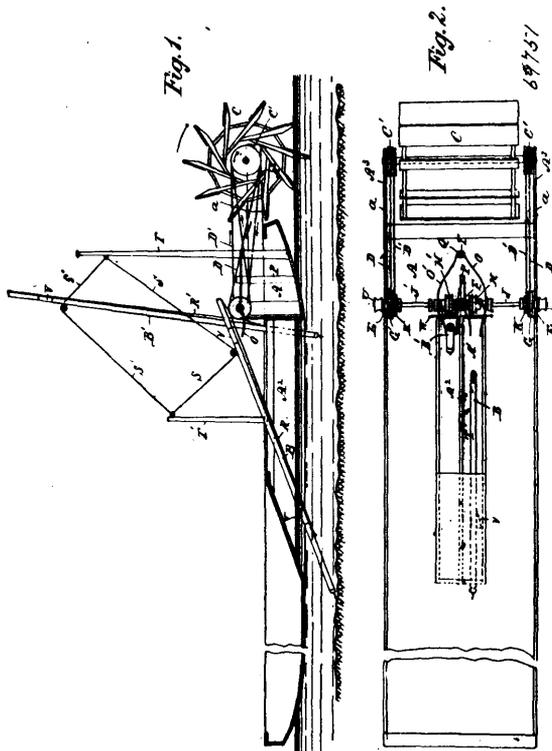


The Enterprise Manufacturing Company, assignee of Joseph Fel-lows, all of Philadelphia, Pennsylvania, U.S.A., 22nd Decem-ber, 1900; 6 years. (Filed 2nd March, 1900.)

*Claim.*—1st. The combination of a cutter having a knife blade, with a sharpener for bearing against the side of said knife blade, and means for mounting said sharpener whereby it is permitted to move from and towards the side of the knife blade, while preserving the same angular relation thereto, substantially as described. 2nd. The combination of a cutter having a knife blade, with a sharpener for bearing against the side of said knife blade, and means for mounting said sharpener whereby it is permitted to move from and toward the side of the knife blade, while preserving the same angular relation thereto, and yielding means for pressing the sharpener towards the knife blade, substantially as described. 3rd. The combination of a cutter having a knife blade, with a sharpener for bearing against the side of the blade, and means for mounting said sharpener whereby it is permitted to move from and towards the side of the knife blade,

while preserving the same angular relation thereto, and means for holding the sharpener out of contact with the blade, substantially as described. 4th. The combination of a cutter having a beveled blade, with a sharpener for bearing against the beveled side of the blade, and means for mounting said sharpener in a plane parallel with the said beveled side of the blade and for maintaining it in constant angular relation thereto, substantially as described. 5th. The combination of a cutter having a knife blade with a sharpener for bearing against the side of said knife blade, and a carrier for said sharpener having a longitudinal pivot parallel with the face of the knife and blade against which the sharpener bears, substantially as described. 6th. The combination of a cutter having a pivoted knife blade with a beveled face and curved edge eccentric in respect to the axis of said pivot, a sharpener for bearing against the beveled face of the blade, and means for mounting said sharpener whereby it is movable from and towards the beveled face of the blade while preserving a constant angular relation thereto, substantially as described. 7th. The combination of a frame of a food cutter, a shaft mounted on said frame, a bevelled knife carried by said shaft, a cap plate forming with the frame a casing in which the knife rotates, a pivoted sharpener arranged on the same angle as the bevel of the knife blade, the casing and the cover plate being recessed for the reception of the sharpener, substantially as described. 8th. The combination of the frame of a food cutter, a shaft mounted in said frame, a beveled knife carried by said shaft, a cap plate forming with the frame a casing in which the knife rotates, a pivoted sharpener arranged on the same angle as the bevel of the knife blade, the casing being recessed for the reception of the sharpener, and a buffer within said recess against which the sharpener strikes, substantially as described. 9th. The combination of a frame of a food cutter or slicer, a shaft, a beveled knife carried by said shaft, an arm pivoted to the casing, said arm having a hollow hub, a spring within the hollow hub, a sharpener detachably secured to the end of the arm, the arm and sharpener being raked on the same line as the bevel of the knife blade, the spring tending to force the sharpener in the path of the knife blade, and means for holding the sharpener out of the path of the knife blade, substantially as described.

**No. 69,751. Boat.** (*Bateau.*)



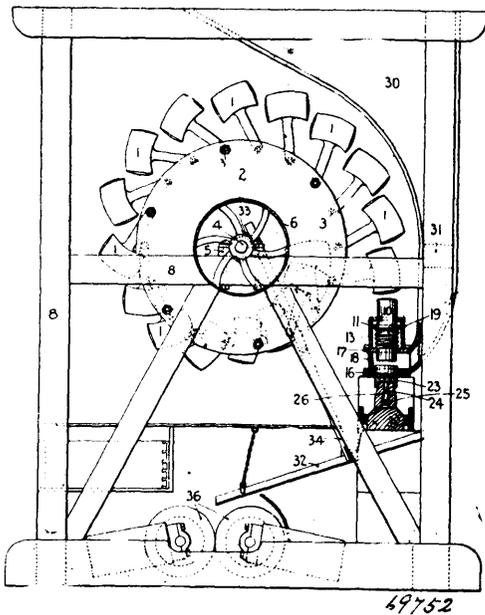
Karl L. Lehmann, Chicago, Illinois, U.S.A., 26th December, 1900; 6 years. (Filed 9th August, 1899.)

*Claim.*—1st. The combination with a boat or scow having a well through the bottom, of a current wheel journaled in front of the bow, a shaft inboard and axles sleeved thereon to be rotated in an opposite direction to the shaft by belts from said wheel, sheaves on said shaft and clutches coupling said sheaves to the shaft and axles, ropes winding and unwinding from said sheaves alternately, poles secured to said ropes and affecting a pushing operation through said well, springs closing said clutches and opened by trips on the poles,

and a notched bar retaining said springs until released by the reverse motion of the poles, whereby the poles perform a walking motion automatically to push the boat against the stream by the power derived from the current wheel, as set forth. 2nd. A scow or boat, having a current wheel across the bow, a shaft inboard and axles sleeved thereon to be rotated in an opposite direction to the shaft by belts from said wheel, sheaves on said shaft and connected thereto and to the axles by clutches, ropes winding on and off said sheaves alternately, poles having said ropes secured to them at or near their ends and raised and lowered by the winding and unwinding of said ropes, said poles operating in said well, and means for operating said clutches by the operation of said poles, substantially as set forth. 3rd. A boat or scow having two push poles operating through a well in the bottom, and having a walking motion imparted by ropes winding on and unwinding from sheaves clutched to a shaft and to axles sleeved thereon to be rotated in an opposite direction by belts from a current wheel located across the bow, as set forth.

**No. 69,752. Stamper Battery. (Bocard.)**

FIG. 1



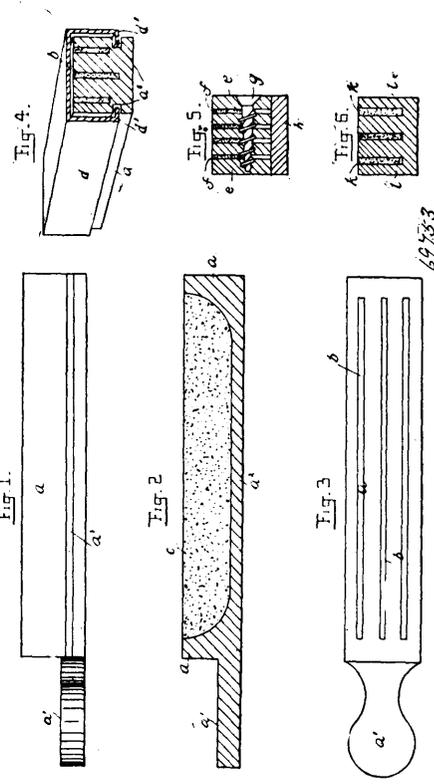
69752

Marinus Weber, Adelaide, South Australia, 26th December, 1900 ; 6 years. (Filed 9th January, 1899.)

*Claim.*—1st. A stamper battery consisting of a supporting frame, a hammer wheel composed of a multiple of circular plates connected by bolts and means for applying power to the wheel in combination with a stamper box of two compartments having apertures, disconnected stampers mounted in the apertures, means for raising the stampers, oscillating anvil blocks, and a hopper supplying ore to the anvil blocks, as specified. 2nd. A stamper battery consisting of a supporting frame, a hammer wheel composed of a multiple of circular plates connected by bolts, a multiple of swinging hammers hung on the bolts and means for applying power to the wheel in combination with a stamper box of two compartments having apertures, disconnected stampers mounted in the apertures, means for raising the stampers, oscillating anvil blocks, a hopper supplying ore to the anvil blocks and a pair of crushing rollers below, as specified. 3rd. A stamper battery consisting of a supporting frame, a hammer wheel composed of a multiple of circular plates connected by bolts, a multiple of swinging hammers hung on the bolts and means for applying power to the wheel in combination with a stamper box of two compartments composed of oscillating anvil blocks forming the bottom, plates forming the sides, ends, and the top, and an intermediate plate being provided with corresponding apertures, disconnected vertical stampers, mounted in the apertures of the box provided each in its upper portion with a collar, a circular spring surrounding the stamper between the collar and the intermediate plate, and means for operating the stamper, as specified. 4th. A stamper battery consisting of a supporting frame, a hammer wheel composed of a multiple of circular plates connected by bolts, a multiple of swinging hammers hung on the bolts and means for applying power to the wheel in combination with a stamper box of two compartments composed of oscillating anvil blocks forming the bottom, plates forming the sides, ends and the top, and an intermediate plate, the top and intermediate plate being provided with corresponding aper-

tures, disconnected vertical stampers mounted in the apertures of the box provided each in its upper portion with a collar, a circular spring surrounding the stamper between the collar and the intermediate plate, the oscillating anvil blocks having each in its centre a downwardly projecting stem, and pivoted oscillating levers below, as specified. 5th. In a stamper battery, a stamper box of two compartments composed essentially of oscillating anvil blocks forming the bottom, plates forming the sides, ends, and the top, and an intermediate plate, the top plate and intermediate plate being provided with corresponding openings in combination with vertical stampers mounted in the apertures of the box and each provided in its upper portion with a collar, a circular spring surrounding the stamper between the collar and the intermediate plate and means for operating stampers, as specified. 6th. In a stamper battery, a stamper box of two compartments composed essentially of oscillating anvil blocks forming the bottom, plates forming the sides and the top, and an intermediate plate, the top plate and intermediate plate being provided with corresponding openings, in combination with vertical stampers mounted in the apertures of the box and each provided in its upper portion with a collar and a circular spring surrounding the stamper between the collar and the intermediate plate, and oscillating anvil blocks having each in its centre a downward projecting stem, and pivoted oscillating levers below, as specified. 7th. In a stamper battery a pair of oscillating anvil blocks, bed blocks upon which the anvil blocks bed, a downwardly projecting stem in the centre of each anvil block, and an oscillating lever pivoted in the bed-block on whose ends impinge the bottoms of the stems, so that, as one anvil block is depressed to the bed-block the other one is raised from it, as specified.

**No. 69,753. Knife Sharpener. (Aiguiseur de couteaux.)**



69753

Edward Henry Jones, Pimlico, London, England, 26th December, 1900 ; 6 years. (Filed 29th August, 1899.)

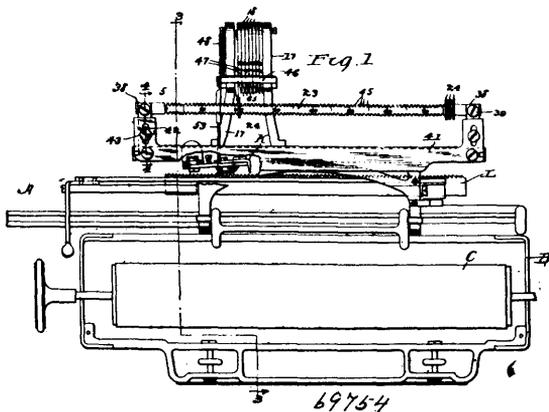
*Claim.*—In an improved knife sharpener, the combination of a wooden block, such as a provided with a handle a', a slit or slits or saw cuts b filled with emery composition or razor paste c, and a case or sheath d formed with flanges d' engaging with grooves a' in the sides of the block, substantially as described.

**No. 69,754. Tabulating Device for Typewriters. (Appareil a catalogueur pour clavigraphes.)**

Louis Schlesinger, Chicago, Illinois, U.S.A., 26th December, 1900 ; 6 years. (Filed 4th November, 1899.)

*Claim.*—1st. In a typewriter, a paper feed carriage, a stop rack carried thereby, and a feed mechanism for said carriage, in combination with a series of movable plungers, an arm or bar arranged to be moved when any one of said plungers is moved, connections between said movable bar and the paper carriage feed mechanism,

whereby when a plunger is moved the carriage is released, stops carried by said rack and arranged to engage said plungers when

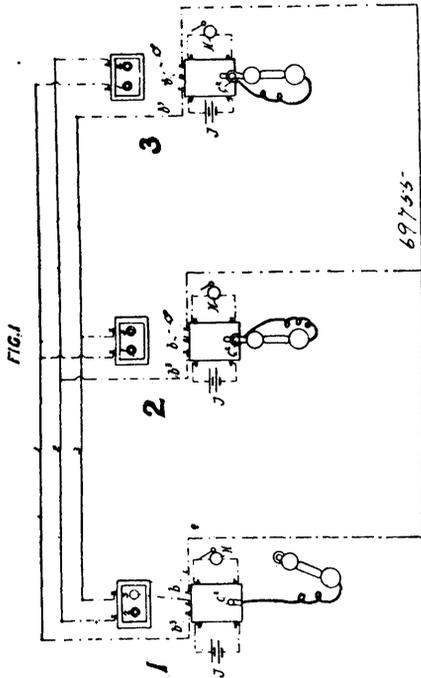


moved, and means for actuating said plungers, as and for the purpose set forth. 2nd. In a typewriter, a paper feed carriage, a feed mechanism therefor, a series of auxiliary keys, means actuated by said auxiliary keys for disengaging the carriage from its feed mechanism and arresting the same at different distances from a predetermined point, and a brake for said carriage, as and for the purpose set forth. 3rd. In a typewriter, a paper feed carriage, a feed mechanism therefor, a series of auxiliary keys, each arranged to disengage the carriage from its feed mechanism and arrest the same at a different distance from a predetermined point, a brake for said carriage, and means for applying said brake when the carriage is released from its feed mechanism, as and for the purpose set forth. 4th. In a typewriter, a paper feed carriage, a feed mechanism therefor, a series of auxiliary keys, each arranged to disengage the carriage from its feed mechanism and arrest the same at a different distance from a predetermined point, whereby the carriage is automatically arrested in position to record in uniform columns numbers of varying denominations, a brake for said carriage, and means operating simultaneously with the actuation of any one of said auxiliary keys for applying said brake, as and for the purpose set forth. 5th. In a typewriter, a paper carriage, a feed mechanism therefor, stops carried by said carriage, a series of movable plungers, each arranged to be moved into position to be engaged by a stop on the paper carriage to arrest the movement of said carriage, means for releasing the carriage from its feed mechanism, a brake, and means operating coincidentally with the release of said feed mechanism for applying said brake to the carriage, as and for the purpose set forth. 6th. In a typewriter, a paper carriage, a feed mechanism therefor, stops carried by said carriage, a series of movable plungers, each arranged to be moved into position to be engaged by a stop on the carriage, means for releasing the carriage from its feed mechanism, a brake, and connections actuated by the movement of any one of the plungers for applying said brake to the carriage, as and for the purpose set forth. 7th. In a typewriter, a paper carriage, a feed mechanism therefor, a series of movable plungers, each arranged when moved to arrest the carriage at a different distance from a predetermined point, a feed mechanism for said carriage, connections actuated by the movement of any one of said plungers for releasing the carriage from its feed mechanism, a brake for the carriage, and means actuated by the movement of any one of the plungers for applying said brake, as and for the purpose set forth. 8th. In a typewriter, a paper carriage, stops carried thereby, a series of movable stop plungers, a brake arm carrying a shoe arranged to engage a moving part of the carriage, means for releasing the paper carriage from its feeding mechanism, and means actuated by the movement of any one of said stop plungers for rocking said brake arm into position to apply the brake, as and for the purpose set forth. 9th. In a typewriter, a paper carriage, a feed mechanism therefor, means for automatically releasing said carriage from its feed mechanism and arresting the same at various distances from a predetermined point, a brake for relieving the shock of arrest of said carriage, and means for applying said brake automatically upon the release of the carriage from its feed mechanism, as and for the purpose set forth. 10th. In a typewriter, a paper carriage, a feeding mechanism therefor, stops carried by said carriage, a series of movable plungers, a brake arm, a brake shoe movably mounted on said arm, means actuated by the movement of any one of said plungers for releasing said carriage from its feed mechanism, and connections, also actuated by the movement of any one of said plungers for rocking said brake arm and applying the brake to said carriage, as and for the purpose set forth. 11th. In a typewriter, a paper carriage having the usual feed mechanism, stops carried by said carriage, a series of movable plungers an arm or bar arranged to be engaged and moved when any one of said plungers is moved, and connections actuated by the movement of said arm or bar for releasing the carriage from its feed mechanism, as and for the purpose set forth. 12th. In a typewriter, a paper feed carriage, a stop rack carried

thereby, said rack provided with grooves or seats arranged a distance apart corresponding to the distance traversed by the carriage in moving a letter space, stops adapted to be removably received in said grooves or seats, a series of movable plungers arranged a letter space distance apart, means for actuating said plungers, and means for releasing the carriage from its feed mechanism, as and for the purpose set forth. 13th. A spacing attachment for typewriters of uniformly columnating figures of various denominations, including a stop rack provided with seats or grooves spaced a distance apart corresponding to the graduations of the spacing scale. 14th. A stop rack, having grooves on opposite sides thereof, in combination with stops adapted to be removably received in said grooves, as and for the purpose set forth. 15th. A stop rack, having grooves in the exterior surface thereof, in combination with stops arranged to straddle said rack and be removably received in said grooves, as and for the purpose set forth. 16th. The combination in a typewriter, of a paper carriage and its feed mechanism, with a stop rack carried by said carriage, a series of movable stop plungers, and means for relatively adjusting said rack and plungers, as and for the purpose set forth. 17th. The combination in a typewriter, with a paper carriage, a stop rack adjustably connected at the ends thereof to said carriage, and carrying stops, a series of stop plungers, means for actuating the same, said plungers and stop rack being relatively adjustable toward and from each other, as and for the purpose set forth. 18th. In a typewriter, a paper carriage, a feed mechanism therefor, a stop rack carried by said carriage, a series of movable plungers, each provided with a shoulder, a movable bar or arm arranged in front of said shoulders, whereby when any one of said plungers is moved, said bar or arm is moved, means for actuating said plungers, and connections actuated by the movement of said bar or arm for releasing the paper carriage from its feed mechanism, as and for the purpose set forth. 19th. In a typewriter, a paper feed carriage, a feeding mechanism therefor, stops carried by said carriage, a series of movable stop plungers each provided with a shoulder or lug, means for actuating said plungers, and means arranged to be engaged and actuated by the shoulders on said plungers for releasing the paper carriage from its feed mechanism, as and for the purpose set forth. 20th. In a typewriter, a paper carriage, a feed mechanism therefor, and stops carried by said carriage, in combination with an auxiliary frame, movable plungers mounted therein, said plungers being scored or grooved in their contacting faces, and means for actuating said plungers, as and for the purpose set forth. 21st. The combination with a paper carriage and its feed mechanism, of means for releasing said carriage from its feed mechanism, and means for arresting the same at predetermined points for uniformly columnating figures and the like, and including sliding plungers, said plungers being grooved on their contacting surfaces, as and for the purpose set forth. 22nd. The combination with a paper carriage and its feed mechanism, and stops carried by said carriage, of a series of plungers arranged to be moved into the path of said stops, levers connected to said plungers for moving the same, auxiliary keys for rocking said levers, and means actuated by the movement of said plungers for releasing the carriage from its feeding mechanism, as and for the purpose set forth. 23rd. The combination with a paper carriage and its feed mechanism, of a tabulator attachment for releasing said carriage and arresting the same in position to uniformly columnate figures and the like, and means for locking said feed mechanism against accidental displacement, as and for the purpose set forth. 24th. In a typewriter, a paper carriage and its feed mechanism, and stops carried by said carriage, in combination with an auxiliary frame, pins or bolts mounted therein, a series of slotted plungers mounted to slide on said pins or bolts, means for independently moving said plungers, and means actuated by the movement of any one of said plungers for releasing the carriage from its feed mechanism, as and for the purpose set forth. 25th. In a typewriter, a paper carriage and its feed mechanism, and stops carried by said carriage, in combination with an auxiliary frame, a series of sliding plungers mounted therein, said plungers arranged therein a letter space distance apart, a lever loosely connected to each of said plungers, whereby said plungers may be independently moved, auxiliary keys for actuating said levers, and means for releasing the carriage from its feeding mechanism, as and for the purpose set forth. 26th. In a typewriter, a paper carriage and its feed mechanism, and stops carried by said carriage, in combination with an auxiliary frame, a series of sliding plungers arranged therein a letter space distance apart, each plunger provided with a seat or depression, a lever loosely connected to each plunger in said seat or depression, auxiliary keys for actuating said plungers, and means for releasing the paper carriage from its feed mechanism, as and for the purpose set forth. 27th. In a typewriter, a paper carriage and its feed mechanism, stops carried thereby and arranged to be adjusted to any desired point with reference to each other and the spacing scale of the typewriter, a series of sliding plungers arranged a letter space distance apart, said plungers having bevelled ends, means for independently projecting said plungers into the path of traverse of said stops, and means for releasing said carriage from its feed mechanism, as and for the purpose set forth. 28th. In a typewriter, a paper carriage and its feed mechanism, and stops carried by said carriage, a series of sliding plungers arranged a letter space distance apart, a bail or strap arranged to be engaged and moved when any one of said plungers is projected, means actuated by the movement of said bail or strap for releasing the paper carriage from its feed mechanism,

ism, and means for independently projecting said plungers, as and for the purpose set forth. 29th. In a typewriter, a paper carriage and its feed mechanism, and stops carried by said carriage, an auxiliary frame, pins or rods mounted therein, a series of sliding plungers arranged a letter space distance apart and mounted to slide upon said pins or rods, a strap or bail common to all of said plungers, whereby when any one of said plungers is moved said strap or bail is moved, means actuated by the movement of said strap or bail for releasing the carriage from its feed mechanism, and means for independently actuating said plungers, as and for the purpose set forth. 30th. In a typewriter, a paper carriage and its feed mechanism, stops carried by said carriage, an auxiliary frame, pins or rods mounted therein, sleeves mounted on said pins or rods, a series of plungers mounted to slide on said sleeves, said plungers arranged a letter space distance apart and adapted to be projected into the path of said stops, means for independently projecting said plungers, and means for releasing the carriage from its feed mechanism, as and for the purpose set forth.

**No. 69,755. Telephone Switch.** (*Echange de telephone.*)

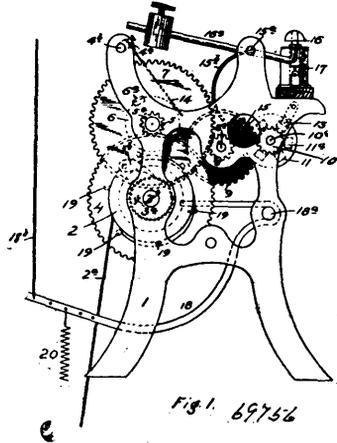


Parnell Rabbidge, Sydney, New South Wales, Australia, 26th December, 1900; 6 years. (Filed 7th February, 1900.)

*Claim.*—1st. In combination in a telephone system, a line selector plug, a connecting piece B in connection with said plug, a connecting piece B<sup>1</sup> connected to earth, a connecting piece B<sup>2</sup> connected to earth, a connecting piece B<sup>3</sup>, a home line wire to which said piece B<sup>3</sup> is connected, a block carrying contacts C C<sup>1</sup>, a battery and the telephonic instrument and bell to which the said contacts C, C<sup>1</sup> are respectively connected, the connecting pieces B, B<sup>2</sup> and the connecting pieces B<sup>1</sup> B<sup>3</sup> being arranged to be engaged by the contacts C, C<sup>1</sup> respectively as the block is moved, substantially as described. 2nd. In combination in a telephone system, a line selector plug, a connecting piece B in connection with said plug, a connecting piece B<sup>1</sup> connected to earth, a connecting piece B<sup>2</sup> connected to earth, a connecting piece B<sup>3</sup>, a home line wire to which said piece B<sup>3</sup> is connected, a block carrying contacts C C<sup>1</sup>, a battery and the telephonic instrument and bell to which the said contacts C, C<sup>1</sup> are respectively connected, the connecting pieces B, B<sup>2</sup> and the connecting pieces B<sup>1</sup> B<sup>3</sup> being arranged to be engaged by the contacts C, C<sup>1</sup> respectively as the block is moved, said block being arranged to be lowered to normal position with its contacts engaging the connecting pieces B<sup>2</sup>, B<sup>3</sup> when the telephonic instrument is hung up, substantially as described. 3rd. In combination in a telephone system, the connecting pieces B, B<sup>1</sup> arranged side by side, the connecting pieces B<sup>2</sup>, B<sup>3</sup> arranged side by side, said pieces B and B<sup>3</sup> having portions side by side, a sliding block having contacts C C<sup>1</sup> to engage either the pieces B, B<sup>1</sup>, B B<sup>2</sup>, or B<sup>2</sup> B<sup>3</sup>, a selector plug connected to the piece B, the piece B<sup>1</sup> being connected to earth, the piece B<sup>2</sup> being connected to earth, the home line wire connected to the piece B<sup>3</sup>, the battery and the telephonic instrument and bell connected respectively to the contacts C, C<sup>1</sup>, substantially as described.

**No. 69,756. Electric Bell-striking Apparatus.**

(*Cloche électrique.*)

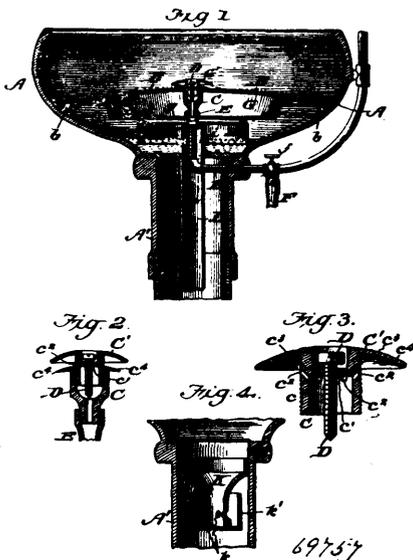


Lorenzo Tillyer and Edgar Derry Tillyer, both of Dover, New Jersey, U.S.A., 26th December, 1900; 6 years. (Filed 25th June, 1900.)

*Claim 1st.*—In an alarm system, a telephone circuit, a magneto bell, a magnet coil which operates a circuit closer, both included in said circuit, a second circuit, said circuit closer, a key, the magnet coils on a bell striking mechanism for operating a brake, all three included in said second circuit, said bell striking mechanism, said brake, a third circuit, including said battery and said magnet coils on the bell striking mechanism, and an automatic circuit maker and breaker which is set in operation by releasing said brake, included in said third circuit, substantially as described. 2nd. In an alarm system, a telephone circuit, a magnet coil which operates a circuit closer, a switch, both included in said circuit, a central telephone provided with a ground and connected to said switch, a second circuit, said circuit closer, a battery, a key, the magnet coils on a bell striking mechanism for operating a brake, all four included in said second circuit, said bell striking mechanism, said brake, a third circuit, including said battery and said magnet coils on the bell which is set in operation by releasing said brake, included in said third circuit, substantially as described. 3rd. In a fire alarm system, a telephone circuit, a magneto bell, a magnet coil which operates a circuit closer and drop mechanism, both included in said circuit, a second circuit, including the flap on the said drop mechanism when said flap is released, a battery, an electric bell, both included in said second circuit, a third circuit, said circuit closer, a second battery, a key, the magnet coils on a bell striking mechanism for operating a brake, all four included in said third circuit, said bell striking mechanism, said brake, a fourth circuit, including said second battery and said magnet coils, and an automatic circuit maker and breaker which is set in operation by releasing said brake, included in said fourth circuit, substantially as described. 4th. In an alarm system, a telephone circuit, a magneto bell, a magnet coil which operates a circuit closer, both included in said circuit, a second circuit, said circuit closer, a battery, a key, the magnet coils on a bell striking mechanism for operating a brake, all four included in said second circuit, said bell striking mechanism, said brake, a third circuit, including said battery and said magnet coils on the bell striking mechanism, an automatic circuit maker and breaker which is set in operation by releasing said brake, included in said third circuit, a fourth circuit, including said key, a second battery, and a buzz, both included in said fourth circuit, substantially as described. 5th. In an alarm system, a telephone circuit, a magneto bell, a magnet coil which operates a circuit closer, both included in said telephone circuit, a second circuit, said circuit closer, a battery, a key, the magnet coils on a bell striking mechanism for operating a brake, all four included in said second circuit, said bell striking mechanism, said brake, a third circuit including said battery and said magnet coils on the bell striker, an automatic circuit maker and breaker which is set in operation by releasing said brake, included in said third circuit, a fourth circuit, including said battery, said magnet coils on the bell striker, and said key, substantially as described. 6th. In an alarm system, a telephone circuit, a magneto bell, a magnet coil which operates a circuit closer, both included in said telephone circuit, a second circuit, said circuit closer, the magnet coils on a bell striking mechanism for operating a brake, a battery, two keys, all five included in said second circuit, said bell striking mechanism, said brake, a third circuit, including said battery and said magnet coils on the bell striker, an automatic circuit maker and breaker which is set in operation by releasing said brake, included in said third circuit, a fourth circuit, including said battery, said magnet coils on the bell striker, and one of said keys in said second circuit, a fifth circuit including the other key in said second circuit, said circuit closer, and said battery, and a buzz, included in said fifth circuit, substantially as described. 7th. In a

fire alarm system, a telephone circuit, magneto bell, a lightning arrester near said telephone, a switch, a second lightning arrester, near a circuit breaker, a magnet coil which operates said circuit breaker, all five included in said telephone circuit, a second circuit, a battery, said circuit closer, a key, the magnet coils on a bell striking mechanism for operating a brake, all four included in said second circuit, said bell striking mechanism, said brake, a third circuit including said battery and said magnet coils on the bell striker, an automatic circuit maker and breaker which is set in operation by releasing said brake included in said third circuit, substantially as described.

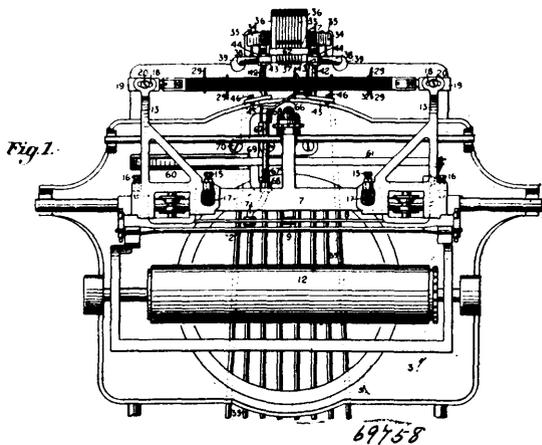
**No. 69,757. Fountain Spittoon. (Crachoir.)**



John Carlile Blair and Robert Wedekind, both of Louisville, Kentucky, U.S.A., 26th December, 1900; 6 years. (Filed 26th November, 1900.)

*Claim.*—1st. The combination with a spittoon bowl, and a water pipe arranged centrally therein, of the disc having a central opening and pendent peripheral prongs resting on the sides of the bowl, and a water conductor passing through said opening and screwing into the pipe, and provided with a flange bearing upon the disc, substantially as shown and described. 2nd. The combination with the bowl, a disc within the same, and a water conductor passing through the centre of said disc, of the spreader comprising a flanged top, a body provided with lateral orifices opening below the flange and above the disc, and an adjustable connection with the said conductor, substantially as shown and described, to operate as specified. 3rd. The combination with the bowl and a disc within it, a water conductor passing through the disc and having lateral orifices opening below the flange and above the disc, of a central screw valve arranged in the spreader and its head being accessible at the top of said spreader, as shown and described. 4th. The combination with the bowl, the disc arranged within it, and the water conductor passing through the disc, of the spreader having a top flange, a cylindrical body screwing into said conductor, and provided with a transverse partition having orifices, and the screw valve passing through said partition, its head extending over the said orifices and being accessible at the top of the spreader, as shown and described. 5th. The combination with a spittoon bowl and a disc arranged therein as specified, a spreader arranged at the centre of and above said disc and having a transverse partition in its tubular body, which partition is provided with openings, of a screw valve passing through said partition and seating below said partition, whereby it is adapted for regulating the discharge of water through the aforesaid openings and upon the upper side of the spreader, substantially as described. 6th. The improved spreader for use in connection with the spittoon disc as specified, the same consisting of a concavo-convex portion, and a tubular body having a transverse partition and lateral openings for the discharge of water, substantially as shown and described. 7th. The combination with the spittoon bowl having a waste pipe attached, and a disc arranged in said bowl, of a deodorant holder consisting of a pan arranged under the disc, substantially as shown and described. 8th. The combination with the spittoon bowl having a waste pipe attached, of a water trap arranged in said bowl and comprising an inverted cup and a discharge pipe substantially as shown and described.

**No. 69,758. Typewriting Machine. (Clavigraphic.)**



Wyckoff, Seamans & Benedict, Iilon, New York, assignee of George Boardman Webb, Westfield, New Jersey, all in the U.S.A., 26th December, 1900; 6 years. (Filed 16th February, 1900.)

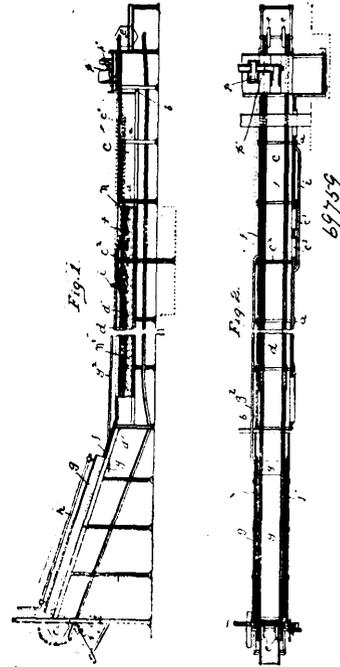
*Claim.*—1st. In a typewriting and tabulating mechanism, the combination of a plurality of independently usable sets of column stops and a set of denomination stops adapted to co-operate with any of said sets of column stops. 2nd. In a typewriting machine, the combination with a carriage, of a tabulating mechanism therefor, including a plurality of sets of column stops, a denomination stop mechanism, and a single set of denomination keys adapted to actuate all of the stops in said denomination stop mechanism. 3rd. In a typewriting and tabulating mechanism, the combination with a set of denomination stops, of a plurality of sets of pre-arranged column stops, any of which sets may be moved into co-operative relation with the denomination stops. 4th. In a typewriting and tabulating mechanism, the combination of a set of denomination stops, a plurality of sets of column stops, and a means whereby one set of column stops may be moved out of operative relation to the denomination stops, and the other set simultaneously moved into operative relation to said denomination stops. 5th. A series of column stop tappets arranged in a row upon a common support and adapted to be set temporarily in position to co-operate with the denomination stops of a typewriting and tabulating mechanism, and also adapted to be withdrawn at will from said co-operative position, without the necessity of disturbing the arrangement of said tappets relatively to one another in said row, whereby said set of tappets may be temporarily replaced by a different set, and afterwards returned again bodily and in their original arrangement to co-operative relation with said denomination stops. 6th. In a typewriting and tabulating mechanism, a row of independently adjustable column stops arranged upon the carriage and simultaneously movable into and out of working position. 7th. In a typewriting and tabulating mechanism, the combination with a series of denomination stops, of a pair of supports, as 13, provided with a means for removably holding a row of column stops in position to co-operate with said denomination stops, whereby said row of column stops may be removed from such co-operative position without the necessity of disturbing their relative arrangement, and a different row of tappets temporarily substituted therefor, and whereby said first mentioned row of column stops may be afterwards restored to co-operative relation with said denomination stops in their original arrangement. 8th. In a typewriting and tabulating mechanism, the combination of a carriage, and a plurality of rows of column stops movable as a whole when any row is moved out of or into working position. 9th. In a typewriting and tabulating mechanism, the combination of a row of column stops, and a rotatable carrier therefor, whereby said stops may be turned simultaneously into or out of working position. 10th. In a typewriting and tabulating mechanism, the combination with a carriage, of a revoluble rod and a plurality of longitudinal rows of column stops arranged on said rod and moved simultaneously thereby so as to move one row out of operative position and another row into operative position. 11th. In a typewriting and tabulating mechanism, the combination with a carriage, of a bar, column stops on and arranged in different radial positions relatively to said bar, a stop movable into and out of position for co-action with stops at one side of said bar, and means for varying the position of the bar and its column stops relatively to said stop to bring different radial column stops into position for co-action with said stop. 12th. In a typewriting and tabulating mechanism, the combination of a carriage, a bar or rod carried thereby, column stops adjustable along and arranged in different radial positions relatively to said bar, a stop movable into and out of position for co-action with column stops at one side of said bar, and means for varying the

position of the bar and its column stops relatively to said stop to bring different radial column stops into position for co-action with said stops. 13th. In a typewriting and tabulating mechanism, the combination with a carriage, of a bar or rod rotatable to present different longitudinal lines or faces in a given direction, column stops on and arranged in different radial positions relatively to said bar, and a stop movable into and out of position for co-action with stops projecting from said bar in said given direction. 14th. In a typewriting and tabulating mechanism, the combination of a carriage, a bar carried thereby and rotatable thereon to present different longitudinal lines or faces in a given direction, column stops adjustable along and arranged in different radial positions relatively to said bar, and a stop movable into and out of position for co-action with column stops projecting in said given direction from said bar. 15th. In a typewriting and tabulating mechanism, the combination of a carriage, a bar, sets of column stops on and arranged in different radial positions relatively to the said bar, a series of blades or stops severally movable into and out of position for co-action with the set of column stops at one side of said bar, whereby the said carriage may be arrested at different distances from points determined by said column stops, and means for varying the position of the bar and its radial stops relatively to the said blades or stops so as to bring a different set of radial stops into position for co-action with the said blades or stops. 16th. In a typewriting and tabulating mechanism, the combination of a carriage, a bar carried thereby, a plurality of longitudinal rows of column stops adjustable along said bar, a series of denomination stops movable into and out of position for co-action with a row of said column stops, and means for varying the position of the bar and its rows of column stops relatively to said denomination stops so as to bring different rows of denomination stops into working position. 17th. In a typewriting and tabulating mechanism, the combination of a revoluble rod having column stops projecting therefrom in a number of directions, a series of denomination stops arranged to co-act with stops at one side of said rod, and a carriage arranged to be arrested by said stops. 18th. In a typewriting and tabulating mechanism, the combination with a set of denomination stops, of a series of column stops arranged upon a bar, supports for the bar, and spring mechanism for temporarily holding the bar in position to enable the co-operation of said column stops with said denomination stops. 19th. In a typewriting and tabulating mechanism, the combination of a rod, a column stop thereon, and a spring device for holding said rod in either of two positions, in one of which said stop is in working position and in the other of which it is out of working position. 20th. In a typewriting and tabulating mechanism, the combination of a revoluble rod, column stops projecting in different directions from said rod, and a spring device for holding said rod in position when any of said stops is in its working position. 21st. In a typewriting and tabulating mechanism, the combination of a rod, a fixed block at and opposite each end of said rod, journals projecting from said blocks into bores in the ends of said rod, flat faces on said journals, spring pins adapted to bear on said faces to retain said rod yieldingly against rotation, and a column stop on said rod and adapted to be rotated thereby into and out of working position. 22nd. In a typewriting and tabulating mechanism, the combination of a pair of endwise adjustable journal blocks, a rod journalled at its ends upon said blocks, and a plurality of column stops adjustable along said rod. 23rd. In a typewriting and tabulating mechanism, a bar provided with means for carrying a plurality of rows of independently adjustable tappets, said bar being so mounted that it may be moved crosswise of its length so as to simultaneously move all of the tappets thereon to a different position. 24th. In a typewriting and tabulating mechanism, the combination of a revoluble rod and a forked plate having carriage arresting teeth projecting in different directions, the forked portion of said plate being adapted to engage detachably with two recesses in said rod. 25th. In a typewriting and tabulating mechanism, the combination of a revoluble rod and a forked plate having carriage arresting teeth projecting in different directions, and at least one tooth being offset a letter space distance, the forked portion of said plate being adapted to engage detachably with two recesses in said rod. 26th. In a typewriting and tabulating mechanism, the combination of an independently movable polygonal rod provided with teeth on a number of sides thereof, and forked carriage arresting tappets straddling said rod and engaging with teeth on two sides thereof, said tappets projecting in diverging directions from said rod. 27th. In a typewriting and tabulating mechanism, the combination of a polygonal rod provided with teeth on at least two sides thereof, and a forked column stop straddling said rod and engaging with teeth on two sides thereof and provided at the free end of one arm of the fork with inwardly projecting tooth or lug arranged to overlap an edge of said bar when in place thereon, to hold the stops against accidental displacement. 28th. In a typewriting and tabulating mechanism, the combination of a polygonal rod provided with teeth on a number of sides thereof, and a forked column stop straddling said rod and engaging with teeth on two sides of said rod, and the working face or portion of said stop being off-set to bring it into a plane a letter space distance away from the forked portion. 29th. An off-set tappet for the tabulating mechanism of a typewriting machine, the tooth portion of the tappet being out of line with the supporting portion thereof. 30th. A multi-faced tappet for the tabulating mechanism of a typewriting machine. 31st. A tappet for the tabulating mechanism, of a typewriting machine, comprising

a plurality of carriage arresting teeth integral therewith, and being so constructed that when one of said teeth is in working position the other teeth are in operative position. 32nd. A tappet for the tabulating mechanism of a typewriting machine of a typewriting machine, comprising a plurality of carriage arresting teeth and one of which at least is offset from the plane of the other teeth

### No. 69,759. Metal Casting Process.

(Procédé pour la fonte des métaux.)



Heyl & Patterson, assignee of William Joshua Patterson, all of Pittsburg, Pennsylvania, U.S.A., 26th December, 1900; 6 years. (Filed 25th November, 1899.)

*Claim.*—1st. The herein described method of casting metals, consisting in pouring the metal into an endless connected series of travelling moulds and carrying the moulds containing the metal through a body of water in a state of ebullition. 2nd. Therein described method of casting metals, consisting in pouring the metal into an endless connected series of travelling moulds, first cooling the metal without contact with water and then submerging the moulds containing the metal and carrying them through a body of water in a state of ebullition. 3rd. The herein described method of casting metals consisting in pouring the metal into an endless connected series of travelling moulds, and first cooling the metal by partially submerging the moulds in water, and then submerging the moulds entirely in a body of water in a state of ebullition. 4th. The herein described method of casting metal, consisting in pouring the metal into an endless connected series of travelling moulds, first carrying the moulds containing the metal partially submerged through a body of water too cool to boil and then carrying the moulds entirely submerged through a body of water in condition of boiling. 5th. The herein described method of casting metal, consisting in pouring the metal into an endless connected series of travelling moulds, submerging the moulds containing the metal in a body of water and causing the water to boil by the heat of the metal. 6th. The herein described method of casting metal, consisting in pouring the metal into an endless connected series of travelling moulds, and first partially submerging the moulds containing the metal in water and then completely submerging the moulds containing the metal in a body of water in a state of ebullition, and during such process heating the water by the partial submerging of the moulds so as to bring it to the necessary temperature for boiling when the moulds are entirely submerged therein. 7th. The herein described method of casting metal, consisting in pouring the metal into an endless connected series of travelling moulds, cooling the metal by first partially submerging the moulds containing the same in water, entirely submerging the moulds in a body of water, in a state of ebullition, and then spraying the metal when still in the moulds, and heating the water by first spraying the metal, then passing it into contact with the partially submerged moulds and thereby bringing it to the heat necessary for boiling when the moulds are entirely submerged therein.

**No. 69,760. Sulphide Ore Treatment.** (*Traitement de minerais de sulfure.*)

James Swinburne and Edgar Arthur Ashcroft, both of Grosvenor Mansions, 82 Victoria Street, Westminster, London, England, 27th December, 1900; 6 years. (Filed 13th December, 1899.)

*Claim.*—1st. Treating sulphide ores with chloride of sulphur to form chloride of the metal or metals, substantially as described. 2nd. Treating metallic sulphides in a bath of fused salt with chloride sulphur, substantially as described. 3rd. The cyclic process of treating sulphide ore with chloride of sulphur to produce chloride and sulphur, electrolysing the chloride to yield metal and chlorine, and treating some of the sulphur with the chlorine to regenerate the chloride of sulphur. 4th. Producing sulphur by acting on sulphid ores with chloride of sulphur, substantially as set forth. 5th. Converting chlorine produced by electrolysis of a metallic chloride into chloride of sulphur, and using such chloride of sulphur whether wholly or partially decomposed by heat or not for treating sulphide ore. 6th. As a step in the herein described process, separating iron or manganese by precipitation as oxide, substantially as described.

**No. 69,761. Sulphide Ore Treatment.**

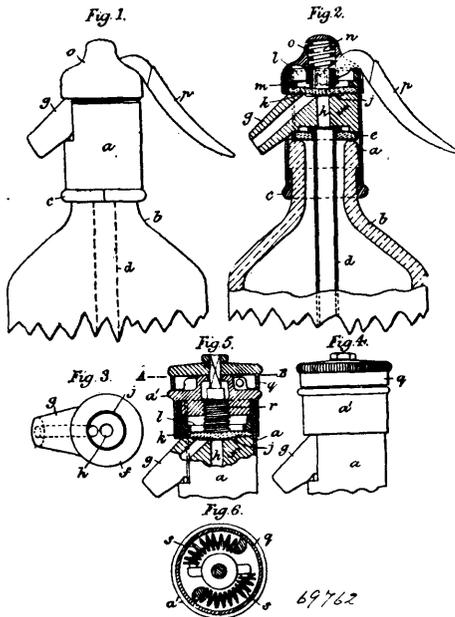
(*Traitement de minerais de sulfure.*)

James Swinburne and Edgar Arthur Ashcroft, both of Grosvenor Mansions, 82 Victoria Street, Westminster, London, England, 27th December, 1900; 6 years. (Filed 15th December, 1899.)

*Claim.*—1st. Treating sulphide ores, suspended in or mixed with a fused chloride or chlorides with chlorine, substantially as described. 2nd. Treating metallic sulphides with a fused chloride or chlorides and passing chlorine through the mixture, substantially as described. 3rd. Obtaining sulphur from sulphide ores by passing chlorine through a mixture of the ore and a fused salt, substantially as described. 4th. Treating ore mixture with chloride in a converter heated essentially by the chemical action of the chlorine. 5th. The cyclic process of treating ores suspended in fused salt with chlorine and electrolytically decomposing the resulting chlorides into metal and chlorine. 6th. As a step in the herein described process, separating from the fused chlorine treated charge, iron and manganese, by precipitation as oxide, substantially as described.

**No. 69,762. Syphon for Aerated Liquids.**

(*Siphon pour liquides gazeux.*)

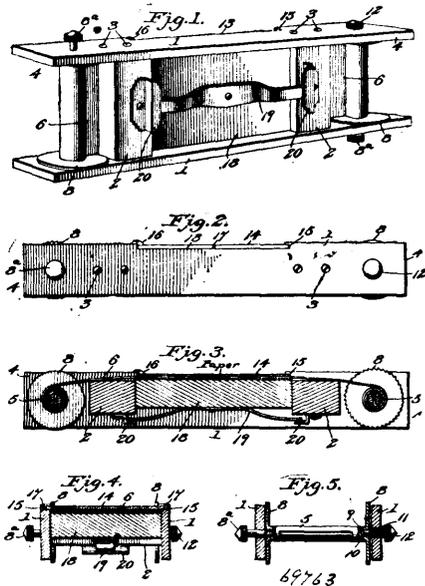


Thomas Howell Williams Idris, and Richard Hooson Griffith, both of Camden Town, Middlesex, England, 27th December, 1900; 6 years. (Filed 8th March, 1900.)

*Claim.*—1st. The combination of a syphon body, a block of earthenware or like material having perforations in it leading from its upper face to the inside of the syphon and to the spout, an annular washer between the block and the body, a disc washer on the upper face of the block, means for pressing the edge of the disc washer and with it the block and annular washer towards the body, and means for pressing the middle of the disc washer against the upper face of the block. 2nd. The combination of a syphon body, a block of earthenware or like material having perforations in it leading from the upper face to the inside of the syphon and to the

spout, an annular washer between the block and the body, a disc washer on the upper face of the block, a ring above the disc washer, a tube surrounding the block and connected to the body, a cap screwing onto the tube and pressing on the ring, and means for pressing the middle of the disc washer against the upper face of the block. 3rd. The combination of a syphon body, a block of earthenware or like material having perforations in it leading from its upper face to the inside of the syphon and to the spout, an annular washer between the block and the body, a disc washer on the upper face of the block, a ring above the disc washer, means for forcing the ring towards the body, and a lever working on the ring as a fulcrum and having one end acting on the middle of the disc washer. 4th. The combination of a syphon body, a block of earthenware or like material having perforations in it leading from the upper face to the inside of the syphon and to the spout, an annular washer between the block and the body, a disc washer on the upper face of the block, a ring above the disc washer, a tube surrounding the block and connected to the body, a cap screwing onto the tube and pressing on the ring, and a lever working on the ring as a fulcrum and having one end acting on the middle of the disc washer. 5th. The combination of a syphon body, a block of earthenware or like material having perforations in it leading from its upper face to the inside of the syphon and the spout, an annular washer between the block and the body, a disc washer on the upper face of the block, a ring above the disc washer, a tube surrounding the block and connected to the body, a cap screwing onto the tube and pressing on the ring, a block in contact with the middle of the disc washer, a spring inside the cap pressing the block against the washer, and a lever working on the ring as a fulcrum and having one end pivotted to the block.

**No. 69,763. Printing Frame.** (*Presse à imprimer.*)



Warren Hull, Gasport, New York, U.S.A., 29th December, 1900; 6 years. (Filed 7th April, 1900.)

*Claim.*—A printing frame for strips of film negatives comprising the cross bars, the side bars united to the cross bars, forming there-with the exposure opening, and having the ends extended beyond the cross bars, shouldered screws having threaded engagement with the extensions of one side bar and each provided at its inner extremity with a smooth journal portion, other screws journaled in smooth bearings in the other side bar extensions and in aligned relation to the first named screws, a glass secured in the side bars at one side of the path of the film strip, and a back, substantially as described.

**No. 69,764. Inhaler.** (*Inhalateur.*)

Junius Garnett Smith and Elmer Elsworth Gardner, both of Manhattan, New York, U.S.A., 27th December, 1900; 6 years. (Filed 10th April, 1900.)

*Claim.*—1st. An inhaler, comprising a medicine receptacle, having an air-inlet opening, an inwardly opening valve therefore, air-exit openings at opposite sides of the receptacle and between the exit-openings and the valve a space for the medicine, tube sections 8 provided with outwardly opening valves, tubes connecting said sections with the exit-openings of said receptacle and supporting the latter at opposite sides of the same, and means for applying said sections to the nostrils, substantially as set forth. 2nd. An inhaler, comprising a medicine receptacle provided with a removable

cover having an air-inlet opening, a valve secured within the cover for opening and closing said opening, two flexible tubes connecting

ranging diagonally to the furnace, and means for reversing the draft within the furnace and causing the discharge of the gases through

Fig. 1.



Fig. 2.

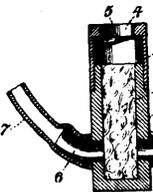


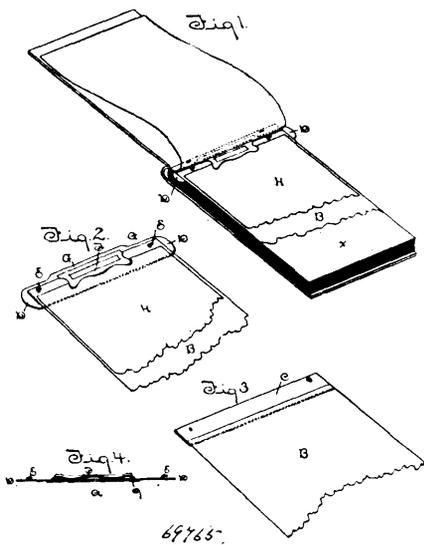
Fig. 3.



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at one end with said medicine receptacle and at their opposite end with two non-flexible tubular sections, said sections being provided with lateral air discharge openings, valves for opening and closing the latter, and nipples connected with said tubular sections, substantially as and for the purpose set forth.

**No. 69,765. Paper and Carbon Holder.**  
(*Porte papier et carbone.*)



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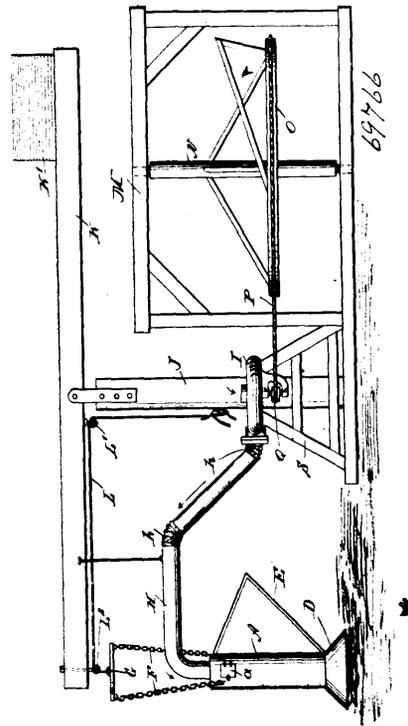
Walter B. Pershing, South Bend, Indiana, U. S. A., 27th December, 1900; 6 years. (Filed 12th April, 1900.)

*Claim.*—A plate having a fastening device at or near each end, and a spring clasp at its center, combined with a strip of paste-board having a perforation in each end to catch over the fastening device upon the plate, and a sheet of carbon paper which is attached to the strip and which strip and carbon paper are jointly held in position by means of the hooks at the ends of the plate, and a spring clasp at its center, substantially as set forth.

**No. 69,766. Thawing Device.** (*Appareil à dégeler.*)

Evelyn Marcelon Andrews, New Britain, Connecticut, U. S. A., assignee of Watson Tryon, Hartford, Connecticut, U. S. A., 27th December, 1900; 6 years. (Filed 23rd April, 1898.)

*Claim.*—1st. A device for use in thawing frozen ground, comprising a furnace having a grate in the lower end thereof, and an opening beneath the grate, bars secured to the outside of the furnace and adapted to support it from the ground in an angular position, the support being carried by the furnace and having its lower side



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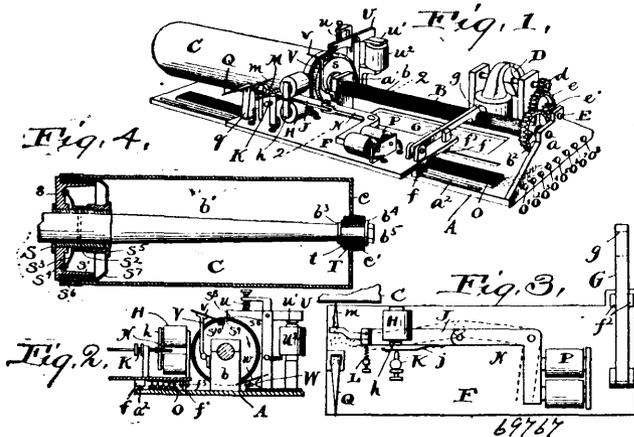
the grate and the lower end of the furnace, substantially as described. 2nd. A device for use in thawing frozen ground, comprising a furnace having a grate in the lower end thereof, means for reversing the draft within the furnace and causing the discharge of the gases through the grate, and the lower end of the furnace, an inverted cone attached beneath the grate and concentrating the discharge there through, and a conical shield surrounding said cone and tapering oppositely thereto, substantially as described. 3rd. A device for use in sinking holes in frozen ground, comprising a casing constituting a furnace and having a draft opening in its lower end, and a gas exit opening in its upper end, a grate in the lower end of the casing, a cone extended downward from the lower end of the casing and enclosing the draft opening, a conical shield surrounding said cone and tapering oppositely thereto, an adjustable suspension device for the casing, and a blower connected with the upper end of the casing whereby the normal draft may be reversed and the gases discharged through the grate at the lower end, substantially as described.

**No. 69,767. Fac-Simile Telegraph.** (*Telegraph.*)

William P. Dun Lany, co-inventor with, and assignee of Thomas Mills, both of Cleveland, Ohio, U.S.A., 27th December, 1900; 6 years. (Filed 21st August, 1899.)

*Claim.*—1st. The combination of a suitable platen, a suitably supported stylus, mechanism adapted to give the stylus a continuous vibration, an electro-magnet, means actuated thereby for changing the position of the path in which the stylus vibrates, and mechanism for giving the stylus and platen a movement past each other in two directions at an angle to each other, substantially as described. 2nd. In combination, a revolving cylinder, a continuously vibrating stylus, said stylus adapted under certain conditions to impinge against said cylinder, there being provision for relative movement between said stylus and cylinder in a longitudinal direction, and mechanism for preventing said stylus from impinging against said cylinder, substantially as described. 3rd. In combination, an electro-magnet, an armature lever in series therewith, a suitable stop limiting the movement of the armature lever away from the magnet and connected in series through the source of electric energy to the magnet, a spring tending to move the armature lever away from the magnet, said parts co-operating to cause a continuous vibration of the armature lever, said armature lever adapted in its vibrations to cause an impression on a suitably held receptive sheet and also adapted to vibrate without causing such impression, and mechanism for determining whether such vibration causes such impression, substantially as described. 4th. In combination, a lever, means for vibrating the same, said lever being adapted in its vibration to cause an impression on a suitably held receptive sheet, said lever being pivoted on a movable pivot, an electro-magnet, connecting means between the magnet and such pivot whereby the magnet is adapted

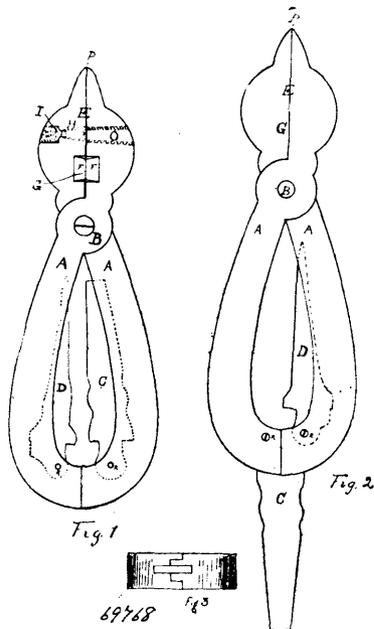
to change the position of the pivot and thereby determine whether the lever in its vibration makes an impression on the receptive sheet,



substantially as described. 5th. In combination, a revolving cylinder, a continuously vibrating stylus swinging in an arc about a suitable centre and adapted to impinge against receptive material carried by said cylinder, there being provision for relative longitudinal movement between the cylinder and stylus, an electro magnet operating to change the center about which said stylus swings in its vibration whereby said magnet determines whether such vibration will impinge upon the receptive material, substantially as described. 6th. In combination, a cylinder adapted to be revolved, a platform capable of longitudinal movement along the side of the cylinder, a continuously vibrating stylus, carried by the platform and capable in its vibration of striking material upon the surface of said cylinder and capable also of vibrating without striking such surface, an electro-magnet carried by the platform, and operating to govern the vibration of said stylus, and means for conveying current from a stationary point to said magnet, substantially as described. 7th. In combination, a cylinder adapted to carry a receptive surface and adapted to be continuously rotated, a platform adapted to travel along the side of said cylinder, a vibrating lever carrying a stylus adapted to impinge against the receptive material carried by the cylinder, an electro-magnet carried by the platform, said magnet operating to shift the pivot of said vibrating lever, and thereby change the center of its vibration so as to determine whether it impinges against the receptive material, and means for conveying current from a stationary point to said magnet, substantially as described. 8th. In combination, a cylinder adapted to be continuously revolved, a platform adapted to travel along the side of the same, there being mounted on said platform, (1st) a lever carrying a stylus, (2nd) an electro magnet connected in a local circuit and adapted to vibrate said lever, (3rd) a magnet connected in the main circuit, said latter magnet adapted to cause change of position of the pivot of the vibrating lever whereby the stylus in its vibration may or may not impinge against the receptive surface, substantially as described. 9th. In combination, a cylinder adapted to be continuously revolved, a platform adapted to travel along the side of the same, a vibrating lever carried by said platform, electrically actuated means for governing the vibration of said lever, a stylus hinged to said lever, a second stylus hinged on a pivot stationary with respect to said platform, the location of said styluses being such that either may contact with a surface carried by said cylinder at substantially the same point, either being adapted to be swung out of the way to make room for the other, substantially as described. 10th. In combination, a magnet H, a lever J, carrying an armature h, a suitable stop as a set screw K, limiting the movement of lever away from the magnet, a bell crank lever N having an arm pivoted to the lever J and the other arm acting as or carrying an armature, an electro-magnet P in suitable position to attract said last mentioned armature, a point carried by said lever J and adapted to cause a mark on a suitably held receptive surface by its vibration when the magnet P has drawn its armature toward itself, otherwise said lever J and point to vibrate idly, and means for causing relative movement between said point and said receptive surface, substantially as described. 11th. In combination, a continuously revolving shaft, a cylinder, a metallic plate and an insulated ring carried by said cylinder, a brush adapted to bear on the periphery of the plate, and a detent adapted to bear on the periphery of said ring, said ring being interrupted by a shoulder in electrical connection with said plate whereby when said detent is in contact with said shoulder it is adapted to be in electrical connection with said plate, an insulating block in the periphery of said plate so placed that when said shoulder is in contact with said detent said brush is in contact with said insulating block, means causing said detent to normally press against said insulating ring and engage the shoulder thereon when it comes into opposition with the detent, an electro-magnet adapted when energized to withdraw said detent

from said shoulder, a divided circuit leading by one path to said magnet and from thence to the detent, and by the other path to said brush, and a conductor leading from said plate whereby the circuit may be completed either through the brush or through the detent, but not through both at once, substantially as described. 12th. In combination, a frame, the shaft suitably journaled therein, said shaft having an overhanging portion, a plate surrounding the shaft and adapted to rotate around the same, spring arms compelled to rotate with the shaft and bearing with an adjustable pressure on the plate whereby the latter is normally revolved by the shaft but may be held against revolution therewith, a cylinder connected at one end with said plate and revolving with it, said cylinder being unobstructed at its peripheral line, at the other end, whereby a message tube may be slipped over it, substantially as described. 13th. In combination, the shaft B having the overhanging portion b the sleeve s secured to the shaft, the plate s surrounding the sleeve, the insulating ring s<sup>0</sup> carried by said plate, the sleeve s<sup>2</sup> surrounding the sleeve s and having spring arms s<sup>3</sup> bearing against the plate s and nut s<sup>5</sup> adapted to adjust the pressure of said spring arms, and the cylinder C carried at one end by the said plate s outside of said insulating ring and at the other end by the shaft b<sup>1</sup> and another insulating ring, substantially as described. 14th. In combination, a shaft b<sup>1</sup>, a sleeve S surrounding the same, a plate s journaled on said sleeve, insulation carried by said plate, a projecting sheath s<sup>7</sup> surrounding said insulation, an insulating ring T surrounding the shaft at another point, and the cylinder C surrounding the sheath s<sup>7</sup> at one end, and having at its other end a head e having a central opening around which is a flange e<sup>1</sup> which bears upon the said insulating ring T, substantially as described. 15th. The combination of a telegraph line, a Morse set of instruments including a key, relay and a local circuit containing a local battery and governed by said relay, a fac-simile set of instruments including a platen, a receiver, a relay for governing the same, a motor for causing relative movement between the receiver and the platen, and suitable switch mechanism adapted to disconnect the Morse system and connect its local battery with an electrically operated part of the fac-simile system, substantially as described. 16th. The combination of a telegraph line, a Morse set of instruments consisting of a key, relay and local line operated thereby, and a fac-simile set of instruments consisting of a message cylinder, a receiver, a relay for governing the same, a transmitting stylus, a reversing coil, a synchronizer, a motor for operating the message cylinder, two local batteries, one for operating the motor and one for operating the receiver, and suitable switching mechanism adapted to disconnect the fac-simile system and connect in the Morse system with one of the aforementioned batteries in the Morse local circuit, substantially as described.

No. 67,768. Combination Tool. (Outil à combinaison.)

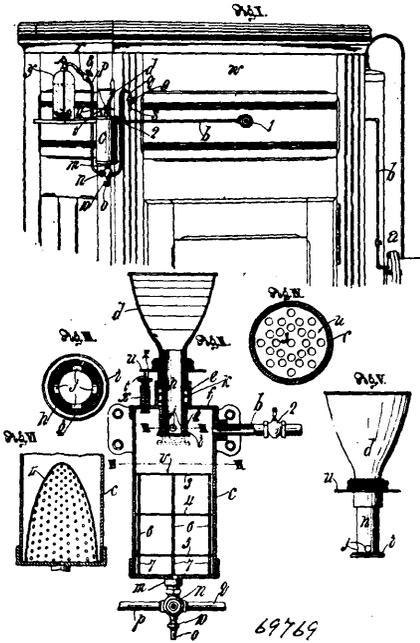


Edward Wilson Casley, Eganville, and Thomas Logan, Renfrew, both of the Province of Ontario, Canada, 27th December, 1900; 6 years. (Filed 20th November, 1899.)

Claim.—As an article of manufacture the combination of the co-related grooved bars or handles A A with the screw driver C, the

awl D, the head E containing the cutters G, the punch and punch seat H I with the opening O and pliers P, all substantially as and for the purpose hereinbefore set forth.

**No. 69,769. Soda Water Fountain Device.**  
(Fontaine pour eau carbonatée.)

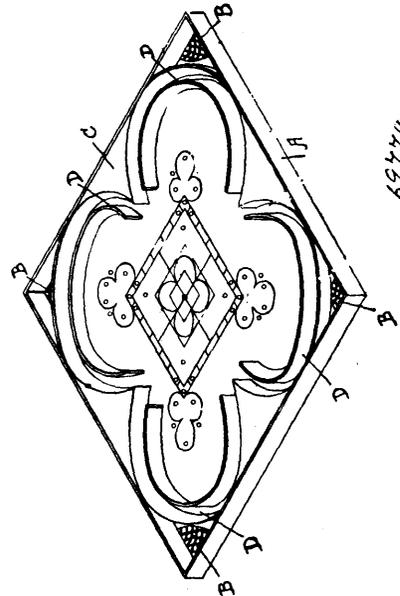


69769

Max Meyberg, Los Angeles, California, U.S.A., 27th December, 1900; 6 years. (Filed 18th April, 1900.)

*Claim.*—1st. In a soda water apparatus, the combination of a valved pipe, means for supplying aerated liquid to the type, a syrup receptacle into which said pipe opens, a funnel with valved outlet opening into said syrup receptacle, an automatically operating air vent, a valved discharge pipe with nozzle opening from the lower end of said receptacle, and a valved waste outlet leading from the lower end of said receptacle. 2nd. In a soda water apparatus, the combination with a pipe, of means for supplying aerated water to the pipe, a syrup receptacle to receive aerated water from said pipe, a funnel having a neck playing through an opening in said receptacle and provided with an outlet to discharge into the receptacle and also provided with a valve to close said opening and outlet, means for holding the funnel with said valve closed, and a valved pipe leading from the receptacle. 3rd. In a soda water apparatus, the combination with a pipe, of means for supplying aerated water to the pipe, a syrup receptacle to receive aerated water from said pipe, a funnel having a neck playing through an opening in said receptacle and provided with an outlet to discharge into the receptacle and also provided with a valve to close said opening and outlet, means for holding the funnel with said valve closed, a valved pipe leading from the receptacle, a vent being provided in the top of the receptacle, and a valve for controlling said vent and arranged to be operated when the funnel is depressed. 4th. In a syrup charger for soda water apparatus, the combination with the syrup receptacle, of a funnel having a neck playing through an opening in said receptacle and provided with an outlet to discharge into the receptacle and with a valve to close said opening and outlet and also provided with a lateral projection, means for holding the funnel with said valve closed, a vent being provided leading from the top of the receptacle, a valve for said vent, and means for normally holding the valve closed with the valve stem in the path of the projecting part of the funnel.

**No. 69,770. Game Board. (Jeu.)**

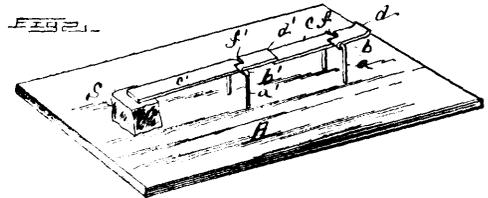
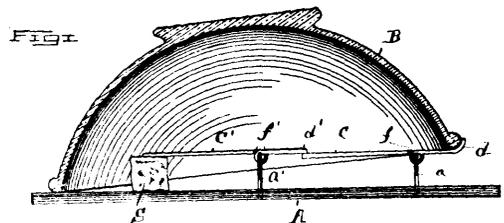


69770

Paul J. Neitzel, South Bend, Indiana, U.S.A., 27th December, 1900; 6 years. (Filed 9th November, 1900.)

*Claim.*—A combination game board having open ended curved grooves or channels formed at its corners, both ends of which grooves or channels terminate opposite the centre of the board, substantially as shown.

**No. 69,771. Mouse Trap. (Souricière.)**



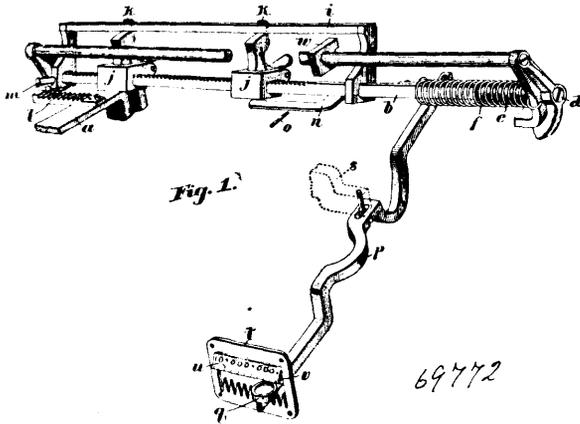
69771

Adam Wellington Ager, Mapleton, North Dakota, U.S.A., 27th December, 1900; 6 years. (Filed 19th April, 1900.)

*Claim.*—1st. In a trap, the combination of a base, levers pivotally supported between their ends on said base, the end of one lever adapted to engage beneath the end of the other lever and support at its opposite end a cage or bowl, the disengaged end of the said other lever being adapted to be supported in set position by a bait. 2nd. In a trap, the combination of a base, pivot supports carried thereby, two levers pivoted respectively between their ends on said supports, one of said levers adapted to be held in operative or set position by a bait beneath one end thereof the other lever positioned to engage beneath the free end of the bait supported lever, and to support a cage or bowl on its opposite end. 3rd. In a trap, the combination of a base, two pivot supports carried thereby, a lever pivoted between its ends on each of said supports, one of said levers adapted to be held in the set position by a bait beneath the end thereof, the other lever positioned to engage beneath the free end of the bait supported

lever and provided with means on its disengaged end for supporting a cage or bowl. 4th. In a trap, the combination of a base, pivot support carried thereby, two levers bent to form a pivot or hinge connection with said supports, one of said levers adapted to be held in operative or set position by a bait placed beneath the end thereof, the other lever positioned to engage beneath the free end of said bait supported lever, and having its disengaged end turned upward to afford a support for the edge of a cage or bowl.

**No. 69,772. Tabulating Device for Typewriting Machines.** (*Appareil à cataloguer pour clavigraphes.*)

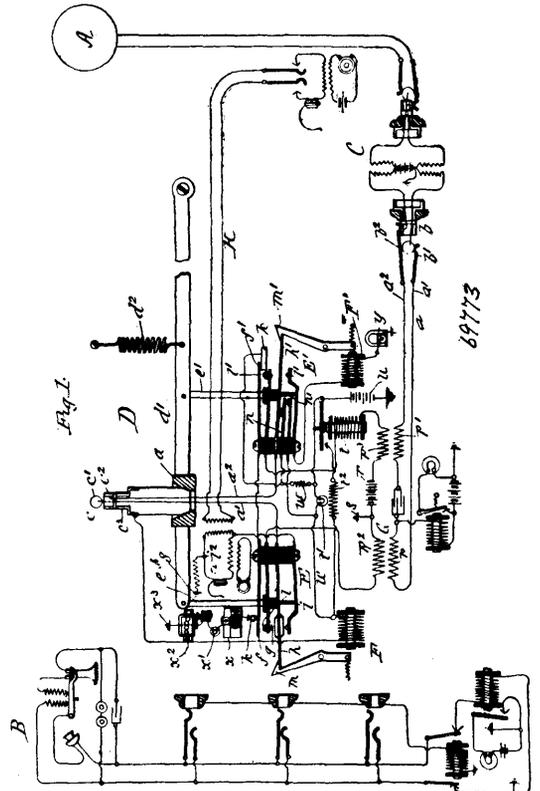


The Wagner Typewriter Company, New York City, New York, assignee of J. Frank Allard, Boston, Massachusetts, U.S.A., 27th December, 1900; 6 years. (Filed 14th March, 1900.)

*Claim.*—1st. The combination, with the stop bar adapted to be rocked and to be moved longitudinally, of a vertically and laterally movable stop key lever for actuating the said stop bar, whereby the stop bar may be set at any predetermined position and released therefrom by said lever, as set forth. 2nd. The combination with the longitudinally adjustable stop bar, of the stop key lever for moving the stop bar into operative position to arrest the carriage, and means for returning the stop bar to its normal position when the stop key lever is released, substantially as described. 3rd. A tabulating device for a typewriter comprising a longitudinally adjustable stop bar mounted to move on stationary bearings secured to the frame of the machine and provided with means for engaging a stop on the carriage to arrest the movement of the carriage and a lever carried by the framing of the machine for shifting the stop bar longitudinally and to bring it into operative position in order to stop the carriage at any predetermined point, substantially as described. 4th. The combination of an adjustable stop bar mounted in bearing on the frame of the machine and provided with a stop adapted to engage a corresponding stop on the carriage, a lever for actuating said stop bar, a toothed bar secured to the frame and a finger projecting from the stop bar so as to engage said toothed bar when the stop bar is in operative position, thus holding the stop bar firmly against the impact of the carriage, substantially as described. 5th. A tabulating attachment for a typewriter comprising a stop bar having a longitudinal and a rocking movement on the bearings, a stop secured to said stop bar and adapted to engage a stop on the carriage, a lever having operative engagement with said stop bar and serving both to move the bar longitudinally and to rock the same, a finger secured to the stop bar and adapted to be moved into engagement with a toothed bar on the frame when the stop bar is rocked into operative position. 6th. In a tabulating device for a typewriter the combination of the longitudinally adjustable stop bar adapted to be rocked on its bearings, a stop secured to said bar and adapted to engage a corresponding stop on the carriage, and a lever for actuating the stop bar, said lever operating to simultaneously release the carriage and move the stop bar in operative position to arrest the movement of the carriage at a predetermined point, substantially as described. 7th. In a tabulating device for typewriting machines, the combination of a movable carrier, an adjustable stop carrier thereby, a second stop co-operating therewith to limit the movement of the carriage and a single hand operated key for moving the movable carrier in the direction of the feed of the carriage without changing the adjustment of said adjustable stop with respect to its carrier and for moving the adjustable stop into position to arrest the carriage, whereby an operation of the single hand operated key may effect the arrest of the carriage at a point determined by the positioning of the movable carrier in the direction of the feed of the carriage. 8th. In a tabulating device for typewriting machines, the combination of a movable carrier, an adjustable stop carried thereby, a second stop co-operating therewith to limit the movement of the carriage, a single hand operated lever for moving the movable carrier in the direction of the feed of the carriage without changing the adjust-

ment of said adjustable stop with respect to its carrier and for moving the adjustable stop into position to arrest the carriage, whereby an operation of the single hand operated lever may effect the arrest of the carriage at a point determined by the positioning of the movable carrier in the direction of the feed of the carriage, and means controlled by said single lever for automatically releasing the carriage when the tabulating device is operated. 9th. In a tabulating device for typewriting machines, the combination of a movable carrier, an adjustable stop carried thereby, a second stop co-operating therewith to limit the movement of the carriage, means for moving the movable carrier in the direction of the feed of the carriage without changing the adjustment of said adjustable stop with respect to its carrier and for moving the adjustable stop into position to arrest the carriage, whereby when the movable carrier is operated, the carriage will be arrested at a point determined by the positioning of the movable carrier, means for automatically releasing the carriage when the tabulating device is operated and means for automatically locking the movable carrier against movement in the direction of the feed of the carriage when the adjustable stop has been moved to arrest the carriage.

**No. 69,773. Telephone Switchboard.** (*Echange de téléphone.*)

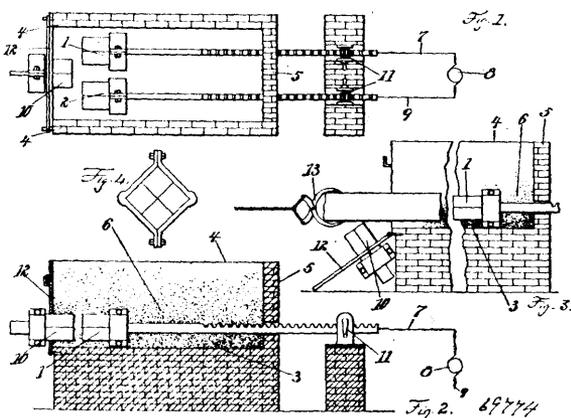


The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Joseph John O Connell, Chicago, Illinois, U.S.A., 27th December, 1900; 6 years. (Filed 31st August, 1899.)

*Claim.*—1st. An apparatus for telephone switchboards, consisting of a connecting plug and its cord circuit, a seat wherein the plug is adapted to rest when not in use, switch contacts and means for setting the same controlled by the co-operation of the plug with its seat, an electro-magnet having an armature for releasing said switch contacts, and means for energizing said magnet, substantially as set forth. 2nd. The combination with a telephone line, extending from a subscriber's station and terminating in a spring jack at the central office, of a plug and its cord circuit, said plug being adapted for insertion in said spring jack, a seat wherein said plug is adapted to rest when not in active use, a set of switch contacts controlled by the co-operation of said plug with its seat, a source of signalling current, means controlled by said switch contacts for connecting the same to the cord circuit, whereby said source of current is connected with the cord circuit and through the latter with the telephone line when the plug is lifted from its seat and inserted in the spring jack, an electro-magnet connected or adapted to be connected with the telephone line, mechanism adapted to be influenced by said magnet to change the relations of said switch contacts to remove the source of signalling current from circuit, and means controlled at the subscriber's station for energizing said magnet, whereby said source of signalling current is cut out when the subscriber answers, substan-

tially as described. 3rd. The combination with a connecting plug adapted for insertion in a telephone line spring, of a seat wherein said plug is adapted to rest when not in active use, a set of switch contacts controlled by the co-operation of said plug with its seat, a source of signalling current and a circuit controlled by said switch contacts for connecting the same with the cord circuit, whereby said source of signalling current is connected with the plug when the latter is lifted from its seat preparatory to making connection, an electro-magnet, circuit changing mechanism adapted to be influenced thereby to cut out said source of signalling current, and means for energizing said electro-magnet, substantially as set forth. 4th. The combination with a telephone line extending from the subscriber's station and terminating in a spring jack at the central office, of a plug and its cord circuit, said plug being adapted for insertion in said spring jack to connect the cord circuit with the telephone line, an electrically operated time indicating device, means controlled by registering contacts on the plug and spring jack for operating said time indicating device, and means controlled by the subscriber's apparatus for preventing the operation of said time indicating device, whereby said device is operated during the time between the insertion of the plug and the operation of said subscriber's apparatus, substantially as set forth. 5th. The combination with a connecting plug, of a seat wherein the same is adapted to rest, a switch contact adapted to occupy alternative positions, controlled by the co-operation of the plug with its seat, a detent for retaining the spring in one of its alternative positions independent of the plug, an electro-magnet having an armature adapted to release said contact, and means for energizing said magnet, substantially as described. 6th. The combination with a connecting plug and its cord circuit, of a seat wherein said plug is adapted to rest when not in active use, a contact spring, mechanical means for moving said contact spring out of its normal position, said means being controlled by the co-operation of the plug with its seat whereby said spring is bent out of its normal position when the plug rests in its seat, contacts with which said spring is adapted to engage in alternative positions, a detent adapted to maintain said spring in an abnormal position independently of the means controlled by the plug and its seat, an electro-magnet and means adapted to be influenced thereby to disengage said detent from said contact spring, a circuit including said magnet, and a source of current and registering contacts on the plug and spring jack for controlling said circuit, whereby the spring is released from said detent by the insertion of the plug in the spring jack, substantially as set forth. 7th. The combination with a connecting plug, of a seat wherein the plug is adapted to rest when not in use, two independent sets of switch contacts, a telephone circuit controlled by one set of contacts and a signalling circuit controlled by the other set of contacts, means associated with the plug seat for changing the relations of both sets of contacts and for setting the same, electro-magnets associated one with each set of switch contacts, armatures for said magnets adapted when moved to release the contacts previously set, and means for energizing said electro-magnets, substantially as described. 8th. The combination with a connecting plug, of a movable seat wherein the same is adapted to rest when not in use, two independent sets of switch springs, both adapted to be set by the movable plug seat independent electric circuits controlled by each of said sets of switch springs, electro-magnets associated one with each of said sets of switch springs, mechanism operated by said magnets for releasing the switch springs, and means for energizing said electro-magnets, substantially as set forth.

**No. 69,774. Manufacture of Calcium Carbide.**  
(*Manufacture de carbure de calcium.*)

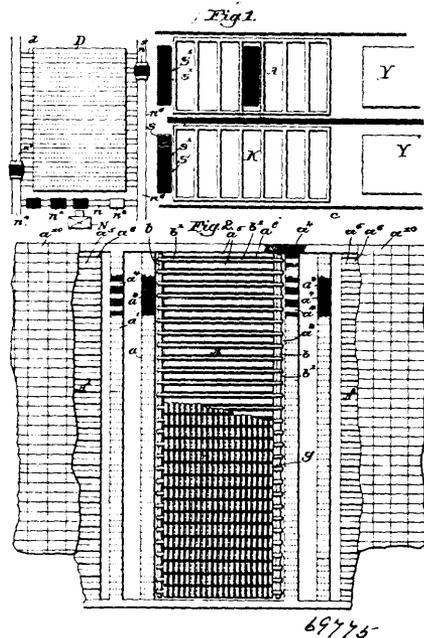


James E. Hewes, Baltimore, Maryland, U.S.A., 27th December, 1900; 6 years. (Filed 13th November, 1899.)

*Claim.*—The process of continuously producing carbide of calcium and the like which consists in arranging electrodes in horizontal

and parallel position beneath a mass of raw material, completing the circuit through an armature applied to said electrodes, and withdrawing and adjusting the electrodes in the direction of their lengths and in respect to the armatures to start the formation of the product, removing the armature and completing the circuit through the fused material, drawing the product from beneath the mass and away from the ends of the electrodes, and adjusting the electrodes endwise evenly and unevenly in respect to the product to control the circuit, substantially as described.

**No. 69,775. Brick Making and Moving Machine.**  
(*Machine à brique.*)

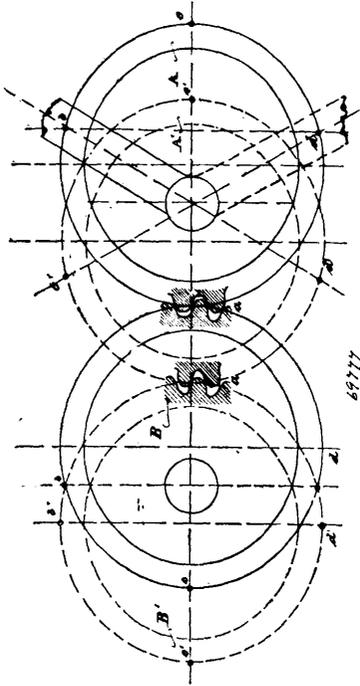


Jonathan Parker Bishop Fiske, Auburndale, Massachusetts, U.S.A., 31st December, 1900; 6 years. (Filed 22nd November, 1899.)

*Claim.*—1st. In an apparatus for the manufacture of bricks, a kiln, and supporting means for carrying a large number of bricks in stack formation into the burning chamber of the kiln, said supporting means being removable from supporting engagement with the bricks without disturbing their said stack formation, substantially as described. 2nd. In an apparatus for handling bricks during their manufacture, a kiln having an opening in its top, a movable support outside of said kiln for carrying a large number of green bricks stacked in regular formation for burning, lifting mechanism for bodily raising said support and the stack of bricks thereon and moving the same to said kiln and lowering said support and bricks into the kiln, means in the kiln for sustaining said stack of bricks independently of said movable support and without interfering with the original stack formation thereof, and means for withdrawing said movable support from supporting engagement with said bricks during the burning operation, substantially as described. 3rd. In an apparatus for handling bricks during their manufacture, a kiln having an opening in its top, a movable support outside of said kiln for carrying a large number of green bricks stacked in regular formation for burning, lifting mechanism for bodily raising said support and the stack of bricks thereon and moving the same to said kiln and lowering said support and bricks into the kiln, means in the kiln for sustaining said stack of bricks independently of said movable support and without interfering with the original stack formation thereof, means for withdrawing said movable support from supporting engagement with said bricks during the burning operation, and means for re-engaging said movable support with said bricks after the latter have been burned and for removing the same in their original stack formation from the kiln, substantially as described. 4th. An apparatus for the manufacture of bricks, including a kiln for burning the bricks, carrying means for transporting a large number of bricks in stack formation, said means including a plurality of separated parts each engaging a series of said bricks, devices for lowering said carrying means and the bricks thereon into the kiln, and means for removing said carrying means from engagement with said bricks without disturbing said stack formation thereof, substantially as described. 5th. A brick yard having a brick kiln, a station outside said kiln constructed for supporting the bricks in stack formation and a transporting device for transporting bricks when arranged in stack formation from one to the other of said station and kiln, said station and kiln each being constructed to permit effective engagement of the said transport-



the other side, the wheels A and A' being independent of each other, a crank loosely running on an axle, the wheels A and A' be-



69777

ing secured to said crank, the shaft 2 to which the wheels B and B' are keyed, the rotation of the wheels B and B' being dependent on each other.

No. 69,778. Gas Burner. (Brûleur de gaz.)

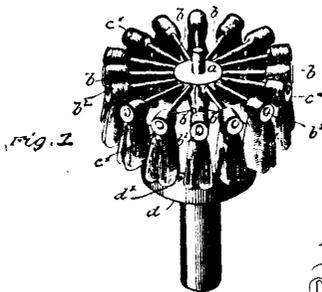
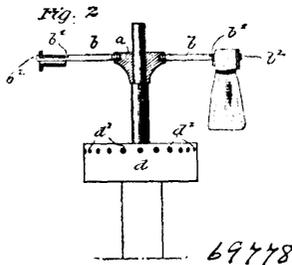


Fig. 3.



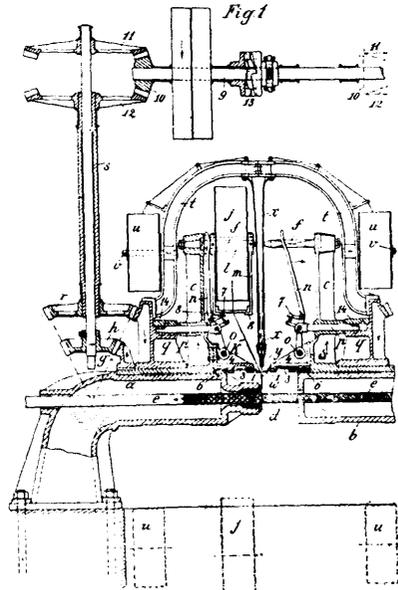
69778

The De Lery Light Company, assignee of Joseph Blasco De Lery, New York City, New York, U.S.A., 31st December, 1900; 6 years. (Filed 10th February, 1899.)

Claim.—1st. The combination in incandescent gas burners of a standard provided with a plurality of supports for incandescent elements and said supports arranged with a substantial interval between them, a plurality of incandescent tassels, each consisting of a number of layers of fragile mineral fragments bunched at the top and free at the bottom, and said tassels suspended from said supports with a substantial air space between them, and a burner provided with a perforate head adjacent to the free edges of said layers,

whereby the flame enters within said layers and into the space between said tassels, substantially as and for the purpose described. 2nd. The combination in incandescent gas burners of a standard provided with a plurality of supports for incandescent elements arranged with a substantial interval between said supports and each provided with a seat and detent, a plurality of incandescent tassels, each consisting of layers of fragile mineral fabric as described and provided with a spool adapted to have a removable fit on said supports, from which said tassels are suspended with a substantial air space between them, and a burner provided with a multi-perforate head adjacent to said tassels whereby the flame enters the folds of the tassels and also the air space between them, substantially as and for the purposes described. 3rd. In an incandescent gas burner and in combination with a suitable support, an incandescent tassel composed of a plurality of layers of fragile mineral fabric and thimble around which said layers are secured, and said thimble being adapted to a removable fit on said support, substantially as described.

No. 69,779. Braiding Machine. (Machine à tresser.)



69779

B. Kirsch and A. Pessl, both of Vienna, Austria, 31st December, 1900; 6 years. (Filed 13th November, 1899.)

Claim.—1st. Machine for braiding thread on a core moving in a straight line, comprising two sets of bobbin carriers, means for revolving the same in opposite directions, means for shifting the bobbins carried by one set of carriers from one carrier to its companion carrier, and thread guides for guiding the thread to the core, for the purpose set forth. 2nd. Machine for braiding thread on a core moving in a straight line, comprising two sets of bobbin carriers, means for revolving the same in opposite directions at the same rate of speed, means for shifting the bobbins carried by one set of carriers from one carrier to its companion carrier, and thread guides for guiding the thread to the core, for the purpose set forth. 3rd. Machine for braiding thread on a core moving in a straight line, comprising two sets of bobbin carriers, means for revolving the same in opposite directions, means for automatically shifting the bobbins carried by one set of carriers from one carrier to its companion carrier, and thread guides for guiding the thread to the core, for the purpose set forth. 4th. Machine for braiding thread on a core moving in a straight line, comprising two sets of bobbin carriers, each bobbin having wound thereon a plurality of separate threads, means for revolving one set of carriers in one direction and the other set in an opposite direction, means for shifting the bobbins carried by one set of carriers for one carrier to its companion carrier, and thread guides constructed to guide the threads from the bobbins to the core so as to be laid thereon parallel to one another, for the purpose set forth. 5th. Machine for braiding thread on a core moving in a straight line, comprising two sets of bobbin carriers, means for revolving one set in one direction and the other set in an opposite direction about said core, thread guides for the bobbin threads for one set of carriers extending radially between the carriers of the other set to a point proximate to the core, and thread guides guiding the bobbin threads of the other set of carriers to said core and means for shifting the bobbins carried by the last named set of carriers from one carrier to its companion carrier, for the purpose set forth. 6th. Machine for braiding thread on a core moving

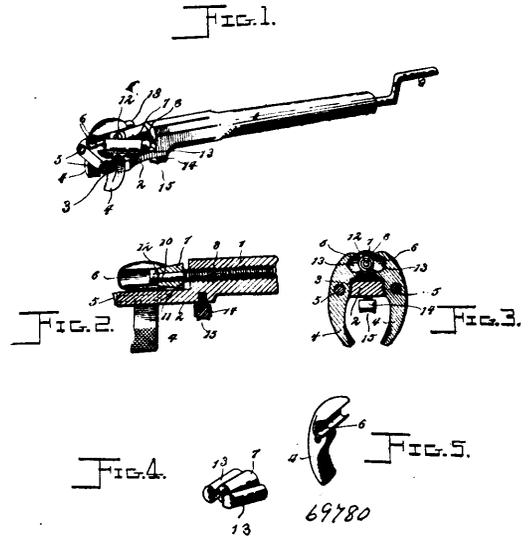
in a straight line, comprising two outer and two intermediate bobbin carriers, the latter having their bobbin spindles aligned and facing each other, means for revolving the outer carriers in one direction and the intermediate carriers in an opposite direction, means for shifting the bobbins from the spindles of one of the intermediate carriers onto the spindles of its companion carrier, thread guides for each bobbin carried by said intermediate carriers for guiding their threads to the core, mean for reciprocally shifting a pair of thread guides when a bobbin is shifted from one carrier to the other, and thread guides for the threads from the bobbins of the outer carriers, said guides extending radially between the inner guides to a point proximate to the core, for the purpose set forth. 7th. Machine for braiding thread on a core moving in a straight line, comprising two outer and two intermediate bobbin carriers, means for revolving the outer and intermediate carriers in opposite directions, the latter having their bobbin spindles aligned and facing each other, bobbins mounted on said spindles to freely move lengthwise, but held against independent rotation on said spindles, forked levers straddling said spindles in rear of their respective bobbins, means for periodically actuating said levers to throw the bobbins off the spindles of one intermediate carrier onto the spindles of its companion carrier, a thread guide for each bobbin spindle for guiding the thread therefrom to the core, means for periodically and reciprocally moving two oppositely arranged thread guides, and thread guides for the bobbin threads of the outer carriers extending radially between the intermediate carriers to a point proximate to the core, for the purpose set forth. 8th. Machine for braiding thread on a core moving in a straight line, comprising two outer and two intermediate bobbin carriers, bearings on which both pairs of carriers are loosely mounted, means for revolving the outer carriers in one direction and the inner carriers in an opposite direction, and means for stopping the rotation of one or the other of the intermediate carriers, for the purpose set forth. 9th. Machine for braiding thread on a core moving in a straight line, comprising a tubular core passage provided with means for tightening the braid on the core, in combination with the two outer and two intermediate bobbin carriers, means for revolving the outer carriers in one direction and the inner carriers in an opposite direction, means for shifting the bobbins from one of the inner carriers to the other, thread guides for guiding the bobbin threads of the inner carriers to the core, and thread guides for the bobbin threads of the outer carriers extending radially between the inner guides to a point proximate to the core, for the purpose set forth.

**No. 69,780. Veterinary Forceps. (Forceps.)**

Oscar J. Neal, assignee of Benjamin F. Pinson, both of Blackwell, Oklahoma, U.S.A., 31st December, 1900; 6 years. (Filed 26th June, 1900.)

*Claim.*—1st. In veterinary dental forceps, the combination of a stock, transversely disposed co-operating jaws mounted upon longitudinal pivots to swing transversely of the stock, a spreader arranged in operative relation with the jaws and having interlocking engagement therewith, whereby the jaws may be opened or closed by

movements in opposite directions of the spreader, and means for advancing and retracting the spreader, substantially as specified.



2nd. In veterinary dental forceps, the combination of a stock, transversely disposed co-operating jaws mounted upon longitudinal pivots to swing transversely of the stock and having guides convergent towards one end, a spreader having an interlocked sliding engagement with said guides, and means for moving the spreader in opposite directions, substantially as specified. 3rd. In veterinary dental forceps, the combination of a stock, co-operating pivotal jaws mounted upon the stock and having convergent guides provided with ways which exceed a semicircle in cross-sectional contour, a spreader interposed between said guides and having convergent cross-sectionally rounded ribs fitted in said ways, whereby the jaws may be opened or closed by movement in opposite direction of the spreader, and means for moving the spreader in opposite directions, substantially as specified. 4th. In veterinary dental forceps, the combination of a stock terminating at one end in a head having lateral extensions provided with transverse seats, jaws arranged perpendicularly to the stock and fitted at intermediate points in said seats, removable pivot pins intersecting said seats and forming fulcrums for the jaws, a follower or spreader interposed between the guides and having an interlocking sliding connection therewith, and means for moving the follower in opposite directions, substantially as specified.



## TRADE-MARKS

Registered during the month of December, 1900, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

7572. J. U. GERVAIS & COMPAGNIE, Joliette, Que. Tabacs, 1 decembre, 1900.
7573. THE PATENT FISH FOOD SYNDICATE, LIMITED, 188 St. Vincent Street, Glasgow, Scotland. Fish and Oaten Flour Powder, 4th December, 1900.
7574. AERATORS LIMITED, Broad Street Avenue, London, England. Mineral and Aerated Waters, 4th December, 1900.
7575. ANDREW USHER & COMPANY, Edinburgh, Scotland. Scotch Whisky, 4th December, 1900.
7576. ANDREW MUIRHEAD, Toronto, Ont. Paints, Colours, Varnishes and Fillers for outside finish for wood or iron, 4th December, 1900.
7577. ANDREW MUIRHEAD, Toronto, Ont. Paints, Colours, Varnishes and Fillers for inside finish for wood or iron, 4th December, 1900.
7578. ALEXANDER RAMSAY, Montreal, Que. Green Paint, 4th December, 1900.
7579. NATHAN MICHAELS, Montreal, Que. Cigars, 4th December, 1900.
7580. L. MARTINEAU & COMPANY, Montreal, Que. A Bon-Bon, 4th December, 1900.
7581. THE TELFORD & CHAPMAN MANUFACTURING COMPANY, Rock Island, Que. Horse Blankets, 4th December, 1900.
7582. CASTELL BROTHERS LIMITED, 39 Clerkenwell Road, London, England. Paper, 4th December, 1900.
7583. SCHMITT & VAN BOCKSTAEL, 119 Rue Nationale, Lille, France. Produits pharmaceutiques, 5 decembre, 1900.
7584. SAMUEL BAILLAIRGE TOWNSEND, Montreal, Que. Scotch Whiskies, 5th December, 1900.
7585. THE PRICE BAKING POWDER COMPANY, Chicago, Illinois, U.S.A. Baking Powder, 7th December, 1900.
7586. THE IMPERIAL SOAP COMPANY, LIMITED, Toronto, Ont. Soap, 7th December, 1900.
7587. S. ANARGYROS, New York, N.Y., U.S.A. Tobacco, Cigars and Cigarettes, 7th December, 1900.
7588. ANNANDALE & SON, LIMITED, Midlothian, Scotland. Paper, 11th December, 1900.
7589. HARBURGER, HOMAN & COMPANY, New York, N.Y., U.S.A. Cigars, Cheroots, Cigarettes and Rolls of Tobacco, 11th December, 1900.
7590. ALEXANDER BREMNER, Montreal, Que. White Lead, Liquid Paints, Oils, Colours and Turpentine, 11th December, 1900.
7591. ALLEN & HANBURYS, LIMITED, 37 Lombard Street, London, England. Chemical substances prepared for use in medicine and pharmacy, 11th December, 1900.
7592. F. W. RUECKHEIM & BROTHER, Chicago, Illinois, U.S.A. Candies and Confections, 11th December, 1900.
7593. JAMES HENRY ASHDOWN, Winnipeg, Man. Certain named articles of Hardware, 11th December, 1900.
7594. THE LONDON COFFEE & SPICE COMPANY, LIMITED, London, Ont. Baking Powder, 11th December, 1900.
7595. G. H. MUMM & COMPANY, Reims, France. Champagne, 14th December, 1900.
7596. THE KINGSCOTE COMPANY, LIMITED, 7 Lancaster Place, Strand, London; and 5 Penarth Street, Old Kent Road, County of Surrey, England. Substitute for Leather and India Rubber, 14th December, 1900.
7597. THE KINLEITH PAPER COMPANY, LIMITED, St. Catharines, Ont. Pulp and paper, 17th December, 1900.
7598. THE NATIONAL CYCLE & AUTOMOBILE COMPANY, LIMITED, Toronto, Ont. Bicycles or Motor Vehicles, 17th December, 1900.

7599. THE NATIONAL CYCLE & AUTOMOBILE COMPANY, LIMITED, Toronto, Ont. Bicycles or Motor Vehicles, 17th December, 1900.
7600. THE NATIONAL CYCLE & AUTOMOBILE COMPANY, LIMITED, Toronto, Ont. Bicycles or Motor Vehicles, 17th December, 1900.
7601. JAMES WALKER & COMPANY, Hamilton, Ont. Soap, 18th December, 1900.
7602. H. W. JOHNS MANUFACTURING COMPANY, New York, N. Y., U.S.A., Asbestos manufactures, particularly Asbestos Cellular Pipe Coverings, 19th December, 1900.
7603. A. LESCHEN & SONS ROPE COMPANY, St. Louis, Missouri, U.S.A., Wire Rope, 21st December, 1900.
7604. THE SHANNON, LIMITED, 15 Ropemaker Street, London, England. General Trade Mark, 24th December, 1900.
7605. THE CAMPBELL MANUFACTURING COMPANY, Fort Erie, Ont. Lubricating Oils and Greases, 24th December, 1900.
7606. WILLIAM BROWN, Sutton, Que. Medicines, 31st December, 1900.
7607. THE EDWARDSBURG STARCH COMPANY, LIMITED, Cardinal, Ont. Glucose and Syrup, 31st December.

## INDUSTRIAL DESIGNS.

Registered during the month of December, 1900, at the Department of Agriculture—  
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1726. THE STARR MANUFACTURING COMPANY, LIMITED, Dartmouth, N. S. Skate, 7th December, 1900.
1727. PHILIPS & WRINCH, Toronto, Ont. Belt. 17th December, 1900.
1728. EDWARD SIDNEY OSTELL, Montreal, Que. Display sheet for Exhibiting Samples of Merchandise, 20th December, 1900.
1729. SAMUEL ROBINSON, Toronto, Ont. Razor Steel Blade, 20th December, 1900.
1730. JOHN J. McLAUGHLIN, Toronto, Ont. Soda Water Glass Holder, 21st December, 1900.
1731. JOHN N. WARNER, Toronto, Ont. Display Stand, 24th December, 1900.
1732. THE MACDONALD MANUFACTURING COMPANY, Toronto, Ont. Tinware, 26th December, 1900.
1733. THE GURNEY-TILDEN COMPANY, LIMITED, Hamilton, Ont. Stove *re* "Sensation Garland", 26th December, 1900.
1734. EDWARD PHILLIPS FETHERSTONHAUGH, Ottawa, Ont. Pitman for Rock Crushers, 31st December, 1900.

# COPYRIGHTS

Entered during the month of December, 1900, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

11810. ILLUSTRATED ADVERTISING. By F. W. Johnston, Toronto, Ont., 1st December, 1900.
11811. BEAMING EYES. (Caprice.) By A. Wellesley. Willimott H. Billing, Toronto, Ont., 1st December, 1900.
11812. THE KITELY COLLECTING SYSTEM. (Form.) Hiram Kitley, Toronto, Ont., 1st December, 1900.
11813. CANADA: AN ENCYCLOPÆDIA OF THE COUNTRY. Edited by J. Castell Hopkins, F.S.S. Volume VI—Supplementary. The Bradley-Garretson Co. (Ltd.), Toronto, Ont., 1st December, 1900.
11814. CANADA'S SONS ON KOPJE AND VELD. By T. G. Marquis, B.A. The Bradley-Garretson Co. (Ltd.), Toronto, Ont., 3rd December, 1900.
11815. PROCEEDINGS OF THE SIXTEENTH ANNUAL SESSION OF THE TRADES AND LABOR CONGRESS OF CANADA, HELD AT OTTAWA, ONT., SEPTEMBER 18, 19, 20, 21, 22, 1900. Trades and Labor Congress of Canada, Ottawa, Ont., 4th December, 1900.
11816. SONG-WAVES. By Theodore H. Rand, D.C.L. Emeline A. Rand, Toronto, Ont., 4th December, 1900.
11817. ALMANACH DE L'AN 1901 Des PILULES ROUGES. La Compagnie Chimique Franco-Américaine, Montréal, Que., 5 décembre, 1900.
11818. X-N-TRIC. Two-Step Characteristic. By L. V. Gustin. Whaley, Royce & Co., Toronto, Ont., 6th December, 1900.
11819. IN DAYS GONE BY. Words by Mildred Lawrence. Music by Thomas H. Chilvers. Whaley, Royce & Co., Toronto, Ont., 6th December, 1900.
11820. AUTUMN GLIDE. By May E. Lord. (Music.) May E. Lord, Toronto, Ont., 6th December, 1900.
11821. NEW GAME OF MAPLE LEAF. (Game of cards.) The Copp, Clark Co. (Ltd.), Toronto, Ont., 6th December, 1900.
11822. KARL RHYMES. By Charles Dougall, (Book.) Charles John Dougall, Belleville, Ont., 6th December, 1900.
11823. THE WESTMINSTER. Christmas, 1900. (Publication.) The Westminster Co. (Ltd.), Toronto, Ont., 7th December, 1900.
11824. GWYNETT OF THORNHAUGH. A Romance. By Frederick W. Hayes. William Briggs, Toronto, Ont., 7th December, 1900.
11825. ACTA VICTORIANA. Christmas, 1900. W. H. Wood, Toronto, Ont., 7th December, 1900.
11826. DE GOLDEN GATE. Words by "Minnehaha." Music by Mrs. Wm. Foran. Mrs. Chas. W. Little, McKellar, Ont., 10th December, 1900.
11827. THE S. CARSLY COMPANY PRICE LIST NO. 24. (French Edition.) The S. Carsley Co. (Ltd.), Montreal, Que., 10th December, 1900.
11828. THE RED RIVER VOYAGEUR: AND OTHER POEMS. By John Greenleaf Whittier and other American Poets. George N. Morang & Co. (Ltd.), Toronto, Ont., 10th December, 1900.
11829. THE HIGH SCHOOL GERMAN READER. With Elementary Exercises, Exercices in Composition and Vocabulary. By W. H. Van der Smissen, M.A., and W. H. Fraser, B.A. The Copp, Clark Co. (Ltd.), Toronto, Ont., 10th December, 1900.
11830. ILLUSTRATED ADVERTISING. (Second Edition.) By F. W. Johnston, Toronto, Ont., 10th December, 1900.
11831. ALMANACH DU PEUPLE DE C. O. BEAUCHEMIN ET FILS, POUR 1901. C. O. Beauchemin et Fils, Montréal, Qué., 10 décembre 1900.
11832. THE CANADIAN MAGAZINE, Christmas Number, 1900. The Ontario Publishing Co. (Ltd.), Toronto, Ont., 10th December, 1900.

11833. **BOUQUET OF KINDERGARTEN AND PRIMARY SONGS WITH NOTES AND GESTURES. ALSO AN APPENDIX : LITTLE READINGS FOR LITTLE FOLKS.** Introduction by Mrs. J. L. Hughes. Selby & Co., Toronto, Ont., 10th December, 1900.
11834. **VALSE CAPRICE.** For piano. By J. Lewis Browne. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11835. **AT A COON FAIR.** (Two-step and cake walk.) By T. S. McCarter. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11836. **INDEED.** (Song.) Words and music by Arthur Trevelyan. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11837. **IN A GARDEN OF ROSES.** (Waltz.) By Arthur Wellesley. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11838. **IF I ONLY HAD A DOLLAR OF MY OWN.** Words and music by Bogert & O'Brien. Arranged by J. Del Vecho. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11839. **I NEVER LIKED A NIGGER WITH A BEARD.** Words and music by Monroe H. Rosenfeld. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11840. **RIDIN' OFF TO DREAMLAND.** (Lullaby.) By Mildred Lawrence and Thos. H. Chilvers. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11841. **IF I THOUGHT YOU COULD MAKE HIM HAPPY.** Words and music by Monroe H. Rosenfeld. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11842. **I DON'T CARE WHAT HAPPENS TO ME NOW.** Words and music by Artie Hall. Whaley, Royce & Co., Toronto, Ont., 10th December, 1900.
11843. **THE STORY OF THE CENTURY.** By Justin McCarthy. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11844. **A VISION OF THE FOUNTAIN.** By Bret Harte. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11845. **AUNT LAVINA'S LETTER.** By Mary E. Wilkins. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11846. **A LITTLE EMPTY STOCKING.** By John Strange Winter. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11847. **HIS GREAT CHANCE.** By Mary A. Dickens. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11848. **THREE CHRISTMAS DINNERS.** By George A. Henty. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11849. **A MESSAGE FOR THE NEW CENTURY.** By Ian Maclaren. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
11850. **HIS IDEAL CHRISTMAS.** By Justin McCarthy. Published in the *Gazette* and *Star*, Montreal, and *Echo*, Halifax. (Temporary copyright.) The National Press Agency, Limited, London, England, 11th December, 1900.
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