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# The Canadian Patent Office RECORD

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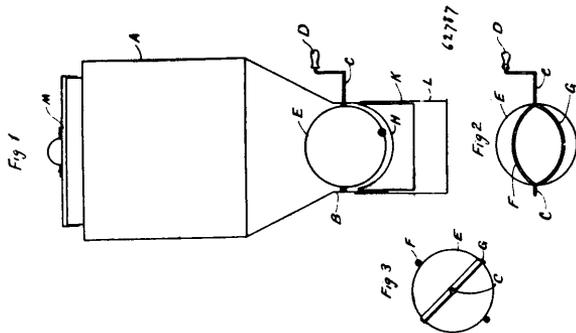
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## INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

### No. 62,787. Flour Chest and Sifter.

(Huche et tamis à farine.)



Andrew Wheeler Green, Toronto, assignee of Archibald H. Britnell, Belleville, Ontario, Canada, 2nd March, 1899; 6 years. (Filed 25th January, 1899.)

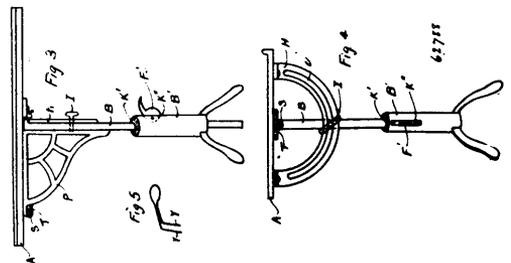
*Claim.*—The herein described flour chest and sifter, comprising body portion A, lower portion B permanently connected to said body portion, hollow cylinder K having the hemispherical sieve permanently united to said cylinder, in combination with a spherical ball E having the raised portions F and G, the said ball being rigidly united to the rod C, substantially as and for the purpose hereinbefore set forth.

### No. 62,788. Table. (Table.)

John Burkell and Robert Elliott, both of Rosemeath, Ontario, Canada, 2nd March, 1899; 6 years. (Filed 26th January, 1899.)

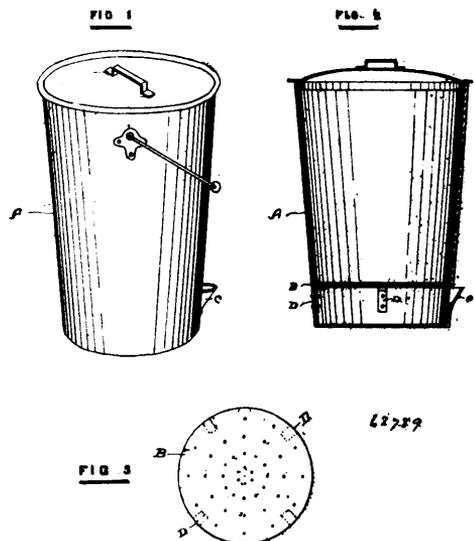
*Claim.*—1st. In a combination table and writing desk, the combination of the adjustable table with the stationary frame D, substantially as and for the purpose specified. 2nd. In a combination table and writing desk, the combination of the table, the stationary frame, with means for securing said frame to the frame of a bedstead or other suitable place, and means for adjusting said table to any height desired, substantially as described. 3rd. In a combination table and writing desk, in combination the table, the stationary frame, means for securing said frame to any suitable place desired, means for raising or lowering said table, with the bracket pivotally connected to said table and the semi-circular frame H, with means

for tilting the table, substantially as and for the purpose specified. 4th. In a combination table and writing desk, in combination the



table, pivotally connected to the frame and bracket, the upright standard, with means for raising said frame vertically in said standard, and means for tilting the table, substantially as and for the purpose specified. 5th. In a combination table and writing desk, in combination the table, the upright standard, means for tilting said table sideways, means for raising said table vertically in said standard, with means for securing said standard to the frame of a bedstead or any suitable place desired, as described.

### No. 62,789. Pail. (Seau.)

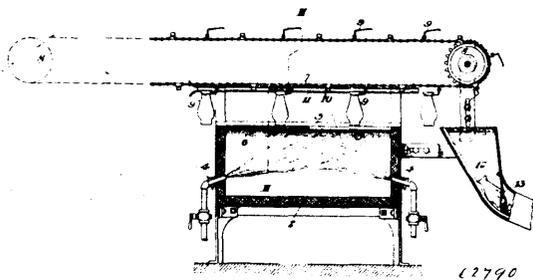


Marie Susan Spence, Toronto, Ontario, Canada, 2nd March, 1899; 6 years. (Filed 11th February, 1899.)

*Claim.*—In a pail for kitchen refuse, the combination of a pail with an outside lip near the bottom, a strainer to fit inside the pail, but removable therefrom, and supported on a level with the lip by

lugs, the whole being adapted to draw off liquids below the strainer and leave the refuse in a dry state, substantially as described.

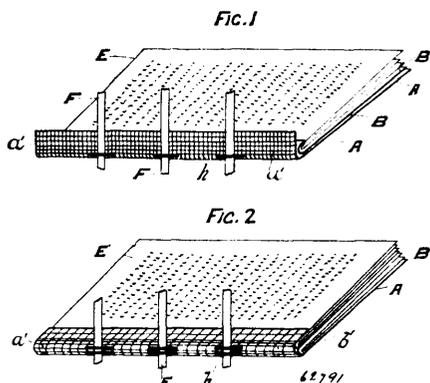
**No. 62,790. Apparatus for Fire Finishing Glassware.**  
(Appareil pour finir de cuire la verrerie.)



William Butter, Radkey, Indiana, U.S.A., 2nd March, 1899; 6 years. (Filed 23rd November, 1898.)

*Claim.*—1st. In apparatus for finishing glassware, a furnace having a slot in its top forming an opening, and a carrier above the opening and external to the furnace, said carrier having holders exterior to the furnace and arranged to hold the glass articles in a vertical position, partly within and partly without the slot, and expose the lower portions to the heat of the furnace passing through the opening. 2nd. In apparatus for finishing glassware, a furnace having an elongated opening through the top of the furnace, a horizontally movable endless carrier above and external to the furnace, and exterior holders on the carrier arranged to support the articles in vertical position, partly within and partly without the opening. 3rd. The combination with a furnace having an elongated opening through its top, of an endless carrier having holders exterior to the furnace and arranged to expose the articles to the heat from the opening, and means for intensifying the heat at the delivery end of the opening. 4th. The combination with a furnace having an upper elongated opening, of a heat radiating plate arranged to shield the portion of the opening first entered by the articles to be finished. 5th. In apparatus for finishing glassware, the combination with a heating furnace having an elongated opening of an external endless chain above the opening having holders exterior to the opening arranged to support the glass articles in a vertical position and carry the lower portions through the opening, and means for continuously moving said chain. 6th. In apparatus for finishing glassware, the combination with a furnace having an upper elongated opening, of a carrier extending from the cracking-off apparatus past the opening, holders upon the chain arranged to support the glass articles in vertical position and carry their lower portions through the opening, and automatic mechanism for discharging the articles from the holders after the same has been heated. 7th. In apparatus for finishing glassware, the combination with a furnace having a slot or opening through its top, and means for varying the heat in different portions of the opening, of an upper external carrier having holders exterior to the slot or opening, and arranged to support the glass articles in vertical position, partly within and partly without the slot, and carry them through the opening. 8th. The combination with an endless chain, of a chute at the end thereof down which the glass articles when released travel, a receptacle for the glass articles, and hanging flexible cushions arranged in series so as to separate the glass articles and prevent their hitting against one another.

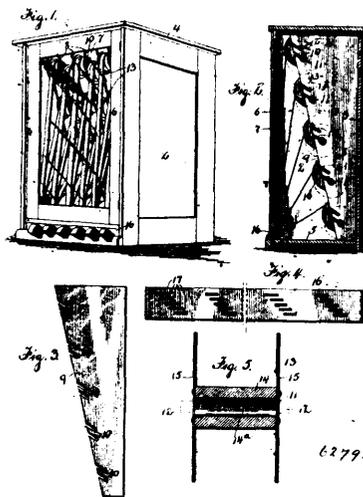
**No. 62,791. Book Binding.** (Reliure de livres.)



Charles Edward Scarse, Birmingham, Warwick, England, 2nd March, 1899; 6 years. (Filed 23rd November, 1898.)

*Claim.*—The covering casing or binding of books, the linen backed end papers A, encompassing and sewn to or forming part of the sections E, E', and securely attached to the covers C, substantially as and for the purpose herein set forth and illustrated.

**No. 62,792. Ribbon Display Cabinet.**  
(Cabinet de montre pour rubans.)

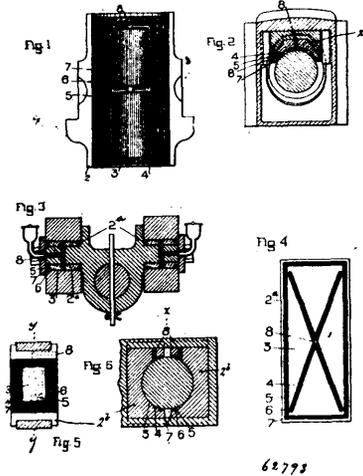


William H. Wyman, St. Johns, Quebec, Canada, 2nd March, 1899; 6 years. (Filed 25th November, 1898.)

*Claim.*—1st. A display cabinet comprising a casing, spools mounted therein in vertical and horizontal series, and openings arranged in said casing corresponding in position to said spools, substantially as described. 2nd. A display cabinet comprising a casing, spools mounted to have independent movement therein, said spools being arranged in vertical and horizontal series, and openings arranged in said casing, corresponding in position to said spools, substantially as described. 3rd. A display cabinet, comprising a casing, spools mounted therein in vertical and horizontal series, said spools being removable independently from said casing and openings formed in said casing corresponding in position to said spools, substantially as described. 4th. A display cabinet, comprising a casing, spools mounted therein in vertical and horizontal series, the spools in said horizontal series being on different planes, and openings formed in said casing corresponding to said spools, substantially as described. 5th. A display cabinet, comprising a casing, spools mounted therein in vertical series, the spools located in alternate series being arranged on the same horizontal plane, and openings formed in said casing corresponding to said spools, substantially as described. 6th. A display cabinet, comprising a casing, spools mounted therein, and openings formed in said casing corresponding to the spools, said openings being arranged to allow of a comparison of the varieties of the article located on the spools, substantially as described. 7th. A display cabinet, comprising a casing, spools mounted therein, and openings formed in said casing, said openings being arranged in series, each series being arranged in oblique alignment, substantially as described. 8th. A display cabinet, comprising a casing, vertical partitions arranged therein, bearings formed in said partitions, said bearings being arranged in horizontal alignment, spools removably mounted in said bearings, and openings formed in said casing corresponding to said spools, substantially as described. 9th. A display cabinet, comprising a casing, vertical partitions arranged therein, bearings formed in said partitions in series, each series being in horizontal alignment, spools mounted in said bearings and openings formed in said casing, corresponding to said spools, substantially as described. 10th. A display cabinet, comprising a casing, vertical partitions arranged therein, bearings formed in said partitions in series, each series being in horizontal alignment, spools mounted in said bearings, the spools in alternate spaces between said partitions being arranged on the same horizontal plane, and openings formed in said casing corresponding to said spools, substantially as described. 11th. A display cabinet, comprising a casing, vertical partitions arranged therein, bearings formed in said partitions, spindles removably located in said bearings, spools removably located on said spindles, and openings formed in said casing corresponding to said spools, substantially as described. 12th. A display cabinet, comprising a casing, spools mounted therein in vertical series the bearings for the spools in each series being out of vertical alignment, and openings formed in said casing in series corresponding to the arrangement of spools, substantially as described. 13th. A spool for display cabinets, comprising a core having a central longitudinal opening, and discs arranged at opposite ends of said core, said discs having an opening corresponding to the said longitudinal opening, substantially as described. 14th. A display cabinet, comprising a casing, spools mounted therein in vertical and

horizontal series, the bearings for the spools in each vertical series being out of vertical alignment, and openings formed in said casing in series corresponding to the alignment of spools, substantially as described. 15th. A display cabinet, comprising a casing, vertical partitions arranged therein, the front face of each of said partitions being arranged inclined to the vertical plane thereof, bearings formed in said partitions parallel to the front face of said partitions, and spools removably mounted in said bearings, substantially as described. 16th. A display cabinet, comprising a casing, and spools removably located therein in vertical and horizontal series, substantially as described.

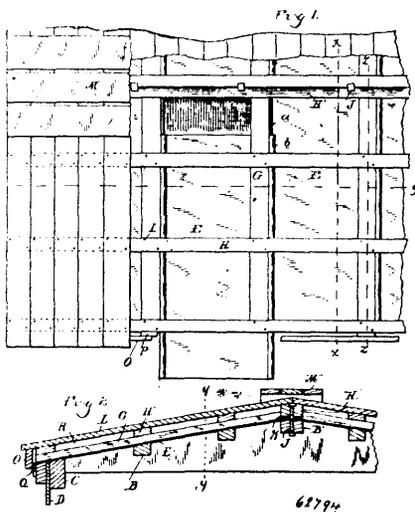
**No. 62,793. Journal Packing.** (*Garniture de tourillon.*)



Albert C. Smith, Saco, Maine, U. S. A., 2nd March, 1899; 6 years. (Filed 9th February, 1899.)

*Claim.*—1st. A plate for the purposes described provided in its working face with oil conducting grooves or cavities having communication with the opposite side of the plate, a packing groove in said working face beyond and completely enclosing or encircling the oil conducting grooves or cavities, which packing groove has no communication with the opposite sides of the plate, whereby when the said groove is packed as described no oil can escape beyond its sides or ends, substantially as described. 2nd. A plate for the purposes described, provided in its working face with oil conducting grooves or cavities communicating with the opposite or exterior portion of the plate, a packing groove in said working exterior to and completely enclosing or encircling the said oil conducting grooves or cavities and out of communication with the opposite face of the plate and the outer marginal edge of the working face, beyond said packing groove, being cut away or rabbetted on all sides, whereby when the packing groove is packed with its oil excluding packing no oil can pass therebeyond and contact of a moving part with an unsealed part of said plate be prevented, substantially as described.

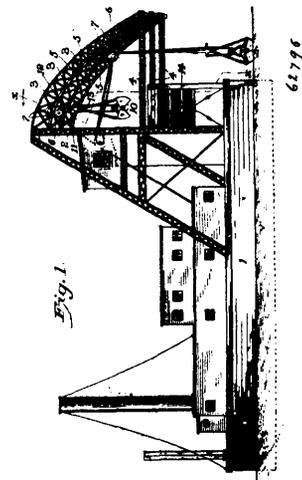
**No. 62,794. Car Roof.** (*Toiture de chars.*)



Charles H. Hutchins, Detroit, Michigan, U. S. A., 2nd March, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—1st. In a double car roof, the combination of a main roof frame supported upon the car sides and comprising purlins and carlins, a continuous sheet metal covering laid upon said carlins and formed of a series of plate sections extending from the eaves to the ridge, standing joints formed at the edges of the sections which from sliding connections between the same and an upper roof frame having carlins resting upon said plates, directly above the carlins of the main frame, purlins connecting said carlins, a roof covering on the purlins, and a detachable fascia at the outer ends of the super roof, the sections of the sheet metal covering being removable upon the removal of said fascia. 2nd. In a double car roof, the combination of a main roof frame supported upon the sides of the car and comprising purlins and carlins, a continuous sheet metal covering laid upon said carlins and formed of a series of plate sections extending from the eaves to the ridge, standing joints formed at the edges of the sections which form sliding connections between the same, an upper roof frame having carlins resting upon said metal plates vertically above the carlins of the main roof frame and adjacent to said standing joints, purlins connecting and carlins, a roof covering on the purlins, and a detachable fascia at the outer ends of the super roof, the sections of sheet metal being removable upon the removal of the fascia.

**No. 62,795. Dredging Apparatus.** (*Appareil à draguer.*)



William H. O'Hara, New York City, New York, U. S. A., 2nd March, 1899; 6 years. (Filed 16th February, 1899.)

*Claim.*—1st. In a dredging apparatus, the combination of a plurality of bow jibs carrying inclined tracks, trolley carriages adapted to travel on said tracks, a series of independent digging clams suspended from said carriages, means for operating said clams, the single inclined chute supported by the dredging boat, and means for effecting the delivery of said clams in dumping position at a uniform distance from said chute, substantially as set forth. 2nd. In a dredging apparatus, the combination of a plurality of bow jibs secured to and overhanging the dredging boat and provided with tracks, the inclined chute supported at the bow of said boat immediately beneath the upper portions of said tracks, the trolley carriages provided with trolley-wheels adapted to travel on said tracks, the two pulleys journaled in the lower portion of each trolley carriage, the digging clams, the cables extending from said clams over said pulleys, suitable mechanism for hoisting and lowering said cables, and means whereby said clams are held in suspension over said chute at a uniform distance therefrom, substantially as set forth. 3rd. In a dredging apparatus, the combination of a plurality of jibs secured side by side to and overhanging the dredging boat and provided with tracks, the inclined chute supported at the bow of the boat immediately beneath the upper portions of said tracks, carriages adapted to travel along said tracks, the digging clams suspended to travel along said tracks, the digging clams suspended from said carriages, cables attached to said clams, and means whereby the clams are delivered in dumping position immediately above said chute and at the same distance therefrom, substantially as set forth. 4th. In a dredging apparatus, the combination of a plurality of jibs arranged side by side and secured to and overhanging the dredging boat and provided with tracks in different horizontal planes, the chute supported at the bow of the boat immediately beneath the upper portions of said tracks and inclined to a plane parallel with the inclined plane passed through said tracks, the carriages provided with trolley adapted to travel on said tracks and having journaled in the lower portions pulleys, the digging clams, and the cables extending from said clams over said pulleys to suitable hoisting and lowering mechanism, substantially as set forth.

**No. 62,796. Nut Lock. (Arrête-écrou.)**

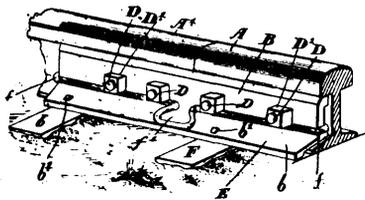


Fig. 1.



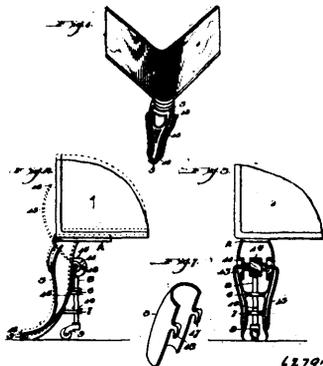
Fig. 2

62796

James Drinkwater, Winchester, Ontario, Canada, 2nd March, 1899; 6 years. (Filed 11th February, 1899.)

*Claim.*—The combination with the rails, the fish-plate provided with a base flange and bolts and nuts, of a spring bar secured between the nuts and the flange of the fish-plate, a central arched portion or loop, and hooked ends arranged to enter the recesses behind the fish-plate, as and for the purpose specified.

**No. 62,797. Culinary Lifting Device. (Appareil de cuisine.)**



62797

S. Charles Entwistle, Pittsburg, Pennsylvania, U.S.A., 2nd March, 1899; 6 years. (Filed 11th January, 1899.)

*Claim.*—1st. In a lifting device for stoves, means for operating the same operated on the front of a stove leg, substantially as shown and described, 2nd. In a device of the character described, a stove leg, a pair of extensions or guides formed integral with its inner face, a pintle operating through the said guides or extensions having a caster or roller secured to its lower end, an operating shaft, an eccentric mounted on the shaft adapted to be brought into engagement with the upper end of the pintle, and means operating at the front of the stove leg for operating said eccentric, substantially as shown and described. 3rd. In a lifting device for stoves, the combination of a stove leg, a pair of extensions formed integral at its inner face, a pintle operating through said extensions and suitably secured to a caster or roller, and means operating against said pintle operated by a lever at the front of the stove leg for elevating the stove, substantially as shown and described. 4th. In a lifting device for stoves, the combination of a stove leg, a pair of extensions formed integral with the inner face of said stove leg, one above the other, a pintle operating through said extensions having a roller or caster secured to its lower end, an operating shaft carrying an eccentric adapted to be brought into contact with the upper end of said pintle, means for securing the said shaft in position formed integral with the inner face of said legs, and an operating lever connected to each end of said shaft adapted to be operated at the front of the stove leg, substantially as shown and described. 5th. In a lifting device for stoves, a pair of extensions formed integral on its inner face, one above the other, a pintle operating through said extensions having a caster secured to its lower end, and means operated by the lever arranged on the front of the stove leg to be brought into contact with the said pintle for lifting the stove, substantially as shown and described.

**No. 62,798. Grain Cleaner and Separator. (Nettoyeur et séparateur de grain.)**

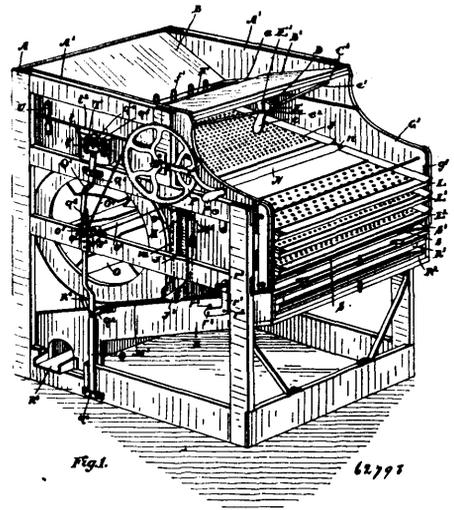


Fig. 1.

62798

The Toronto Grain and Seed Cleaner and Grader Manufacturing Co., assignee of Thomas Henry Cooper, all of Toronto, Ontario, Canada, 6th March, 1899; 6 years. (Filed 9th February, 1899.)

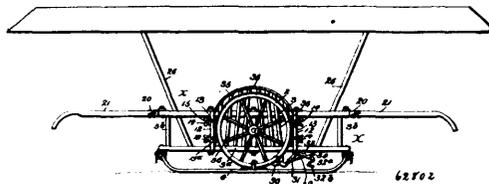
*Claim.*—1st. In a grain cleaner and separator, the combination with the feed hopper located at the upper portion of the machine and held stationary in the frame and having inclined ends converging to the centre and leaving a suitable orifice, of an adjustable closing board for such orifice supported in suitable guideways at the side and provided with a rack, and a quadrant suitably pivoted on the frame meshing with such rack and provided with a handle whereby it may be manipulated, as and for the purpose specified. 2nd. In a grain cleaner and separator, the combination with the feed hopper located at the upper portion of the machine, and held stationary in the frame, and having inclined ends converging to the centre and leaving a suitable orifice, of an adjustable closing board for such orifice supported in suitable guideways at the side and provided with a rack, and a quadrant pivotally held on a suitable spring rod extending across the frame and a bracket secured at the bottom of the end board and provided with a notch through which such spring rod extends and which is designed to limit its inward spring, as and for the purpose specified. 3rd. In a grain cleaner and separator, the combination with the feed hopper located at the upper portion of the machine and held stationary in the frame and having inclined ends converging to the centre and leaving on a suitable orifice, of the cross-bar extending underneath one edge of the end bar in proximity to the orifice and provided with upwardly extending fingers or loops, the brackets for supporting the rod, the bell crank pivotally connected to one end of the bar, pivotally supported on the frame, and pivotally connected to a cross-bar on the upper longitudinal vibratory shoe, as and for the purpose specified. 4th. In a grain cleaner and separator, the combination with the feed hopper and upper shoe driving movement as specified and provided with a screen beneath the orifice, of the curvulate hopper inclined to one side and the downwardly extending side spout leading therefrom and having a lateral extension outside the shoe, as and for the purpose specified. 5th. In a grain cleaner and separator, the combination with the feed hopper, of the upper shoe and a suitable screen located beneath the hopper, and a riddle extending the length of such screen and suitably supported, and a flexible apron abutting the outer end of the screen and extending partly over the riddle, as and for the purpose specified. 6th. In a grain cleaner and separator, the combination with a substantially cylindrical fan casing held in a stationary portion of the machine and having an orifice at the front side thereof and a fan having the shaft suitably journaled on the frame and means for driving such fan, of the shoe having the inclined directing boards M<sup>2</sup>, M<sup>3</sup> and M<sup>4</sup>, and the riddles suitably supported on the shoe in the path of the blast formed by such directing boards, as and for the purpose specified. 7th. In a grain cleaner and separator, the combination with a substantially cylindrical fan casing held in a stationary portion of the machine and having an orifice at the front side thereof and a fan having a shaft suitably journaled on the frame and means for driving such fan, of the shoe having the inclined directing boards M<sup>2</sup>, M<sup>3</sup> and M<sup>4</sup>, and the riddles suitably supported on the shoe in the path of the blast formed by such directing boards and the tail-board 3 having the limiting metal straps and rod extending through such straps, as and for the purpose specified. 8th. In a grain cleaner and separator, the combination with the fan casing and fan and the upper shoe suitably driven and having the directing boards M<sup>2</sup>, M<sup>3</sup> and M<sup>4</sup>, and riddles, of the lower shoe having suitable screens and spouts leading therefrom and an apron connected to the front end of the directing board M<sup>4</sup> and extending



working face being in position with its longitudinal area disposed obliquely transverse of the line of its working movement, and the combination adapted for yielding to permit the work-members to be moved, during the operation, for shifting the plane of the working faces, substantially as described. 3rd. A tool of the character indicated, comprising in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier, holding the work-members in circular series, with the said working faces disposed outwardly and forming collectively, an approximately circular circumferential plane, each work-member being in position with its longitudinal area disposed obliquely transverse of the line of its working movement, the combination being adapted for yielding to permit the work-members to be moved inwardly, during operation, for shifting the plane of the working face, and the relative arrangements of the combination operating to cause the said movements of the work-members inwardly to take place in paths or lines of movement approximately at right angles to the axis of said circumferential plane, substantially as described. 4th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier, for holding the work-members in series one after another, with said working faces disposed outwardly, each working face being disposed obliquely transverse of the line of its working movement and the combination adapted for yielding to permit the work-members to be moved inwardly, during operation, for shifting the plane of the working face, and means for actuating the members yielding in the direction opposed to said inward movements, substantially as described. 5th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier for holding the work-members in circular series with the said working faces disposed outwardly and collectively forming an approximately circular circumferential plane, the combination being adapted for yielding to permit the work-members to be moved inwardly, during operation, for shifting the plane of the working face, and stop contrivances arranged for limiting the amount of said movement outwardly, substantially as described. 6th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each a grooved outer working face, and means carried by the carrier, holding the work-members in circular series, with the said working faces disposed outwardly, and forming collectively an approximately circular circumferential plane, each work-member being in position with the groove in its said working face disposed obliquely transverse of the line of its working movement, and the combination adapted for yielding to permit the work-members to be moved, during operation, for shifting the plane of the working face, substantially as described. 7th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face carrying the ribbed or like angular formation, 7, and means carried by the carrier for holding the work-members in circular series with the said working faces disposed outwardly and collectively from an approximately circular circumferential plane, each work-member being in position with the said angular formation disposed obliquely transverse of the line of its forward movement, and the combination adapted for yielding to permit the work-members to be moved inwardly, during operation, for shifting the plane of the working face, substantially as described. 8th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier for holding the work-members in circular series with the working faces disposed outwardly and collectively forming an approximately circular circumferential plane, and the combination adapted for yielding to permit of the work-members rocking in direction of the line of working movement, substantially as described. 9th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier for holding the work-members in circular series, with the working faces disposed outwardly and collectively forming an approximately circular circumferential plane, and the combination adapted for yielding to permit the work-members to be moved inwardly and rocked longitudinally, substantially as described. 10th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of independent work-members having each an outer working face of less distance transversely than the transverse or width distance of the tool, and means carried by the carrier, and holding the work-members in circular series, with said working face disposed outwardly and collectively forming an approximately circular circumferential plane, each working face being positioned with its longitudinal axis obliquely transverse to the line of its working movement, and the combination adapted for yielding to permit the work-members to be moved, during operation, for shifting the plane of the working face, substantially as described. 11th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of independent work-members having each an oblong outer working face of less distance transversely throughout its length than the transverse or width distance of the tool, and means carried by the carrier, holding the work-members in circular series, with said working faces disposed outwardly and collectively forming an approximately circular circumferential plane, each working face being in position with its longitudinal axis obliquely transverse to the line of its working movement, and the combination

adapted for yielding to permit the work-members to be moved, during operation, for shifting the plane of the working face, substantially as described. 12th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of independent work-members having each an outer working face of less distance transversely than the transverse or width distance of the tool, and means carried by the carrier, and holding the work-members in circular series with said working faces disposed outwardly and collectively forming an approximately circular circumferential plane, each working face being positioned with its longitudinal axis obliquely transverse to the line of its working movement, the combination being adapted for yielding to permit the work-members to be moved, during operation, for shifting the plane of the working face, and the relative arrangement of the combination operating to cause the said movement of the work-members to take place in a path of line of movement approximately at right angles to the axis of said carrier, substantially as described. 13th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier, holding the work-members one after another in circular series, and side by side transversely, whereby the said working faces are disposed outwardly and forming collectively an approximately circular circumferential plane, a plurality of working faces being included in the transverse or width section of the plane, and the combination being adapted for yielding to permit the work-members to be moved, during operation, for shifting the plane of the working face, substantially as described. 14th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier, holding the work-members one after another in circular series and side by side transversely whereby the said work faces are disposed outwardly and forming collectively a substantially circular and circumferential plane, and a plurality of the working faces being included in the longitudinally and also the transverse section of the said plane and the combination adapted for yielding to permit the work-members to be moved, during the operation, for shifting the plane of the working faces, substantially as described. 15th. A tool of the character indicated, comprising, in combination, a carrier, a plurality of independent acting work-members, constructed with working faces and arranged for operation and movement inwardly, substantially as described, combined with means for resting and gauging the position of the work relatively to the working faces, substantially as described. 16th. A tool of the character indicated, comprising, a plurality of independently acting work-members, constructed with working faces and arranged for operation and movement inwardly, substantially as described, combined with means for resting and gauging the position of the work relatively to the working faces, the combination operating for resting the work in position with the axis of the heel in direction oblique to the axis of the carrier, substantially as described. 17th. A tool of the character indicated, in combination, a carrier, a plurality of work-members, having each an outer working face, and means carried by the carrier, holding the work-members in circular series with the said working faces disposed outwardly, and collectively forming an approximately circular circumferential plane, with open spaces between the members, and the combination adapted for yielding to permit the work-members to be moved during operation, for shifting the plane of the working face, combined with means for circulating air artificially through the said open spaces, substantially as described.

**No. 62,802. Prospecting Wheel. (Voiture pour mineurs.)**

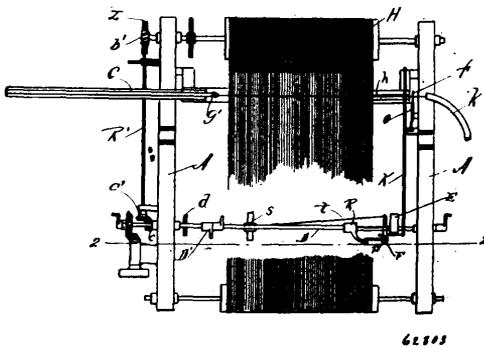


William H. P. Jones, Highland, California, U.S.A., 6th March, 1899; 6 years. (Filed 6th October, 1898.)

*Claim.*—1st. An apparatus for the purpose described, comprising a supporting frame formed of sections, a drive-wheel mounted in each section, a clamping mechanism adapted to interchangeably join the sections, whereby said sections may be adjusted to bring the wheels close together or separated for the purposes specified. 2nd. An apparatus for the purposes described, comprising a supporting frame formed of sections, a drive-wheel mounted in each section, a clamping mechanism for interchangeably joining the two sections, and a runner for each section adapted to be detachably connected therewith and having clamp devices for engaging the wheels, as set forth. 3rd. An apparatus for the purposes described, comprising a frame formed of two longitudinal sections, each section having a supporting-wheel journaled thereon and having on the opposite sides clamping members, clamp devices for engaging said members and holding the frame with the wheels turned either to their inward or outward positions, and handle members detachably and adjustably secured to the said frame sections, substantially as shown and for

the purposes described. 4th. An apparatus for the purposes described, comprising a suitable supporting frame having drive wheels, and having detachable vertically projecting brace members and a rain or sun shield connected to such members and disposed longitudinal of the apparatus, said shield being constructed to form a scow when inverted, as set forth. 5th. An apparatus as described, comprising a main or drive wheel mounted thereon, a supplemental or ice wheel journaled on such frame and geared with the main wheel, substantially as shown and for the purposes described. 6th. An apparatus for the purposes described, comprising a supporting frame and main drive wheel, detachable and adjustable handles, an ice wheel journaled on such handles and geared with the main wheel, substantially as shown and described. 7th. In an apparatus as described, the combination of the main frame, the drive wheel, the detachable runner, and clamp devices secured to the runner adapted to engage the wheel, said devices having elastic bearing blocks on which the said wheel is adapted to rest, as and for the purposes described. 8th. An apparatus for the purposes described, comprising a frame formed of longitudinal sections, a wheel mounted in each section, clamp devices for holding the said sections joined with the wheels in close relation, and a detachable rim having ice spurs or ribs, said rim being common to both wheels and means for holding said rim to such wheels, substantially as shown and described. 9th. In an apparatus as described, the combination with the supporting frame, said frame having vertical guides, of bearing boxes vertically adjustable in the guides, the axle journaled in such boxes, and the wheel fixedly held on the axle, substantially as shown and described. 10th. An apparatus for the purposes described, comprising a frame formed in two longitudinal sections, each having a supporting or drive wheel, clamp devices for interchangeably connecting the said frame sections, whereby to bring the wheels closely together or separated as specified, handle members adjustably and detachably connected to such frame sections, and a foot-operated brake mechanism for engaging the wheels having detent devices for holding the brakes to their operative position, substantially as shown and for the purposes described. 11th. In an apparatus as described, the combination with the longitudinal frame sections, said sections having clamp members 12, of clamp devices consisting of a bolt threaded at one end, a clamp shoe 15, having a smooth aperture for the passage of the said bolt, and a similar clamp 15<sup>a</sup>, opposing the clamp 15, having a threaded aperture for the threaded end of the bolt, as specified. 12th. In an apparatus as described, the combination with the frame sections and the supporting wheels, and means for propelling the apparatus, of vertically adjustable slide boxes for the spindles of the wheels, said boxes being mounted on spring cushion timbers, substantially as shown and described. 13th. An apparatus for the purposes described, comprising a frame formed of longitudinal sections, each section comprising longitudinal and vertical timbers detachably connected and having slide bearings, a combined drive and supporting-wheel for each section having its spindle mounted in said bearings, clamp devices for securing the two sections together to form them into one fixed frame body, handle members detachably and adjustably connected to the frame sections, runners detachably connected to the frame sections and having clamps for securing the wheels, foot operated brake devices on each frame section, said frame sections having guards covering the periphery and the outer sides of the wheels, all being arranged substantially as shown and described.

**No. 62,803. Loom for Weaving Hair Cloth.**  
(*Métier pour tisser le drap.*)

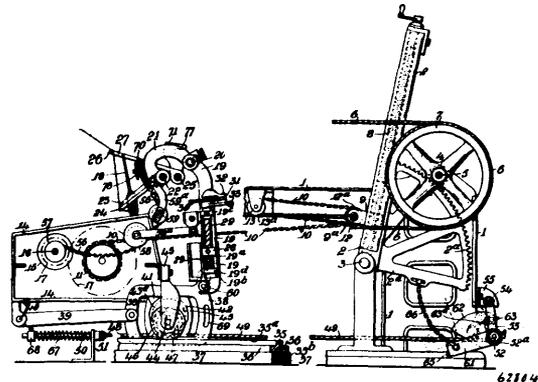


Charles Emmons Pervear, William Watson Harrison and John Holt, all of Pawtucket, Rhode Island, U.S.A., 6th March, 1899; 6 years. (Filed 12th October, 1898.)

*Claim.*—1st. The combination of the driving shaft, a cam fast thereon, an auxiliary shaft to operate the heddles, a cam arranged to slide on said auxiliary shaft, and engages with the cam on the driving shaft, a feeler to indicate a miss-pick, the mechanism operated by a cam on the driving shaft to move the sliding cam when indicated by the feeler, substantially as described. 2nd. The combination of the driving shaft, a cam fast thereon, an auxiliary shaft to operate the cloth take up roll, a sliding cam held on said auxiliary shaft and engaging with the cam on the driving shaft, a

feeler held to vibrate across the top of the lay, mechanism operated by a cam on the driving shaft and governed by the feeler device, to slide said sliding cam, mechanism connecting said auxiliary shaft with the cloth take up roll, and the cloth take up roll, substantially as described. 3rd. The combination of the driving shaft, a cam fast on said shaft, an auxiliary shaft, a cam sliding on said auxiliary shaft, a cam sliding on said auxiliary shaft, a gear on said auxiliary shaft, a short shaft held in a bearing on the end frame, a gear on said short shaft engaging with the gear on the auxiliary shaft, a bevel gear on the outer end of the short shaft, a horizontal shaft held in bearings across the end frame, a bevel gear on one end of said horizontal shaft engaging with the bevel gear on said short shaft, a worm on the front end of said horizontal shaft engaging with a worm gear on the cloth take up roll, a cloth take up roll, a feeler, and mechanism operated by a cam on the driving shaft to slide the said cam on the auxiliary shaft, substantially as described. 4th. In a stop motion for a loom, a driving shaft, a cam fast thereon, an auxiliary shaft, a cam sliding thereon, a feeler held to vibrate across the top of the lay, in combination with mechanism arranged to move the cam on the heddle operating shaft out of engagement with the driving cam and prevent the changing of the heddles when the nipper fails to take a hair, substantially as described. 5th. In a stop motion for a loom, the combination of a lay, a nipper to draw the hair into the shed, a feeler arranged to be struck by a hair when one is drawn in by the nipper, and mechanism for preventing the operation of the cloth take up roll when the nipper fails to take a hair, substantially as described. 6th. The combination of the lay, a driving shaft, a cam fast on said shaft, a nipper to draw a hair into the shed, a short horizontal lever held on a stand attached to the loom frame, a feeler pendant from one end of said short lever, an inverted T lever pivoted to the loom frame and arranged to have its upright arm strike the end of said horizontal lever when that lever is level, a short vertical shaft held in bearings on the end frame, a two armed dog held on and turning with said vertical shaft, a rod connecting the arm with cam on the heddle operating shaft, with cams fast on the driving shaft, to operate said dog and T-lever, substantially as described. 7th. In a hair cloth loom, the combination of a nipper, a short horizontal lever held to swing on a bearing, a feeler pendant from one end of short lever in the path of the hair web, an inverted T-lever, pivoted on the loom frame, and arranged to have its upright arm strike the end of said horizontal lever when said lever is level, a dog, a cam fast on driving shaft to operate said dog, said T-lever arranged to throw the dog out of the path of movement of said cam, mechanism connecting said dog with the heddles, and the cloth take up rolls substantially as described.

**No. 62,804. Mule.** (*Mule.*)



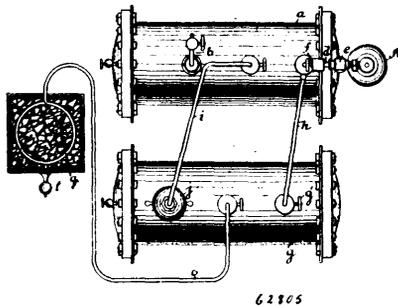
Joe Ramsden, Arthur Turton Taylor and James Ramsden, 10a Park Square, Leeds, York, England, 6th March, 1899; 6 years. (Filed 10th November, 1898.)

*Claim.*—1st. In a self-acting mule, the combination with the quadrant, of a set of moveable pulleys carried by the sliding block on the quadrant screw and a set of fixed pulleys carried in a bracket bolted to the side-framing of the headstock, and the re-duplication of the winding chain by passing it around the pulleys in each set alternately and finally attaching it to the sliding block, substantially as set forth. 2nd. In self-acting mules, a screw of varying pitch for lowering the position of the faller leg, as the building proceeds and gradually raising the front faller wire to guide the yarn in successive chases one above or upon the other, and the means for actuating said screw. 3rd. In self-acting mules the combination with the faller leg, of a separate or detached foot forming a part of said leg and adapted to be slid up and down thereon, a screw of variable pitch carried by the faller leg and working through a nut attached to the said foot for lengthening and shortening the faller leg, and the means for actuating the screw, substantially as set forth. 4th. In a self-actuating mule, for crosswinding the yarn, a rocker or frame actuated by means of a cam or eccentric for raising and lowering the faller leg, arranged and operated, substantially as herein shown and

described. 5th. In self-acting mules, the combination with the pivoted rocker or frame which carries the faller leg when the mule is winding-on, of an eccentric working in said rocker or frame and imparting to it, and to the faller leg, and front faller wire, an oscillatory up and down motion for crossing and recrossing the yarn, and the means for giving rotary motion to the eccentric, substantially as set forth. 6th. In self-acting mules, a rail for supporting the rocker in its traverse with the mule carriage, having a plain level surface on one side for the crosswinding motion, and on the opposite side the inclined surface of an ordinary copping rail for the ordinary plain winding motion and provided on its lateral edges with ribs adapted to engage and rest upon a channelled bar supported on the floor, on which bar the rail is reversible, substantially as set forth. In self-acting mules, the combination with the means for building up the cops and crosswinding the yarn thereon, of a barrel secured on the same shaft as the eccentric, cords attached at one end to the barrel and secured at their opposite ends, one to a yielding spindle or bar, and the other to a lever arm at the outer end of the headstock, a catch lever carried by said lever arm, and adapted to be engaged with a fixed shoulder when the lever arm is forced outward by the quadrant on the outward traverse of the mule carriage and to be disengaged from said shoulder just before the carriage arrives at the end of its return traverse, and the means for engaging and disengaging the catch lever, substantially as set forth. 8th. In self-acting mules, the combination with the faller shafts, of levers mounted thereon, a locking pin for locking said levers together, and consequently the fallers, at the termination of each successive winding on and releasing them again after each successive drawing and spinning of the yarn, and the chain connection for restraining the initial upward movement of the counterfaller when released, substantially as set forth.

**No. 62,805. Apparatus for Carbonating Liquids.**

*(Appareil pour la carbonisation des liquides.)*

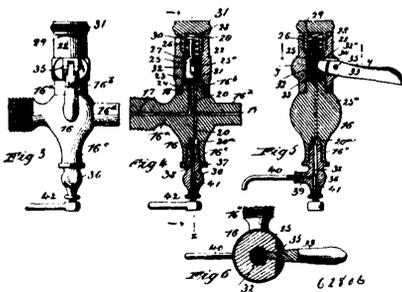


Otto Waldemar Ackerman, New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 22nd November, 1898.)

*Claim.*—The combination in carbonating apparatus, of the liquid and gas receiving cylinder, having suitable liquid and gas inlet connections, the cylinder for reception of the carbonated liquid, branch pipe for admitting gas to the latter cylinder, pressure-regulating cock in said branch pipe, porous percolator detachably mounted on the cylinder for reception of the carbonated liquid, and the pipe connecting the liquid-receiving cylinder with the percolator, said pipe having the drop extension in said cylinder, substantially as described.

**No. 62,806. Method of Carbonating Liquids.**

*(Méthode de carbonisation des liquides.)*



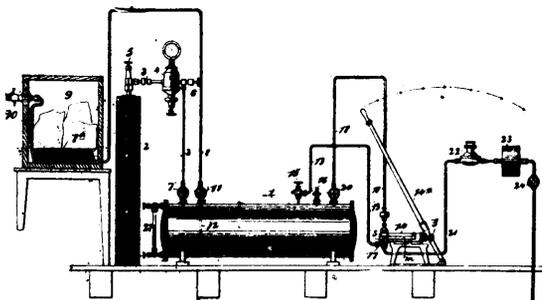
Peter E. Malmstrom and Otto W. Ackerman, both of New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 22nd November, 1898.)

*Claim.*—1st. The method of carbonating liquid, consisting in charging with gas a pair of connected cylinders or chambers, in then withdrawing the gas from one of the cylinders or chambers, in then charging that cylinder or chamber with liquid, and in then admitting gas, under increased pressure, to the cylinder or chamber

containing the liquid and causing the liquid to pass to the other cylinder or chamber to commingle with the gas therein, substantially as described. 2nd. In a carbonating apparatus, the combination of two cylinders or chambers, connected together, a gas and a liquid inlet for one cylinder, both independent of the connection between the cylinders, an outlet for the other cylinder, and means to control the supply of gas to the cylinder, substantially as described. 3rd. In a carbonating apparatus, the combination of two cylinders or chambers connected together, a check valve in the passage between said cylinders, a gas and a liquid inlet for one cylinder, an outlet for the other cylinder, and means to control the supply of gas to the cylinders, substantially as described. 4th. In a carbonating apparatus, the combination of two cylinders or chambers, a coil interposed between them through which they connect, a gas and a liquid inlet for one cylinder, an outlet for the other cylinder, and means to control the supply of gas to the cylinder, substantially as described. 5th. The combination of two cylinders or chambers, a coil interposed between them through which they connect, a check valve between the coil and one cylinder, a gas and a liquid inlet for said cylinder, and means to control the supply of gas to said cylinder, substantially as described. 6th. The combination of two cylinders or chambers, a coil connected with one cylinder, a filter interposed between the other cylinder and the coil, an outlet from said cylinder, and means for admitting gas and liquid to the other cylinder, substantially as described. 7th. The combination of two cylinders, connected together, a gas inlet for one cylinder, a liquid inlet therefor, a check valve to control the supply of liquid to said cylinder, and an outlet for the other cylinder, substantially as described. 8th. The combination of two cylinders, connected together, a check valve interposed between said cylinders, a gas inlet for one cylinder, a liquid inlet therefor, a check valve to control the supply of liquid to said cylinder, and an outlet for the other cylinder, substantially as described. 9th. The combination of two cylinders, a coil interposed between and connected with said cylinders, a gas inlet for one cylinder, a liquid inlet therefor, a check valve to control the supply of liquid to said cylinder, and an outlet for the other cylinder, substantially as described. 10th. The combination of two cylinders, a coil interposed between and connected with said cylinders, a check valve between said coil and one cylinder, a gas inlet for said cylinder, a liquid inlet therefor, a check valve to control the supply of liquid thereto, and an outlet for the other cylinder, substantially as described. 11th. The combination of cylinders 1 and 2, a coil connected with cylinder 1, a check valve between said coil and cylinder, a filter connected with cylinder 2, and also connected with said coil, a gas inlet for cylinder 1, a liquid inlet therefor, a check valve to control the supply of liquid to cylinder 1, and an outlet for cylinder 2, substantially as described. 12th. The combination with a pair of cylinders or chambers connected together and provided with a gas and a liquid inlet and an outlet, of a cock connected with the gas inlet and having inlet and outlet ways a valve to control the inlet ways and independent means to control the outlet ways, substantially as described. 13th. The combination with a pair of cylinders or chambers connected together and provided with a gas and liquid inlet and an outlet, of a cock connected with the gas inlet and having inlet ways that lead to a common chamber, a valve in said chamber to control said ways, an outlet in said cock and independent means to control said outlet, substantially as described. 14th. The combination of a pair of cylinders or chambers connected together and provided with a gas and a liquid inlet and an outlet, of a cock connected with the gas inlet and comprising a casting having a way extending inwardly to a chamber, another way extending inwardly to said chamber, a valve in said chamber to control said ways, said casting also having an outlet means to control said way, substantially as described. 15th. A cock comprising a casting having two ways leading to a chamber, a valve in said chamber to control said ways, an outlet way, and means to control the same, substantially as described. 16th. A cock comprising a casting having two ways leading to a chamber, a valve in said chamber to control said ways, an outlet way leading from one of the other ways, and means to control said outlet way, substantially as described. 17th. A cock comprising a casting having ways 17, 18, leading to a chamber, a way 20 also leading to said chamber, a valve to control said ways, a way 19 leading to the way 20, and means to control the outlet from way 20, substantially as described. 18th. A cock comprising a casting having four hubs, ways leading through two adjacent hubs to a chamber, a way leading through two opposed hubs to said chamber, a way leading through the other hub and connected with the last mentioned way, a valve in said chamber to control the ways leading thereto, and means for controlling the outlet way, substantially as described. 19th. A cock comprising a casting having an inlet way, a way extending through the casting, a plug connected with said way and having a bore and an outlet, means to control said outlet, and means to control the inlet ways, substantially as described. 20th. A cock having a pair of ways leading to a chamber, a plunger in said chamber to control said ways, means for operating said plunger, an outlet way leading to one of said ways, and means for controlling said outlet way, substantially as described. 21st. A cock comprising a casting having inlet ways, a sleeve connected with said casting and to which said ways lead, a plunger in said sleeve, means for operating said plunger, and outlet ways in said casting, and means to control said way, substantially as described. 22nd. A cock comprising a casting

having inlet ways, a sleeve connected with said casting to which said ways lead, a plunger to control said ways, a lever to operate said plunger, an outlet way, and means to control the same, substantially as described. 23rd. A cock comprising a casting having inlet ways, a sleeve connected with said casting to which said ways lead, a plunger to control said ways, a spring and lever to operate said plunger, a plug or cap to adjust the tension of said spring, an outlet way in said casting, and means to control said outlet, substantially as described. 24th. A cock comprising a casting having ways, a sleeve connected with said casting to which said ways lead, a spring acting plunger in said sleeve to control said ways, a lever pivotally carried by said sleeve to control said plunger, an outlet way in said casting and means to control said way, substantially as described. 25th. A cock comprising a casting having inlet ways, a sleeve connected with said casting to which said ways lead, a sleeve within said sleeve, a spring acting plunger within the second mentioned sleeve, a lever pivotally carried by the first mentioned sleeve and projecting through an opening in the inner sleeve and into a recess in said plunger, an outlet way in said casting, and means to control said outlet, substantially as described. 26th. A cock comprising a casting having ways leading to a common side thereof and to a chamber carried by said casting, a plunger in said chamber to control said ways, and means for operating said plunger, substantially as described. 27th. A cock comprising a casting having a way leading from one side to another, a way leading from the latter side to another side, said casting having a chamber to which both of said ways lead, a plunger in said chamber to control said ways, and means to control said plunger, substantially as set forth.

**No. 62,807. Apparatus for Carbonating and Dispensing Liquids.** (*Appareil pour la carbonisation et dispensation des liquides.*)

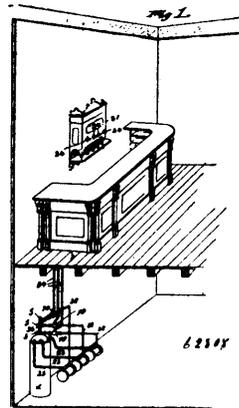


Peter E. Malmstrom, New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 22nd November, 1898.)

*Claim.*—1st. In an apparatus for carbonating liquids, a cylinder or vessel connected by a pipe with a gasholder, a pump exterior to and connected with said cylinder by two pipes, both of said pipes being independent of the pipe from the gasholder, means for supplying said pump with a liquid, and valves to control the passage of gas from said cylinder to said pump through one pipe, and to control the passage of the same gas and a liquid from said pump to said cylinder through the other pipe, substantially as described. 2nd. The combination of a cylinder or vessel, a pump, a pipe connecting them for the passage of gas to the pump, a pipe connecting said cylinder with said pump for the passage of liquid from the latter to the former, valves to control the passage through said pipes, and a nozzle connected with the second-mentioned pipe within said cylinder, said nozzle having its end closed and slits in its side arranged to converge toward a point exterior thereto, substantially as described. 3rd. The combination with the gasholder 2, a force pump having a compression chamber, the cylinder 1, pipes and controlling devices connecting the gasholder with the pump chamber through the gas space of cylinder 1, a return pipe connecting the pump and gas space of cylinder 1, independently of the latter's connection with the gasholder, and a source of liquid supply connected with the pump chamber, substantially as described. 4th. The combination with the detachable gasholder 2, a force pump having a compression chamber, the cylinder 1, pipes and devices controlling the passage of the gas from the holder through the gas space of the cylinder to pump chamber, a return pipe connecting the pump chamber and gas space of the cylinder, and a source of liquid supply connected with the pump chamber, a dispensing faucet, the cooling chamber, a coil in said chamber, and pipes connecting the liquid space of the cylinder 1, with the coil and the latter with the faucet independently of the before-mentioned pipes, substantially as described. 5th. The combination with the gasholder 2, a force pump, the cylinder 1, pipes and devices controlling the passage therethrough, said pipes connecting the gasholder with the pump through the cylinder, a return pipe connecting the pump and cylinder, and a source of liquid supply connected with the pump, a dispensing faucet, the cooling chamber, a coil in said chamber, and pipes connecting the cylinder 1, with the coil and the latter with the faucet, substantially as described. 6th. The combination with the gas-holder

2, the cylinder 1, a force pump, a pipe connecting the inlet of the pump with the cylinder 1, a water-supply connected with said inlet, a pipe leading from the outlet of the pump to said cylinder 1, a pipe connecting the gas-holder and cylinder 1, and means for equalizing the water and gas pressure at the pump inlet, substantially as described. 7th. The combination with the gas-holder, the cylinder 1, the pipe 12 leading to the fluid space in said cylinder and extending exteriorly of the cylinder by a pipe 8 to a suitable dispenser, a pipe 3 extending between the gasholder 2 and the gas space in cylinder 1, a pipe 13 leading from the gas space in the cylinder to a force pump, a pipe 21 leading to the pump from a fluid supply, and a pipe 18 leading from the pump and terminating in the split nozzle 25 extending into the gas-space of the cylinder 1, substantially as described. 8th. In a device for carbonating liquids, the combination with the longitudinally disposed cylinder 12, the gasholder 2, the valve regulated pipe 3 leading from the holder to the gas space of said cylinder, a pump having a compression chamber, a pipe 21 leading from a liquid supply to the inlet of said chamber, a pipe 13 leading from the gas space of said cylinder to said pump chamber, and a pipe 18 leading from said pump chamber to the gas space in said cylinder and provided at its end with a slotted tube, substantially as described. 9th. In a device for carbonating liquids, the combination with the horizontally disposed cylinder 12, the gasholder 2, the valve regulated pipe 3 leading from the holder to the gas space of said cylinder, a pump having a commingling and compression chamber comprising two separate and valve controlled compartments, a barrel having a plunger in communication with one of the compartments, and a by-pass in communication with the barrel and the other compartment, inlet and outlet compartments above and below the compression compartments, a pipe 21 leading to the inlet compartment, a pipe 13 leading from the gas space of cylinder 12 to said inlet compartment, a pipe 18 leading from the outlet compartment to the gas space of said cylinder, and means for operating said plunger, substantially as described. 10th. In a device for carbonating and dispensing liquids, the combination with the horizontally disposed cylinder 12, the gasholder 2, the valve regulated pipe 3 leading from the holder to the gas space of said cylinder, a pump having a compression chamber, a pipe 21, leading from a liquid supply to the inlet of said chamber, a pipe 13 leading from the gas space of said cylinder to said pump chamber, a pipe 18 leading from said pump chamber to the gas space in said cylinder, a pipe 12 leading from the bottom of said cylinder, a cooling box, a pipe coil in said box, a pipe 8 leading from the pipe 12 to one end of said coil and having a valve 11, and a faucet 10 exterior to said box and in communication with the other end of said coil, substantially as described.

**No. 62,808. Apparatus for Making and Dispensing Mineral Waters.** (*Appareil pour la fabrication et dispensation des eaux minerales.*)



Peter E. Malstrom, New York City, New York U.S.A., 6th March, 1899; 6 years. (Filed 22nd November, 1898.)

*Claim.*—1st. In an apparatus of the class described, the combination of the following instrumentalities, a holder containing carbonated water and having a top gas pressure, a receptacle containing a mineral salt solution, a commingling chamber in which the carbonated water and mineral salt solution is combined, a pipe leading from the carbonated water holder to the said chamber, a pipe leading from the gas area to the said receptacle a pipe leading from the said receptacle to the said chamber, and check-valves located at each of the flow of said fluids, substantially as described. 2nd. The combination, in an apparatus of the kind described, of the holder, the solution-receptacle, the commingling chamber, a cooling-box, a dispensing-faucet, and independent pipes with controlling valves leading from the holder to said receptacle and to said chamber, and from the chamber to said faucet through the cooling box, substantially as described. 3rd. The combination, in an apparatus of the kind described, of the holder, the solution receptacle, the comming-

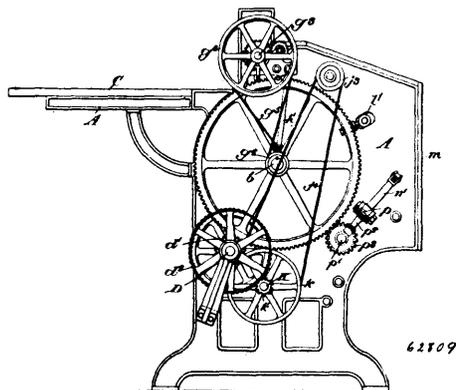
ling chamber, a pipe leading from the holder and to said receptacle, another pipe leading from said holder and to said chamber, a check valve in this pipe, another pipe leading from said receptacle to said chamber, and a check valve in the latter pipe, substantially as described. 4th. The combination, in an apparatus of the kind described, of the holder, the solution receptacle, the commingling chamber, a pipe leading from the holder to said receptacle and a valve in this pipe, another pipe leading from said holder to said chamber a valve and check in this pipe, a further pipe leading from said receptacle to said chamber, and a check valve in the latter pipe, substantially as described. 5th. In a device of the class described, the combination with the holder, of a commingling chamber, a pipe leading from said holder to the chamber having an interposed check valve, a receptacle, a pipe leading from the holder to the receptacle, a passage of restricted area extending between the chamber and said receptacle, and a check valve interposed in said passage, substantially as described. 6th. In a device of the class described, the combination with the holder, of a commingling chamber, a pipe leading from said holder to the chamber having an interposed check valve, a receptacle, a pipe of restricted internal area with an interposed check valve leading from said receptacle to said chamber, and a pipe leading from said holder to said receptacle having an internal area larger than the last mentioned pipe, substantially as described. 7th. The combination with the holder 1, and receptacle 6, the former being of greater containing capacity than the latter, a commingling chamber, pipes leading independently from the holder to said chamber and receptacle, a pipe of proportionately restricted internal diameter leading from the receptacle to said chamber, and independent check valves opposing the inlets to said chamber, substantially as described. 8th. The combination with the holder 1, having the upright siphon pipe 2, the chamber 10, a pipe with an interposed valve and check valve leading from the pipe 2, to the chamber 10, a receptacle 6, a pipe 25 having a valve 26, between the holder and receptacle, and the restricted siphon pipe 28, having an interposed check-valve extending to the chamber 10 and the receptacle 6, substantially as described. 9th. The combination with the upright holder 1, the upright siphon pipe 2 extending to the bottom and through the top of the holder, the commingling chamber 10, a pipe 20 extending between said chamber and pipe 2, and having an interposed valve 5 and a check-valve, a horizontally disposed receptacle 6, a pipe 25, leading from the top of the holder 1, to the top of the receptacle and having a valve 26, and a smaller pipe 28, having an interposed check-valve leading from the bottom of the receptacle 6 to the chamber 10, substantially as described. 10th. The combination with the holder 1, receptacle 6, and chamber 10, and the regulated passages between them, of the cooling box, a pipe coil therein, a dispensing faucet, and pipes 23, 34, leading from the coil to the chamber 10 and faucet respectively, substantially as described. 11th. The combination with the gasholder 1, the stand pipe 36, a series of receptacles as 6, a pipe with an interposed controlling valve leading from each of the receptacles to the gas space in the holder, the pipe 2 in the holder connecting the stand pipe 36, a separate commingling chamber for each receptacle, a pipe leading from each of the receptacles to its respective commingling chamber, a series of pipes leading from the stand pipe 36 to each of the commingling chambers, and valves interposed in the pipes leading to the said commingling chambers, substantially as described. 12th. The combination with the gasholder 1, the stand pipe 36, a series of separate receptacles as 6, a pipe with an interposed controlling valve leading from each of the receptacles to the gas space in the holder, the pipe 2 in the holder a separate commingling chamber for each receptacle, a pipe leading from each of the receptacles to its respective commingling chamber, a series of pipes leading from the stand pipe 36 to each of the commingling chambers, valves interposed in the pipes leading to the said commingling chambers, a cooling box and coils therein, a series of independent pipes 34 each leading from each of the commingling chambers to a separate coil in the cooling chamber, a series of dispensing faucets and separate pipes leading from each of the cooling coils, to said faucets, each of the faucets being in connection with each of the independent commingling chambers, substantially as described.

**No. 62,809. Bronzing Machine. (Machine à bronzer.)**

Rudolph Frank Emmerich and Frederick Vonderlehr, both of New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 5th November, 1898.)

*Claim.*—1st. In a bronzing machine, the combination with a carrier for the sheet to be bronzed, of a bronze distributing device comprising a hopper for containing the bronze, a roll for receiving the bronze from the hopper, a second roll for receiving the bronze from the face of the first-named roll, a swinging frame in which the second roll is mounted to rotate and means under the control of the movement of the carrier for simultaneously swinging the said second roll bodily away from its contact with the face of the carrier and stopping a rotary movement of the rolls, substantially as set forth. 2nd. In a bronzing machine, the combination with a sheet carrier, of a bronzing mechanism located in position to engage the sheet, the said bronzing mechanism comprising a plurality of bronzing pads and means for simultaneously rotating the pads and reciprocating them in a right line, substantially as set forth. 3rd. In a bronzing machine, the combination with the sheet carrier, of a bronzing mechanism located in position to engage the sheet, the said bronzing

mechanism comprising a carriage, a plurality of bronzing pads mounted in the carriage and means for simultaneously rotating the



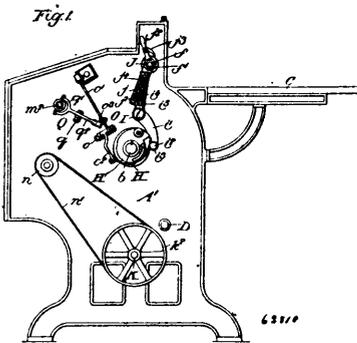
pads and reciprocating the pad carrying carriage in a right line, substantially as set forth. 4th. In a bronzing machine, the combination with the sheet carrier, of a bronzing mechanism located in position to engage the sheet, the said bronzing mechanism comprising a carriage, elongated pads carried by the carriage, the said pads being arranged in pairs with their longitudinal axes at substantially right angles to each other, each pair being arranged so that the pads will overlap each other as they are rotated and means for rotating the pads, substantially as set forth. 5th. A pad for bronzing machines of greater width at its opposite ends than at its middle portion. 6th. In a bronzing machine, the combination with the sheet carrier, of a bronzing mechanism comprising a carriage, pads carried by the carriage, a shaft mounted to rotate in the carriage and geared to the said pads for rotating them, means for rotating the shaft and means engaging the shaft for causing it and thereby the carriage to reciprocate as the shaft is rotated, substantially as set forth. 7th. In a bronzing machine, the combination with the sheet carrier, of a superfluous bronze removing roll mounted in position to engage the face of the carrier, a hinged scraper having its free edge connected with the roll support and means for adjusting the roll toward and away from the face of the carrier, substantially as set forth. 8th. In a bronzing machine, the combination with the sheet carrier, of a superfluous bronze removing roll mounted in position to engage the face of the carrier, a sieve for receiving the bronze from the said roll and means under the control of the movement of the carrier for reciprocating the sieve, substantially as set forth. 9th. In a bronzing machine, the combination with a sheet carrier, of a superfluous bronze removing roll mounted in position to engage the face of the carrier, a sieve for receiving the bronze from the said roll, means for reciprocating the sieve, a hopper for receiving the sifted bronze, a suitable receptacle and a conveyer for carrying the sifted bronze from the said hopper to the said receptacle, substantially as set forth. 10th. In a bronzing machine, the combination with a sheet carrier and drawing rolls, of means for positively removing the sheet from the carrier and directing it into engagement with the rolls, comprising a pair of cross bars, a stripper adjustably mounted on one of the said bars, with its edge in engagement with the face of the carrier, the said stripper being provided with a downwardly extended lip, and a guide mounted on the other cross-bar, the said guide having an upper arm arranged to overlap the said lip and a lower arm extending into close proximity to the meeting faces of the drawing rolls, substantially as set forth.

**No. 62,810. Bronzing Machine. (Machine à bronzer.)**

Rudolph Frank Emmerich and Frederick Vonderlehr, both of New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 5th November, 1898.)

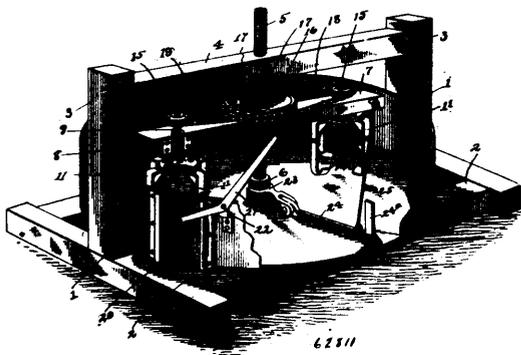
*Claim.*—1st. In a bronzing machine, a rotary sheet carrying cylinder, a bronze distributing roller and mechanism connecting the cylinder and the roller comprising means for adjusting the speed of the roller and means for adjusting the amount of rotation of the roller to adapt it for use in connection with different lengths of sheets, substantially as set forth. 2nd. In a bronzing machine, a rotary sheet carrying cylinder, a bronze distributing roller and mechanism under the control of the cylinder for determining the rotary movement of the bronze distributing roller comprising a cam carried by the cylinder shaft, a rocking lever carried by the roller shaft and an intermediate lever having one arm engaged with the cam and the other arm adjustably engaged with the roll lever, substantially as set forth. 3rd. In a bronzing machine, a rotary paper carrying cylinder, a bronze distributing roller and mechanism for controlling the movement of the said roller comprising a double cam carried by the cylinder shaft, and a connection between the said cam and the roller, substantially as set forth. 4th. A double cam comprising a stationary cam member and a rotary cam member arranged to co-act therewith, the one being provided with a gradually outwardly extended truck and the other with a rapidly

outwardly extended track and a connecting band or spring permanently secured to the outermost portion of one of the cam members



and arranged to be temporarily secured to the outermost portion of the other cam member for bridging the space between said outermost portions, substantially as set forth. 5th. A double cam comprising a stationary section and a movable section, the one being provided with a gradual outwardly extended track and the other with a rapid outwardly extended track, means for clamping the two members in any desired adjustment and a band or spring secured at one end to the outermost portion of the stationary section and having its free end telescoping within the movable member at its outermost section and means for temporarily locking the spring in position when the members have been adjusted relatively to each other, substantially as set forth. 6th. In a bronzing machine, a rotary sheet carrying cylinder, a bronzing mechanism, a rotary superfluous bronze removing roll and means under the control of the cylinder for simultaneously reciprocating the bronzing mechanism and a roll comprising a cam carried by the cylinder shaft, a rocking lever having one arm connected with said cam and the other with the bronzing mechanism and a second rocking lever having one arm connected with the first named rocking lever and its other arm connected with the said roll, substantially as set forth.

**No. 62,811. Mixing Machine. (Machine à mélanger.)**



Frank Charles Ferris, Columbus, Ohio, U.S.A., 6th March, 1898; 6 years. (Filed 15th November, 1898.)

*Claim.*—1st. In a mixing machine, the combination with a framework, a central shaft 5, journaled in said framework, a bar 7, carried on said shaft, a mixing pan, a rotary mixer carrying shaft journaled in said bar 7, and depending within said pan, of a fixed sprocket-wheel surrounding said central shaft and having an upper and lower set of sprocket teeth, smaller sprocket wheels on said mixer carrying shaft, and endless chains 18 and 19, respectively connecting said smaller sprocket-wheels with the lower and upper teeth of said central sprocket-wheel, substantially as and for the purpose specified. 2nd. In a mixing machine, the combination with the pan, a central socket projection in said pan, and a suitable framework, a rotatable vertical shaft journaled in said framework and pan, a transverse bar 7, carried on said shaft, mixer stems or shafts journaled on opposite sides of the centre of said bar 7, and radially arranged mixing arms connected with each of said mixer shafts, said arms being provided with inturned finger portions 14, sprocket-wheels carried on said mixer shaft and a scraper arm having its outer end portion detachably connected with the bar 7, and having its inner end portion detachably journaled on the central shaft receiving socket projection of the pan, of a stationary sprocket-wheel supported between said mixer sprockets, and a chain gear connection between said mixer sprockets and stationary sprocket-wheel, substantially as and for the purpose specified.

**No. 62,812. Explosive. (Explosif.)**

Ernest A. G. Street, Paris, France, 6th March, 1899; 6 years. (Filed 30th December, 1898.)

*Claim.*—In the manufacture of chlorated powders with a base of nitro or azo derivated dissolved in oil, the substitution, for the whole or part of the nitro or azo derivatives, of pitch, solid or pasty tars.

**No. 62,813. Process of Preserving Fruit Juices.**

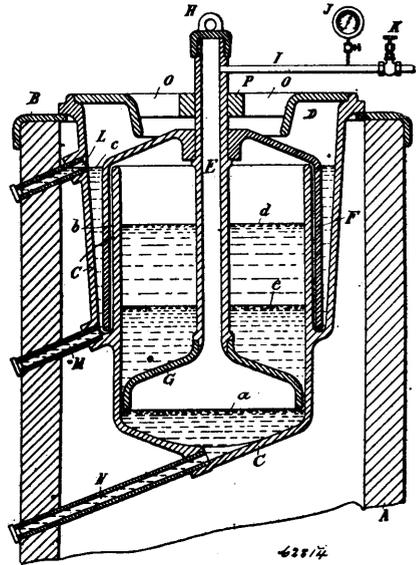
(*Procédé pour la préservation de jus de fruits.*)

Conrad Graf, Banning, California, U.S.A., 6th March, 1899; 6 years. (Filed 5th November, 1898.)

*Claim.*—The improved process of preserving fruit juices which consists in subjecting the juice to a temperature of 145° Fahrenheit, to prevent fermentation and promote sterilization, cooling and filtering the same in vacuo, to remove the sediment and prevent access of air, then subjecting the same to a temperature as above to insure final sterilization and hermetically sealing the same, substantially as and for the purpose set forth.

**No. 62,814. Manufacture of Caustic Alkalies.**

(*Fabrication d'alcali caustique.*)



Charles Ernest Acker, East Orange, New Jersey, U.S.A., 6th March, 1899; 6 years. (Filed 18th July, 1898.)

*Claim.*—1st. The process of making caustic alkali which consists in submitting a fused alloy containing an alkali metal to the direct action of steam, whereby the steam is decomposed and hydrogen gas and an alkaline hydrate are formed, and in immediately removing the hydrate thus formed whereby the steam is again permitted to come into direct contact with the alloy. 2nd. The herein described process which consists essentially in treating molten alloys of the alkali metals by the direct application of steam in such manner as to directly produce the alkali metal hydrate, and in the immediate removal of the hydrate from direct contact with the steam. 3rd. The process of making caustic alkali consisting in continuously submitting a fused alloy containing an alkali metal to the direct action of steam, thus forming hydrogen gas and an alkaline hydrate, and in continuously removing the hydrate thus formed. 4th. In a converter for use in making caustic alkali, the combination with a pot or receptacle mounted in a furnace, of a bell extending down into the receptacle, means for supplying steam to said bell, and means for permitting escape of hydrogen resulting from the decomposition of steam. 5th. In a converter for use in making caustic alkali, the combination with a pot or receptacle of a bell extending down into the same, means for supplying steam to said bell, and a liquid sealed joint through which may escape hydrogen resulting from the decomposition of steam without permitting ingress of air.

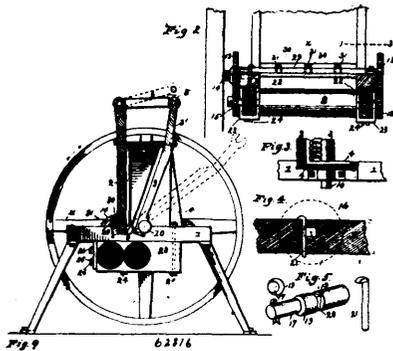
**No. 62,815. Explosive. (Explosif.)**

Frederick William Jones, Barwick near Ware, Hertford, England, 6th March, 1899; 6 years. (Filed 9th December, 1898.)

*Claim.*—1st. The herein described method of taming and regulating the combustion of granulated gunpowders, by covering the grains with a non-explosive substance, such as is herein before described applied in the form of a thin shell for the purpose and substantially as set forth. 2nd. The method of covering granulated explosives with solid substances which when melted are solvents for the substances of the grains, and subsequently finishing the covering shell and rendering it closely adherent to the grain by heating

the coated grains to a temperature above the melting point of the substances used for covering them for the purposes and substantially as herein set forth. 3rd. The herein described granulated gun powders tamed and regulated by being covered with non-explosive substances such as are hereinbefore described applied to the grains, substantially as set forth.

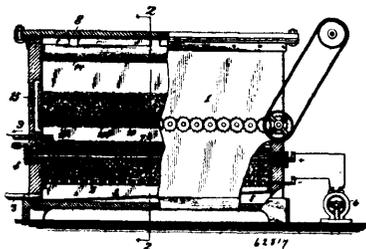
**No. 62,816: Stone Crusher. (*Broyeur de pierre.*)**



Francis H. Cook, Spokane, Washington, U.S.A., 6th March, 1899; 6 years. (Filed 30th November, 1898.)

*Claim.*—1st. The combination, with the fixed crushing-jaw, the movable jaw having the vertically extended arm 3<sup>1</sup>, provided with an open slot, or notch, on its upper end, and eccentric shaft on which the movable jaw is mounted, and the swinging arms 6, pivoted to the extension of the fixed jaw and having a transverse connecting rod which is adapted to enter the aforesaid slot, and to be freely disengaged therefrom, as shown and described, for the purpose specified. 2nd. The combination with box-like frames arranged horizontally and having integral partitions, a fixed roll whose shaft is journaled in such partitions, a movable roll and journal blocks therefor which are adapted to slide in said frames, screw bolts passing through such partitions, and blocks and springs for cushioning the same, as shown and described. 3rd. The combination with the fixed frame, and a shaft held in its top, of the fixed jaw, parallel arms pivoted on said shaft, and a pivoted jaw, having a detachable connection with said arms, substantially as shown and described. 4th. The combination with the fixed jaw, of the breakable supporting L-bar arranged horizontally at the base of the same, and bolted thereto, and to the base proper, as shown and described. 5th. The reversible frame for roller journals, the same having a fixed partition and slots aligned lengthwise on opposite sides of the partition, as shown and described. 6th. The combination with the movable jaw, adjustable crushing roll, and gears on the shafts of the same, of a shifting gear 14, that meshes with the first-mentioned gears, the shaft 19 having an eccentric journal 17, and adapted to be rotated on its axis, and having polygonal portions, and the cotter-pin for securing said shaft in any desired rotary adjustment, as shown and described.

**No. 62,817. Apparatus for Decomposing Solid Substances. (*Appareil pour décomposer les substances solides.*)**

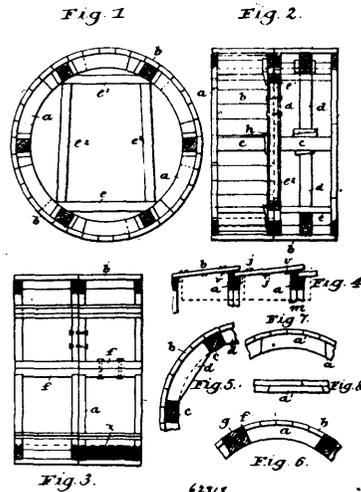


William S. Romme, New York City, New York, U.S.A., 6th March, 1899; 6 years. (Filed 25th November, 1898.)

*Claim.*—1st. The herein described process of decomposing solid substances electrically, which consists in placing the substance to be acted upon between electrodes, and causing a liquid solvent of the substance treated to percolate through the mass in such quantity as suffices merely to keep the mass moist, without submerging the mass in said fluid, and passing an electric current through the mass, substantially as described. 2nd. The herein described process of decomposing soluble salts of sodium and like substances, which consists in placing the salt in a solid state between electrodes and causing water to percolate through the mass in such quantity as suffices merely to keep the mass moist, without submerging the mass in the water, and passing an electric current through the mass, substantially as described. 3rd. The herein described process of

decomposing sodium chloride and like chlorides electrically, which consists in placing the sodium or other chloride in a solid state between electrodes, and causing water to percolate through the mass in such quantity as suffices merely to keep the mass moist, without submerging the mass in the water, and passing an electric current through the mass, substantially as described. 4th. The method of electrolyzing a readily soluble metallic salt, which consists in supplying to a granular body of such salt a liquid solvent in such quantity that the solvent will be retained between the particles of the salt by capillarity without submerging the body, in passing through such body and solvent a continuous current of electricity, and replacing as required such portions of the solvent as may have been removed by electrolysis and evaporation, substantially as described. 5th. In an apparatus for electrically decomposing solid substances, the combination, with a tank adapted to contain the substance treated, of electrodes within said tank, placed one above the other, and between which the substance treated may be placed, and adapted to be connected to an electric generator and to pass an electric current through the mass to be treated, the upper electrode having passages through which the substance to be treated may descend to the space between the electrodes, and the lower electrode being provided with openings through which fluids may pass, means for supplying a fluid to the mass within said tank, and means for collecting the soluble products of the decomposition which flow through the openings in said lower electrode, substantially as described. 6th. In an apparatus for electrically decomposing solid substances, the combination, with a tank adapted to contain the substance treated, of electrodes within said tank, placed one above the other, and between which the substance treated may be placed, and adapted to be connected to an electric generator, and to pass an electric current through the mass to be treated, the upper electrode having passages through which the substance to be treated may descend between the electrodes, and the lower electrode being a perforated plate forming the bottom of the chamber in said tank in which the decomposition takes place, means for supplying a fluid to the mass within said tank, and a collecting chamber below said lower electrode adapted to receive the soluble products of the decomposition which flow through said electrode, substantially as described.

**No. 62,818. Wall or Lining for Shield Tunnelling and for Shaft Sinking. (*Mur ou garniture pour tunnels et creusage de puits.*)**



George Henry Dunlop, 139 Bridgport Street, South Melbourne, Victoria, Australia, 8th March, 1899; 6 years. (Filed 13th August, 1898.)

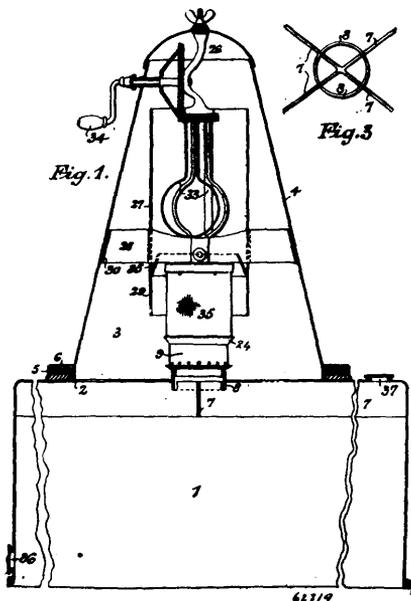
N.B.—Patent No. 62,818 is a re-issue of Patent No. 57,674, dated 5th October, 1897.

*Claim.*—1st. In a device of the class specified, a series of wall rings bolted or otherwise secured to each other each ring being composed of ribs formed in segments to facilitate removal, laggings *b*, and struts *c*, arranged substantially as described. 2nd. In a device of the class specified, a series of wall rings bolted or otherwise secured together, each ring being composed of ribs *a*, formed in segments to facilitate removal, laggings *b*, struts *c*, and flanges *f*, all secured together and arranged substantially as described. 3rd. In a device of the class specified, a series of wall rings bolted or otherwise secured together, each ring being composed of ribs *a*, formed in segments to facilitate removal, laggings *b*, struts *c*, flanges *f*, and segments *d*, all secured together and arranged substantially as described. 4th. In a device of the class specified, wall rings bolted or otherwise secured to each other, each ring being composed of ribs *a*, one of which is of less diameter than the other and overlapping laggings *b*, as and for the purpose specified. 5th. In a device

of the class specified, a series of wall rings bolted or otherwise secured together, each ring being composed of ribs *a*, formed in segments to facilitate removal, laggings *b*, struts *c*, flanges *j*, wedges *h*, segments *d*, and a strengthening set *e*, *e*<sup>1</sup>, *e*<sup>2</sup>, all secured together and arranged substantially as described. 6th. In combination in a wooden wall or lining for tunnelling and for shaft sinking, the ribs *a*, and the laggings *b*, carried thereby, substantially as described.

**No. 62,819. Birch Bark Product.**

(Produit d'écorce de bouleau.)



James Wheeler, Ilfracombe, Devon, England, 8th March, 1899; 6 years. (Filed 14th September, 1898.)

*Claim.*—1st. Obtaining pyroretulin or pyroretulin anhydride by burning material containing betulin in a closed chamber and without flame, substantially as set forth. 2nd. Obtaining pyroretulin or pyroretulin anhydride by compressing together into blocks or tablets a mixture comprising or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier such as nitrate of potassium, and burning in a closed chamber without flame, a quantity of the said blocks or tablets bearing a suitable proportion to the air capacity of the said chamber, substantially as hereinbefore described. 3rd. Obtaining pyroretulin or pyroretulin anhydride by compressing together into blocks or tablets, a mixture comprising or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier such as nitrate of potassium, arranging in a closed chamber a quantity of the said blocks or tablets bearing a suitable proportion to the air capacity of the said chamber in such a manner that when ignited they will all have either an abundant or a limited supply of air, and burning the said blocks or tablets in the said chamber without flame, substantially as hereinbefore described. 4th. Producing films consisting of or containing pyroretulin or pyroretulin anhydride on articles by compressing together into small blocks or tablets a mixture consisting of or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier, such as nitrate of potassium, and exposing the said articles in a closed chamber to fumes produced by burning, without flame, a quantity of the said blocks or tablets bearing a suitable proportion to the area of the said chamber, substantially as hereinbefore described. 5th. Producing films consisting of or containing pyroretulin or pyroretulin anhydride on articles by compressing together into small blocks or tablets a mixture consisting of or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier such as nitrate of potassium, exposing the said articles in a closed chamber to fumes produced by burning, without flame, a quantity of the said blocks or tablets bearing a suitable proportion to the area of the said chamber, and agitating the said fumes so as to mix them together and with the air of the said chamber, substantially as hereinbefore described. 6th. Producing films consisting of or containing pyroretulin or pyroretulin anhydride on articles by compressing together into small blocks or tablets a mixture consisting of or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier such as nitrate of potassium, exposing the said articles in a closed chamber to fumes produced by burning, without flame, a quantity of the said blocks or tablets bearing a suitable proportion to the area of the said chamber, and filtering the said fumes before allowing them to form films on the articles treated, substantially as described. 7th. Producing on articles, films of or containing containing pyroretulin pervious to the action of an etching agent so

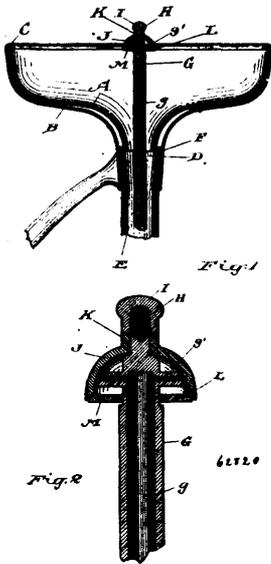
that articles so filmed will, under the action of such an agent, be given a finely pitted surface, the said films being produced by compressing together a mixture consisting of or containing finely ground epidermis or outer rind of birch bark and an oxygen carrier such as nitrate of potassium, exposing the articles in a closed chamber to fumes produced by burning, without flame, a quantity of the said compressed mixture in the form of small blocks or tablets bearing a suitable proportion to the area of the said chamber and so arranged as to have an abundant supply of air, and agitating the said fumes so as to mix them together and with the air of the said chamber, substantially as hereinbefore described. 8th. Producing on articles or materials opaque films or non-porous or reticulated transparent films of or containing pyroretulin or pyroretulin anhydride respectively, substantially as hereinbefore described. 9th. Apparatus comprising a lower compartment for containing the articles to be filmed, an upper compartment communicating through an opening with the said lower compartment, a lamp supported within the said upper compartment, and a hollow cylinder extending upwards from the said lamp to within a short distance from the top of the said chamber, substantially as and for the purposes set forth. 10th. Apparatus comprising a closed chamber, a lamp therein adapted to burn combustible material without flame, and means for filtering the fumes produced by the partial combustion of the material as they are given off, substantially as and for the purposes set forth. 11th. Apparatus comprising a closed chamber having a conical cover, a lamp situated centrally as regards the said cover, and a hollow cylinder extending upwards from the said lamp to within a short distance from the said cover, substantially as and for the purposes set forth. 12th. Apparatus comprising a closed chamber having a conical cover, a lamp situated centrally as regards the said cover, a hollow cylinder extending upwards from the said lamp to within a short distance from the said cover, an agitating apparatus above the said lamp, means for operating the said agitating apparatus from outside the said chamber, and a guide or deflector for directing into the said agitating apparatus fumes rising up from the said lamp, substantially as and for the purposes set forth. 13th. Apparatus comprising a closed chamber lamp adapted to burn, without flame, combustible filming material, and means for filtering the fumes produced by the partial combustion of the said material as they are given off, and means for effecting the uniform deposition of a film upon the articles to be filmed, substantially as and for the purposes set forth. 14th. Apparatus comprising a closed chamber, a lamp adapted to burn combustible filming material without flame, means for filtering the fumes produced by the partial combustion of the said material as they are given off, and means for effecting the uniform distribution of a film upon the articles to be filmed, substantially as and for the purposes set forth. 15th. Apparatus comprising a closed chamber, a lamp adapted to burn combustible filming material without flame, means for filtering the fumes produced by the partial combustion of the said material as they are given off, means for agitating the fumes after filtering, and means for effecting the uniform distribution of a film upon the articles to be filmed, substantially as and for the purposes set forth. 16th. For producing films on articles, a lamp comprising a receptacle to receive combustible filming material and a chimney having walls and a cover of material adapted to filter fumes produced by the partial combustion of the said filming material, substantially as hereinbefore described. 17th. For producing films on articles, a lamp comprising a cup perforated in its lower part and provided in its upper part with means for supporting combustible filming material, and a chimney having walls and a cover of material adapted to filter fumes produced by the partial combustion of the said filming material, substantially as hereinbefore described. 18th. For producing films on articles, a lamp comprising a cup perforated in its lower part and provided in its upper part with means for supporting combustible filming material in such a manner to allow it an abundant supply of air, and a chimney having walls and a cover of material adapted to filter fumes produced by the partial combustion of the said filming material, substantially as hereinbefore described. 19th. For producing films on articles, a lamp comprising a cup having its lower part perforated, means in the upper part of said cup adapted to support tablets of combustible filming material with an air space around each tablet, and a chimney having walls and a cover of material adapted to filter the fumes produced by the partial combustion of the said filming material, as hereinbefore described. 20th. For producing films on articles, a lamp comprising a receptacle to receive combustible filming material and comprising an open work floor plate adapted to support the lower edges of the tablets, a charge plate having radial openings each adapted to receive a tablet, and a distance piece between the said floor plate and the said charge plate, and a chimney having walls and a cover of material adapted to filter fumes produced by the partial combustion of the said filming material, substantially as hereinbefore described.

**No. 62,820. Dental Cuspidor. (Crachoir pour dentistes.)**

George P. Davis, Thomas D. Wilson and Edward J. Cousins, 8th March, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—1st. A flushing device for a dental cuspidor, consisting of a water-standard having an outlet port or ports, and a revolvable cap fitted to the water-standard to cover the ports, having an annular perforated flange encircling the standard below the ports to atomize and centrifugally distribute the water to the bowl, substantially as specified. 2nd. A flushing device for a dental cuspidor, consisting of a water-standard fitted at its upper end with a water-

jet or jets having diminutive outlets, a revoluble cap mounted on the top of the water-standard covering the water-jets, and an



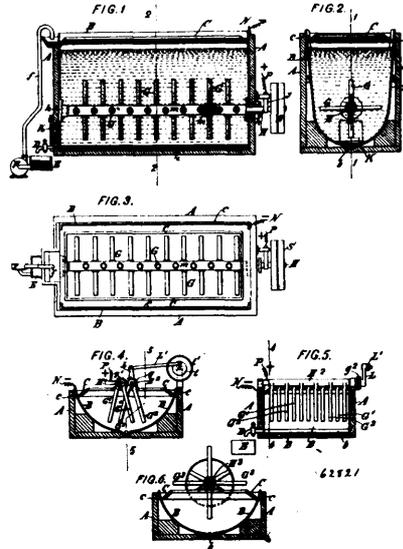
annular flange for the cover encircling the water-standard below the water-jets, to atomize and centrifugally distribute the water to the bowl, substantially as specified. 3rd. A dental cuspidor, consisting of an inner bowl, an outer bowl enclosing the inner bowl provided with an annular inturned flange overlapping the top of the inner bowl, and a flushing device, consisting of a water-jacket centrally located within the inner bowl, having an inlet port or ports, and a revoluble cap for the water-standard covering the ports, and fitted with an annular perforated flange encircling the standard below the ports to atomize and centrifugally distribute the water to the bowl, substantially as specified. 4th. A dental cuspidor, consisting of an inner bowl, an outer bowl enclosing the inner bowl, provided with an annular inturned flange overlapping the top of the inner bowl, and a flushing device, consisting of a water-standard centrally located within the inner bowl, fitted at its upper end with a water jet or jets, a revoluble cap mounted on the top of the water-standard covering the water-jets, and an annular flange for the cap surrounding the water-standard below the water-jets, to atomize and centrifugally distribute the water to the bowl, substantially as specified. 5th. A flushing device for a dental cuspidor, consisting of a water-standard having an outlet port or ports, and a cap fitted to the water-stand to cover the ports, having an annular perforated flange encircling the standard below the ports to atomize and distribute the water to the bowl, substantially as specified.

**No. 62,821. Process of and Apparatus for Extracting Precious Metals.** (*Procédé et appareil pour extraire les métaux précieux.*)

Hugh Riecken, London, England, 8th March, 1899; 6 years. (Filed 6th June, 1898.)

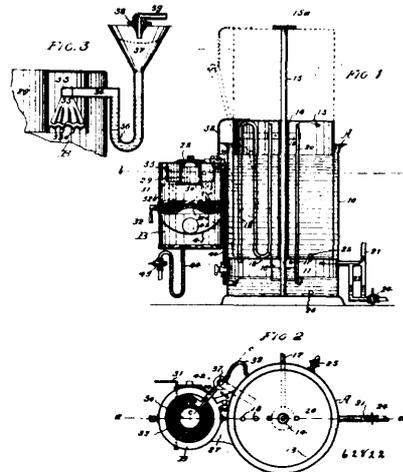
*Claim.*—1st. In an electrolytical process of treating ores and slimes for the extraction of precious metals, particularly gold, therefrom, the employment of a vertical or inclined metallic cathode down which a stream of mercury is caused to flow, substantially as and for the purposes specified. 2nd. A process of extracting precious metals from ores or slimes, which consists in agitating a mixture of the ores or slimes and an electrolyte in the presence of an anode, and of a cathode consisting of an amalgamating plate over which a stream of mercury is caused to flow, and passing a current of electricity through the mixture, all substantially as described. 3rd. In a process of extracting precious metals from ores or slimes by deposition of the same in an adherent form upon a vertical or inclined cathode, the use of a stream of mercury delivered over such cathode, substantially as and for the purposes hereinbefore described. 4th. In the said process collecting the descending mercury and re-conveying it to the top of the metallic cathode so as to provide a continuously renewed, large, clean surface to act upon the precious metal, substantially as specified. 5th. An electrolytic apparatus for extracting precious metals from ores and slimes by the process hereinbefore described and claimed, which apparatus comprises an open tank or vessel, adapted to receive the ore to be treated, having an inner metallic surface forming the cathode, a trough near the upper edge of the vessel, capable of discharging mercury in thin streams down the sides of the vessel, and an anode within the vessel, substantially as described. 6th. An electrolytic apparatus for extracting precious metals from ores or slimes which consists of a vessel having an inner

inclined metallic surface and a converging bottom, a movable anode, a perforated or open pocket near the upper end of the vessel, mer-



cury within such pocket adapted to descend over the metallic surface, and means for re-conveying the mercury from the bottom of the vessel into the pocket, substantially as specified.

**No. 62,822. Gas Generator.** (*Générateur à gaz.*)

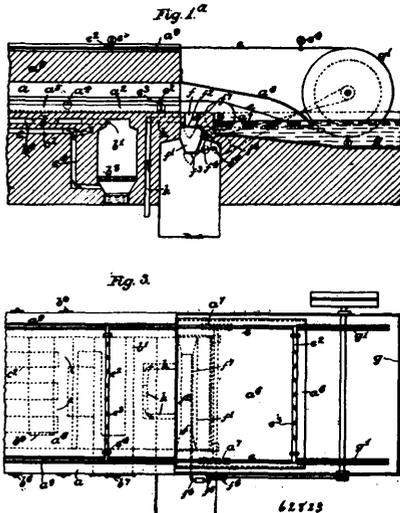


George Daniel Scott, Vancouver, British Columbia, Canada, 8th March, 1899; 6 years. (Filed 26th September, 1898.)

*Claim.*—1st. In a machine for generating acetylene gas, having a water chamber, 10, with a gasometer arranged therein, in combination with a generating chamber B, the closable chamber 29 for inserting the carbide, a grate 32 having the convexo-concavo bottom and the annular rim for properly distributing the carbide, an annular chamber 33 having the corrugated and perforated bottom arranged over the annular recess in the grate beneath, a pipe 34 having a fluted apron for depositing the water in the chamber 33, and a flexible tube 39 communicating with the said chamber 10 for supplying the water to the said pipe, as specified. 2nd. In an acetylene gas generator, having a water chamber 10 and a gasometer arranged therein, in combination with a carbide chamber B, having a convexo-concavo carbide grate 32 pivoted therein for exposing a large area of the carbide, a fluted water-tray 35 fixed to the discharge end of a pipe 34 which receives the water supply, said tray being arranged over a chamber having an annular corrugated and perforated bottom for supplying a large area of moisture to the carbide, and of a bracket 38 for elevating the nozzle of the pipe 39 and thereby automatically preventing such supply of water when the gas is being generated faster than the consumption, as specified. 3rd. In a machine for generating acetylene gas, in combination with a water chamber, a gasometer working therein, and a closable chamber B for generating the gas, a closed chamber 11 beneath the water chamber for washing gas, a pipe 40 leading from the carbide-chamber to the closed chamber 11, and an S-shaped pipe 18 come

municating between the chamber 11 and the water chamber, with its top or outlet above such water, as and for the purposes specified. 4th. In combination with a water chamber 10, having a gasometer arranged therein and a closable carbide chamber, a carbide grate 32 having an annular depression in the said carbide chamber, an annular perforated chamber 33 over such grate, a pipe 34 having an apron 35 communicating from the chamber 33 with the outside of the carbide chamber, a strainer funnel on the end of such pipe, a flexible hose or tube 39 communicating with the water chamber 10 and to a vertical line above the said funnel, whereby water will be supplied to such funnel and consequently to the carbide in the carbide chamber, and a seal 36 for preventing the gas from escaping backward through the water supply pipe 34. 5th. In combination with a water chamber 10, with a gasometer therein, and a sealed chamber 11 containing water beneath the chamber 10, and a pipe 40 for introducing gas under pressure to beneath the water in the chamber 11, of an S-shaped pipe with punctured end to carry off moisture, communicating above the surface of the water in the chamber 10, and a pipe 20 for returning the gas to beneath the water in the chamber 11, whereby the gas will be cooled and washed. 6th. A combined washing chamber and a safety vent, consisting of a closed vessel or chamber 11 arranged beneath a water chamber 10, a pipe 40 for conducting the gas to the chamber 11 beneath the water therein, an S-shaped pipe communicating between the chamber 11 and a gasometer in the water chamber 10, and a return pipe 20 communicating between said gasometer and to beneath the surface of the water in the chamber 11, an annular chamber 16 secured to and beneath the bottom of the chamber 10, with its open end depending below the surface of the water in the chamber 11, and a pipe 17 communicating between the said chamber 16 and the outer atmosphere, substantially as and for the purpose set forth.

**No. 62,823. Ore Furnace.** (*Fournaise à minerais.*)



Alfred George Wells, 29 Cornhill, London, England, 8th March 1899; 6 years. (Filed 28th June, 1898.)

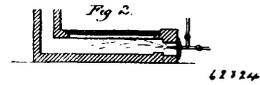
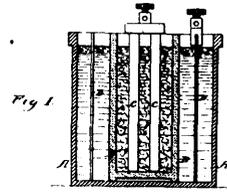
*Claim.*—1st. In combination, a closed reducing chamber, a flue bed, and an air heating bed, the chamber hearth being built on the flue bed, the flue bed having transversely-arranged zig-zag flues serving to lead the furnace gases from the fire chamber to the chimney to and fro under the chamber hearth, and the air heating bed having longitudinally arranged ducts serving to lead atmospheric air from an inlet at the cooler end of the apparatus to the fire chamber longitudinally under the flue bed whereby it is heated, as set forth. 2nd. In combination a reducing chamber adapted with means of automatically supplying the ore to be treated and of automatically removing the treated ore and to prevent access of air to the chamber and with means of admitting the ore reducing gases to the chamber and leading them therefrom, a water tank at each end of the chamber and a hood at each such end dipping into the water tank and serving to seal and close the chamber end, and means for traversing the ore from end to end of the chamber adapted to emerge from and to re-enter the chamber through said water tanks and to be cooled thereby before re-entering the chamber, as set forth.

**No. 62,824. Process of Making Litharge or Protoxide of Lead.** (*Procédé pour la fabrication de litharge ou protoxyde de plomb.*)

Pedro G. Salom, Philadelphia, Pennsylvania, U.S.A., 8th March, 1899; 6 years. (Filed 23rd August, 1898.)

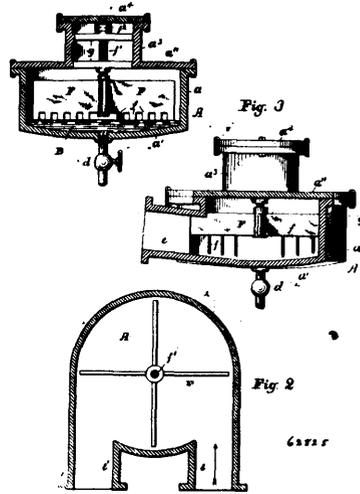
*Claim.*—The process of converting lead ore into litharge or protoxide of lead, said process consisting in subjecting the ore to the

action of nasent hydrogen electrolytically developed, producing thereby a spongy mass, then heating the said spongy mass in the



open air first at a temperature below the melting point of metallic lead and afterward to a higher temperature, substantially as described.

**No. 62,825. Ore Separator.** (*Séparateur de minerais.*)



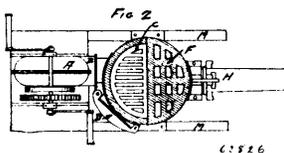
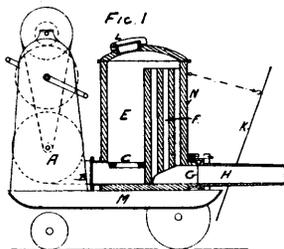
Gilbert R. Elliott, Boston, Massachusetts, U.S.A., 8th March, 1899; 6 years. (Filed 25th July 1898.)

*Claim.*—1st. In an ore separating device, the combination with the chamber containing the ore treating element, and adapted to permit the passage therethrough of the ore containing liquid, of an agitator located in said chamber and adapted to be kept in motion by the passage of said ore containing liquid through said chamber and to constantly agitate the surface of said ore treating element, substantially as and for the purposes set forth. 2nd. In an ore separating device, the combination with the chamber containing the ore treating element, and adapted to permit the passage therethrough of the ore containing liquid, of the agitator arms freely revoluble in said chamber and adapted to be set in motion by the passage of said ore containing liquid through said chamber, and to constantly agitate said ore treating element, substantially as and for the purpose hereinbefore set forth. 3rd. The combination with the chamber having the tangential inlet and outlet for the passage of the ore containing liquid, of the agitator fan wheel revoluble in said chamber by the impact of said liquid in its passages, said fan being adapted to agitate the surface of the ore treating element contained in said chamber, substantially as and for the purpose hereinbefore set forth. 4th. The combination with the chamber adapted to contain an ore treating element and to permit an ore containing liquid to flow over the surface of said element, of agitator arms adapted by their rotation to disturb the surface of said ore treating element, and means for rotating said arms, substantially as hereinbefore set forth. 5th. The combination of the circular chamber having its axis vertical and adapted to contain a quantity of ore treating mercury at its bottom and to permit the ore containing liquid to flow through the same over the surface of said mercury, of the agitator arms freely revoluble in said chamber and set in motion by the passage of said ore containing liquid, said agitator arms being denticular at their points of engagement with said mercury, substantially as and for the purpose hereinbefore set forth. 6th. The combination of the chamber having the tangential inlet and outlet and adapted

to contain a quantity of mercury upon its bottom, and the agitator revolvable in contact with said mercury, said inlet and outlet being each inclined downwardly toward the bottom of said chamber, whereby the ore containing liquid passing through said chamber through said inlet and outlet shall be directed more positively into contact with the surface of said mercury, substantially as and for the purpose hereinbefore set forth. 7th. The combination of the chamber having the removable centrally elevated cap, bearings in said cap, a vertical shaft revolvable in said bearings, and agitator arms radiating from said shaft, said chamber being formed with the tangential inlet and outlet, substantially as and for the purpose hereinbefore set forth.

**No. 62,826. Earth Thawing Machine.**

(Machine à dégeler la terre.)



Peter Watt, 59 Belle Vue Road, Leeds, England, 8th March, 1899; 6 years. (Filed 9th September, 1898.)

*Claim.*—1st. A machine for thawing frost out of land, stone, mortar and the like, embracing in its construction a carrying frame, a furnace mounted on the carrying frame, consisting of a vertical fire-box, a grate or burner for the fire-box, a series of vertical flues within the furnace, their upper ends communicating with the upper end of the fire-box, an outlet pipe, one end of which communicates with the lower end of the flues, and the opposite end of which is adapted to distribute the heat where it is required, substantially as specified. 2nd. A machine for thawing frost out of land, stone, mortar and the like, embracing in its construction a carrying frame consisting of a vertical fire-box, a grate or burner for the fire-box, a series of vertical flues within the furnace, their upper ends communicating with the upper end of the fire-box, an outlet-pipe, one end of which communicates with the lower end of the vertical flues, and the opposite end of which is adjustable to direct the flame or heated gases in any required direction, substantially as specified.

**No. 62,827. Process of Producing Magnetic Oxid of Iron.** (Procédé pour la production d'oxyde de fer magnétique.)

Robert H. Peak, Orlando, Florida, U.S.A., 8th March, 1899; 6 years. (Filed 13th September, 1898.)

*Claim.*—The process of converting ferric oxid into magnetic oxid, which consists in heating dry, finely-pulverized ferric oxid to a temperature somewhat below the fusing point of the oxid, maintaining such temperature a suitable length of time under exclusion of atmospheric air, keeping the oxid in motion while being exposed to such temperature, and then allowing it to cool its own gases while the atmospheric air is excluded, as herein set forth.

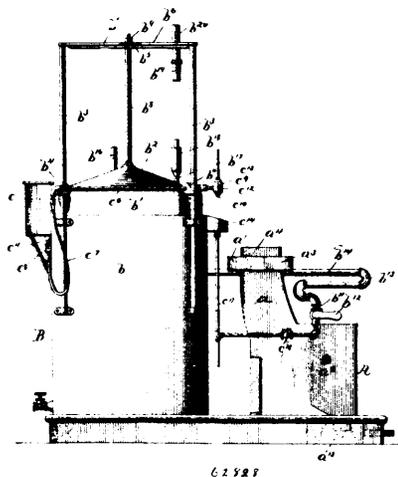
**No. 62,828. Acetylene Gas Generator.**

(Générateur du gaz acétylène.)

Joseph Alfred Plante, Quebec, Canada, 8th March, 1899; 6 years. (Filed 11th May, 1898.)

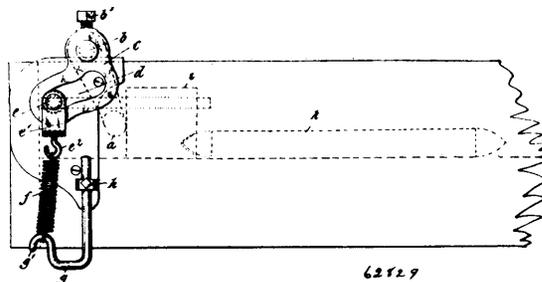
*Claim.*—1st. An acetylene gas generating chamber comprising a chamber for the carbide, said chamber having an open top, a cap for the carbide, said chamber having an open top, a cap for said chamber, a perforated plate secured at the lower end of said chamber, an outer casing for the lower end of said chamber, a water inlet located above said chamber, an outlet for the refuse from said chamber, and a pipe for passing the generated gas from said chamber, substantially as described. 2nd. An acetylene gas generator, comprising a casing, said casing forming a generating chamber, an open top, a cap removably located on said open top, perforations formed at the lower end of said chamber, for the passage of the carbide residue, and of the gas, an auxiliary residue chamber located below said

generating chamber, said chamber having a sealed outlet, an auxiliary chamber formed above the lower end of said generating cham-



ber, said chamber having a water inlet and gas outlet, and openings leading from said auxiliary chamber and said generating chamber, for the passage of the water and gas, substantially as described.

**No. 62,829. Shuttle Catcher.** (Arrête-navette.)



Adolf Reinert, 13 Glowna Lodz, Russia, 8th March, 1899; 6 years. (Filed 18th October, 1898.)

*Claim.*—1st. A shuttle catcher having a lever *a* arranged in the shuttle path on each side of the loom, connected with an eccentric or curved piece *c*, and adapted to be turned by the picker *i*, when the shuttle *k* runs in, in order to stress a spring which is regulated so that it can return the working parts into their original position only when the shuttle is shot from the box, constructed and arranged substantially as hereinbefore described. 2nd. A mode of carrying out the shuttle catcher claimed in which the curved piece *c* has a curved slot adapted to guide a roller *e* connected to an adjustable pin *g* by a spring *f*, the curved piece being adjustable as to its position after loosening a screw *b*, constructed and arranged substantially as hereinbefore described.

**No. 62,830. Process of Producing a Wax-Like Product.** (Procédé pour la production d'un corps de cire.)

Ernest Schilemann, 35 Katharinenstrasse, Hamburg, Germany, 8th March, 1899; 6 years. (Filed 19th September, 1898.)

*Claim.*—1st. A process for the production of wax-like products, which consists, first, in mixing resin and paraffin; secondly, melting same; and thirdly, injecting air into the melted mixture whereby an excess oxidation of the resin is avoided, as and for the purpose set forth. 2nd. A process for the production of wax-like products, which consists, first, in mixing resin and paraffin; secondly, melting same; thirdly, injecting air into the melted mixture; fourthly, boiling the product; and finally adding small quantities of solid hydro-carbons, as and for the purpose set forth. 3rd. In the production of wax-like body as described, warming the mixture of resin and paraffin and treating same with an oxidizing agent such oxygen or nitric acid, as and for the purpose set forth.

**No. 62,831. Manufacture of Fabrics.**

(Fabrication de tissus.)

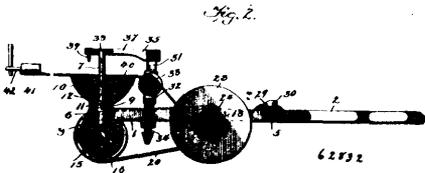
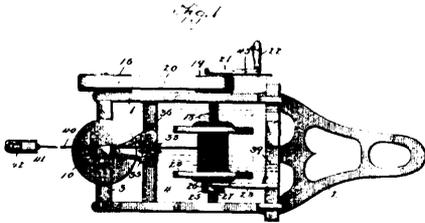
Charles Henry Stearn, 47 Victoria Street, Westminster, England, 8th March, 1899; 6 years. (Filed 22nd October, 1898.)

*Claim.*—1st. The manufacture of material in filamentary, or sheet, or web form, by projecting the aforesaid solution of cellulose, (viscose), into, or passing into, or through, a precipitating, or setting,

solution or liquid. 2nd. The manufacture of material in filamentary, or sheet, or web, form, by projecting the aforesaid solution of cellulose, (viscose), into, or passing it into or through, a solution of chloride of ammonium. 3rd. The manufacture of material in filamentary, or sheet, or web, form, by projecting the aforesaid solution of cellulose, (viscose), through a small orifice, or through a slit, into a precipitating, or setting, solution, or liquid, and drawing it therethrough. 4th. The preparation of material in filamentary, or sheet, or web, form, by first subjecting the aforesaid solution of cellulose, (viscose), to stirring and filtering, and then projecting it from a small orifice, or slit, into a solution of chloride of ammonium. 5th. A filamentary material for textile purposes, or sheets, or webs, for photographic, or other purposes, prepared from the aforesaid solution of cellulose, (viscose), substantially as hereinbefore set forth. 6th. Fabrics made from filamentary material, prepared from the aforesaid solution of cellulose, (viscose), substantially as hereinbefore set forth.

**No. 62,832. Chalk Line Reel.**

(*Devoir pour lignes marquées à la craie.*)

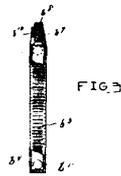
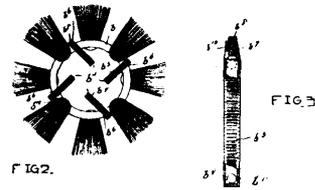
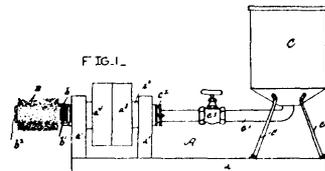


John William Bacon, Enderby, British Columbia, Canada, 8th March, 1899; 6 years. (Filed 6th October, 1898.)

*Claim.*—1st. A chalk line reel, comprising a frame, a rotatable chalking portion mounted on said frame, a reel mounted in said frame, said reel having a chalk line mounted thereon, and means for operating said reel and said chalk portion concurrently, substantially as described. 2nd. A chalk line reel, comprising a frame, a rotatable chalking portion mounted thereon, a reel mounted in said frame and adapted to have a lateral movement therein, said reel having the chalk line mounted thereon, and means for imparting a movement to said reel and to said chalk portion concurrently, substantially as described. 3rd. A chalk line reel, comprising a frame, a rotatable chalking portion mounted on said frame, a reel mounted on said frame, said reel having the chalk line mounted thereon, said chalk line extending forwardly over said chalk portion, means for adjustably holding said chalk line in direct contact with the surface of said chalk portion, and means for operating said reel and said chalk portion concurrently, substantially as described. 4th. A chalk line reel, comprising a frame, a spindle rotatably mounted in the front portion of said frame, said spindle being adapted to receive the chalk, a reel mounted in said frame, said reel being adapted to contain the chalk line, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 5th. A chalk line reel, comprising a frame, a spindle rotatably mounted in the front portion of said frame, said spindle being adapted to receive the chalk, a reel mounted in said frame and having a lateral movement thereon, said reel being adapted to contain the chalk line, and means for imparting a movement to said reel and said spindle concurrently, substantially as described. 6th. A chalk line reel, comprising a frame, a spindle rotatably mounted in the front portion of said frame, said spindle being adapted to receive the chalk, a reel mounted in said frame, said reel having a controlled lateral movement thereon and adapted to contain the chalk line, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 7th. A chalk line reel, comprising a frame, a spindle rotatably mounted at the front end thereof, a chalk portion removably connected to said spindle, a reel mounted in said frame, said reel being adapted to contain the chalk line, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 8th. A chalk line reel, comprising a frame, a spindle rotatably mounted at the front end thereof, a chalk portion removably connected to said spindle, a reel mounted in said frame and having a lateral movement thereon, said reel being adapted to contain

the chalk line, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 9th. A chalk line reel, comprising a frame, a spindle rotatably mounted at the front end thereof, a chalk portion removably connected to said spindle; a reel mounted in said frame, said reel having a controlled lateral movement thereon, and adapted to contain the chalk line, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 10th. A chalk line reel, comprising a frame, a chalk receiving spindle rotatably mounted therein at its front end, a reel mounted in said frame, said reel being adapted to contain the chalk line, an adjustable guide for said chalk line, mounted between said chalk portion and said reel, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 11th. A chalk line reel, comprising a frame, a chalk receiving spindle rotatably mounted therein at its front end, a reel mounted in said frame and having a lateral movement thereon, said reel being adapted to contain the chalk line, an adjustable guide for said chalk line, mounted between said chalk portion and said reel, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 12th. A chalk line reel, comprising a frame, a chalk receiving spindle rotatably mounted therein at its front end, a reel mounted in said frame, said reel having a controlled lateral movement thereon, and adapted to contain the chalk line, an adjustable guide for said chalk line, mounted between said chalk portion and said reel, and means for imparting movement to said reel and said spindle concurrently, substantially as described. 13th. The combination with a chalk line reel, of means for preventing the unreeling of the chalk line after the required distance has been unwound, substantially as described. 14th. The combination with a chalk line reel, of a pin secured to the frame thereof above the chalk portion, said pin being adapted to hold the chalk line after the required amount has been unreeling, thereby preventing a further unwinding of the line, substantially as described.

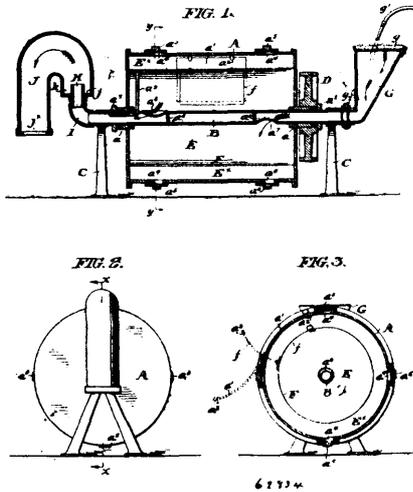
**No. 62,833. Liquid Supplying and Distributing Machine.** (*Machine à pourvoir et distribuer des liquides.*)



Willis Lincoln Marsh, Jefferson City, Missouri, U.S.A., 8th March, 1899; 6 years. (Filed 16th November, 1898.)

*Claim.*—1st. In a liquid supplying and distributing machine, the combination with a rotary liquid-supplying element, comprising a hollow body portion, of liquid-supplying tubes secured in the said hollow body portion and leading from the interior to the exterior thereof, said tubes being arranged tangentially with relation to the axis of rotation of the liquid-distributing element, substantially as described. 2nd. In a liquid-supplying and distributing machine, the combination of the hollow brush and means to supply liquid to the interior thereof, of suitable liquid-supplying tubes arranged to conduct the liquid from the interior to the exterior of said brush, and suitable plungers arranged to reciprocate in said supply-tubes, as the brush is revolved to force the liquid along said tubes, substantially as described. 3rd. In a liquid-supplying and distributing machine, the combination with a hollow brush and means to supply liquid to the interior thereof, of supply-tubes leading from the interior to the exterior of said brush and disposed tangentially with relation to the axis of rotation thereof, and suitable inlets and outlets in said supply-tubes, the inlets being removed from the ends of said tubes and suitable plungers located in said supply-tubes, and arranged to reciprocate therein as the brush is revolved, substantially as described. 4th. In a liquid-supplying and distributing machine, the combination with the supply-tank or reservoir, of the hollow rotating brush, connected therewith, a supply-tube leading from the interior to the exterior of said brush arranged to supply liquid to the bristles of said brush, said supply-tube arranged tangentially with relation to the axis of rotation, and having a suitable inlet and outlet in opposite ends thereof, and a ball arranged to reciprocate along said supply-tube as said brush is revolved, and means to regulate the flow of liquid from the outlet of said tube, substantially as described.

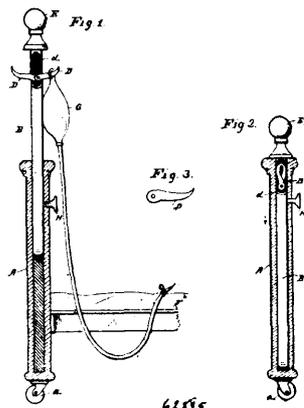
**No. 62,834. Apparatus for Washing Soil.**  
(Appareil à laver le minéral.)



Samuel Marion Lissau, Philadelphia, Pennsylvania, U.S.A., 8th March, 1899; 6 years. (Filed 18th April, 1898.)

*Claim.*—1st. In an apparatus for washing placer and other soil, in combination, a rotatable drum or receptacle divided by a foraminous diaphragm into a central and an exterior chamber, means for rotating said drum, means for introducing water to within the central portion of the inner chamber of said drum, means for withdrawing water from said receptacle, substantially as set forth. 2nd. In an apparatus for washing placer and other soil, in combination, a rotatable drum, a foraminous diaphragm mounted in said drum and separating it into two chambers, means for rotating said drum, hollow axles, one of which is in communication with a source of water supply, on which said drum rotates, and openings in said drum, substantially as set forth. 3rd. In an apparatus for washing placer and other soil, in combination, a rotatable drum, a foraminous diaphragm mounted in said drum and separating it into two chambers, means for rotating said drum, hollow axles, one of which is in communication with a source of water supply, on which said drum rotates, outlets in said drum, a vertical extension connected with the second of said hollow axles, and a settling chamber enclosing the upper end of said vertical extension, substantially as set forth. 4th. In an apparatus for washing placer and other soil, a rotatable drum, a cylindrical diaphragm of foraminous material in said drum, normally closed openings in the drum and in the diaphragm in line with each other, a hollow shaft upon which said drum is mounted, a plug or stoppage in the central portion of said shaft, a lateral screen-provided opening in said shaft on the discharge side of said stoppage or plug, means for supplying the water to one end of said shaft, a vertical extension in communication with the other end of said shaft, a goose-neck formed of pipe of greater diameter than said vertical extension, and one end of which encloses the upper end of said vertical extension to form a settling chamber, substantially as set forth.

**No. 62,835. Invalid's Bed.** (Lit d'invalides.)

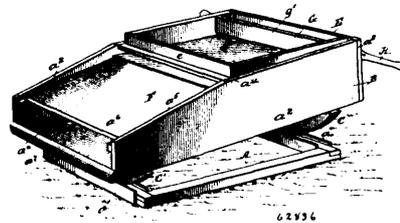


Joel Henry Greene, Dubuque, Iowa, U.S.A., 8th March, 1899; 6 years. (Filed 15th November, 1898.)

*Claim.*—1st. A bed-post, consisting of a hollow shell or post, a rod telescoping into said post and having hooks loosely attached to

said rod, and means for sustaining the rod at any desired extension, as and for the purposes shown. 2nd. A hollow bed post, combined with an extensible rod provided with suitable grooves, and hooks pivoted in the grooves, and which are closed as the rod is telescoped into the post, substantially as shown. 3rd. In a bedstead, the hollow corner post, combined with the extensible rod B, which is placed therein, and which rod is provided with grooves, hooks pivoted in the lower ends of the grooves, and which are made to automatically close as the rod is lowered into the post, and a set-screw which passes through the post and engages with the rod and holds the rod in any desired position, substantially as described.

**No. 62,836. Apparatus for Treating Ore-Bearing Earth.**  
(Appareil pour le traitement de minerais.)

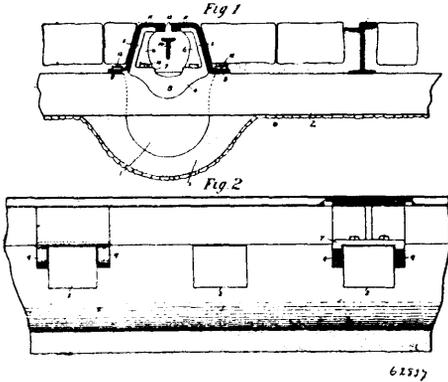


John Franklin Hardee, Tacoma, Washington, U.S.A., 8th March, 1899; 6 years. (Filed 12th March, 1898.)

*Claim.*—1st. In an apparatus for treating placer earth, the combination of a box-like body portion, a blanket arranged within said box, a sluice-box arranged above the blanket, said sluice-box having a perforated bottom and a riffle or pocket, and a discharge chute adjoining the sluice-box and arranged to receive a portion of the debris and water directly from the sluice-box and to automatically discharge the same, said machine being also provided with a passage for the escape of water and debris which may have passed through the perforations in the sluice-box, substantially as described. 2nd. In an apparatus for treating placer earth, the combination of a box-like body portion provided with rockers, a blanket arranged within said box, a sluice-box arranged above the blanket, the said sluice-box having a perforated bottom and a riffle or pocket, the pocket also being provided with perforations in its bottom, and a discharge chute adjoining the sluice-box and arranged to receive a portion of the debris and water directly from the sluice-box and to automatically discharge the same, said machine being also provided with a passage for the escape of water and debris which may have passed through the perforations in the sluice-box, substantially as described. 3rd. In an apparatus for treating placer earth, the combination of a rearwardly inclined box-like body portion provided with rockers, a forwardly and downwardly inclined blanket arranged within said box, a sluice box arranged above the blanket, the said sluice box being provided with a discharge opening and also provided with a perforated bottom and a riffle or pocket, the pocket also being provided with perforations in its bottom, and a discharge chute adjoining the sluice box and arranged to receive a portion of the debris and water directly from the sluice box and to automatically discharge the same, said machine being also provided with a passage for the escape of water and debris which may have passed through the perforations in the sluice box, substantially as described. 4th. In an apparatus for treating placer earth, the combination of a rearwardly inclined box-like body portion provided with rockers, a forwardly and downwardly inclined blanket arranged within said box, a sluice box arranged above the blanket, the said sluice-box being provided with a discharge opening and also provided with a perforated bottom and a perforated riffle or pocket, the perforations in the riffle being above and in line with the blanket, a distributing board arranged within the sluice-box and forming a pocket, and a discharge chute adjoining the sluice-box and arranged to receive a portion of the debris and water directly from the sluice-box and to automatically discharge the same, said machine being also provided with a passage for the escape of water and debris which may have passed through the perforations in the sluice-box, substantially as described. 5th. In an apparatus for treating placer earth, the combination of a supporting frame provided with grooves and vertically arranged pins, a box-like body portion having rockers which latter are formed with triangular shaped notches which receive the said pins, a blanket arranged within said box, a sluice-box arranged above the blanket, said sluice-box having a perforated bottom and a riffle or pocket, and a discharge chute adjoining the sluice-box and arranged to receive a portion of the debris and water directly from the sluice-box and to automatically discharge the same, said machine being also provided with a passage for the escape of water and debris which may have passed through the perforations in the sluice-box, substantially as described. 6th. In an apparatus for treating placer earth, the combination of a box-like body portion open at its discharge end and formed with a raised cleat or bar, a blanket arranged within said box, a sluice-box arranged above the blanket, the said sluice-box having a perforated bottom and a riffle or pocket, and a discharge chute adjoining the sluice-box which terminates forward of the lower rear end of the box and arranged to

receive a portion of the debris and water directly from the sluice-box and to automatically discharge the same, substantially as and for the purposes described.

**No. 62,837. Depressible Rail System for Electric Railways.** (*Système de rails à dépression pour chemins de fer électrique.*)



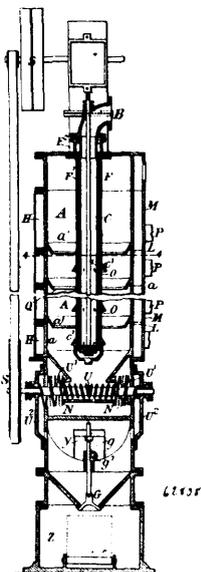
William Grunow, Bridgeport, Connecticut, U.S.A., 8th March, 1899; 6 years. (Filed 21st March, 1898.)

*Claim.*—1st. A subway, consisting of a conduit, beams extending across the conduit, yokes upon the beams, provided with curved arms, and slot rails enclosing the yoke and provided with an attaching flange along one edge thereof and having an engaging rib along the free edge thereof to overlap the extremity of the yoke arms and form a slot. 2nd. A subway consisting of a conduit, beams bridging the conduit, yokes secured upon the beams and provided with clamping jaws extending downwardly upon each side of the beams, and having curved upwardly extending arms, and slot rails enclosing the yokes and provided with an attaching flange along one edge thereof to be connected to said beams and having an engaging rib along the free edge of the same to overlap the extremities of the yoke arms and form a slot. 3rd. In an electric railway system, contact receptacles, a feeder cable passing into the receptacles, a supporting connection or joint overlapping the end portions of the service conductor, provided with means to close the circuit and charge the service conductor. 4th. In an electric railway system, contact receptacle a feeder cable passing into said receptacles, provided with a terminal, a supporting connection or joint overlapping the end portion of the service conductor and means carried by said joint to close the circuit through the terminal and charge the service conductor. 5th. In an electric railway system, contact receptacles, a feeder cable passing into said receptacles, provided with a terminal, a depressible supporting connection or joint overlapping the end portion of the service conductor and means carried by the joint to close the circuit through said terminal and charge the service conductor. 6th. In an electric railway system, contact receptacles, a feeder cable passing into said receptacles provided with a terminal, a depressible supporting connection or joint, overlapping the end portions of the service conductor mounted above said receptacles and means carried by said joint to close the circuit through said terminal and charge the service conductor. 7th. In an electric railway system, contact receptacles, a feeder cable, passing into said receptacles and provided with a terminal, a supporting connection or joint for the end portions of the service conductor, mounted between springs adjacent to receptacles and a separate contact device carried by said joint to charge the said conductor through said terminal. 8th. In an electric railway system, contact receptacles, a feeder cable passing into said receptacles and provided with a terminal, a supporting connection or joint for the end portions of the sectional service conductor, provided with lateral lugs, springs supporting said lugs, and a separate contact device carried by said joint adapted to contact with said terminal and charge the service conductor. 9th. In an electric railway system, contact receptacles, a feeder cable passing into said receptacles and having a feeder terminal, a support provided with lateral lugs mounted above the receptacles, springs supporting said lugs, a service conductor upon the support and a contact device carried lugs upon the support to charge the service conductor when the rail is depressed. 10th. In an electric railway system, contact receptacles, provided with spring compartments and with a tubular projection, a feeder cable passing into the receptacles and having a terminal, a supporting connection or joint for the ends of the ends of the sections of the service conductor having laterally extending lugs, springs in said spring compartment and supporting said lugs, guides for the lugs and springs, a sleeve movably mounted in said projection and supported by lugs on the support, a service conductor upon the support, a contact carried by the sleeve and electrical connection between the contact and the service conductor. 11th. In an electric railway, contact receptacles, having a tubular projection, a feeder cable passing into the receptacles

and having a feeder terminal, a support carrying a service conductor, a sleeve movably mounted within the tubular projection and having a recessed nut engaged by lugs on the support, a contact carried by the sleeve and connections between the same and the service conductor. 12th. In an electric-railway system, contact receptacles, a sheet metal feeder terminal, provided with V-shaped later wing or members, secured upon an insulating block in said receptacles, a feeder cable passing into the receptacles and connected to said terminal, a depressible support adjacent to the receptacles, a service conductor upon said support, a sleeve movably mounted in said receptacles and connected with said support, spring contact plates carried by said sleeve and electrical connections between the same and the service conductor. 13th. In an electric railway system, contact receptacles provided with a terminal having V-shaped members, a feeder cable passing into said receptacle and having connection with said terminal, a depressible support mounted adjacent to the receptacles, a sleeve carried by said support, and provided with spring contact plates adapted to contact with said members of the terminal when the support is depressed, a sectional service conductor upon the support, and separate electrical connections between each section of said conductor and said contact plates to simultaneously charge both sections. 14th. In an electric-railway system, contact receptacles, provided with tubular receptacles, a depressible U-shaped support mounted adjacent to the receptacles and having depending tubular projections adapted to enter said receptacles, springs within said receptacles and extending into the projections, guide bolts passing through the base of the receptacles, the springs and the support and limiting the movement of the latter, a feeder cable passing into said receptacles and having a terminal, a service conductor upon said support and a contact device carried by the support and having electrical connections with the service conductor. 15th. A support for electrical service conductors, consisting of a base, a U-shaped support having laterally extending lugs, springs between the base and the lugs and guide pins or bolts extending through the base, springs and lugs and limiting the movement of the latter. 16th. A support for electrical service conductors, consisting of a base provided with tubular receptacles, a U-shaped support having depending tubular projections adapted to enter said receptacles, springs within the receptacles and extending into the projections and guide pins or bolts passing through the base, springs and support. 17th. A depressing device, consisting of a frame adapted to be secured to the car truck, one or more arms movably mounted within the frame, wheel or wheels journaled in the arm or arms, a guide rod connected with the arm or arms, a spring supported sleeve movably mounted on a guide rod and having outwardly directed trunnions, a bell-crank lever pivoted in the upper portion of the frame and having a bifurcated lower arm adapted to rest upon said trunnions, and means for actuating the upper arm of the bell-crank lever to depress said wheel or wheels. 18th. A depressing device, consisting of a frame having a bifurcated portion provided with vertical slots and a scraper, a bifurcated arm having a guide rod, a wheel journaled in the bifurcated arm and having the axles thereof engaging said vertical slot, a bell-crank lever pivoted to the frame, a spring supported sleeve movably mounted upon said guide rod and provided with trunnions upon which the lower arm of the bell-crank lever bears, and means for actuating the upper arm of the bell-crank lever to depress said wheel. 19th. A depressing device, consisting of the rectangular frame having vertical apertured ears, a bell-crank lever journaled in said ears, bifurcated arms or yokes pivoted in each end of said frame and pivotally connected at their free ends, a guide rod mounted upon the pivotal connection of said arms, a spring supported sleeve movably mounted upon said guide rod and provided with trunnions upon which the lower arm of the bell-crank lever bears a means for actuating the upper arm of the bell-crank lever and wheels carried by said yoke. 20th. A depressing device consisting of a frame adapted to be connected to a car or truck, a current collecting device movably mounted within said frame, a guide rod carried by said current collecting device, a spring supported sleeve movably mounted upon said guide rod and having outwardly directed trunnions, a bell-crank lever pivoted in the upper portion of said frame and provided with a bifurcated arm adapted to engage said trunnions, and means for operating the upper arm of the bell-crank lever to depress the current collecting device. 21st. An electric contact system, consisting of contact receptacles having a tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the receiver and source of electrical supply, a sleeve movably mounted in tubular projection and having outwardly directed arm, means for supporting said arms, a contact device carried by said sleeve and a depressible rail connected with the contact device and adapted to be charged when depressed. 22nd. An electric contact system consisting of contact receptacles having a tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the receiver and source of electrical supply, a sleeve movably mounted in said tubular projections and having outwardly directed arms, springs supporting said arms, a contact device carried by said sleeve and a depressible rail connected with the contact device. 23rd. An electric contact system consisting of contact receptacles having an integral tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the receiver and the source of electrical supply, a sleeve movably mounted in said tubular pro

jection and having outwardly directed arms, springs supporting said arms, an insulated contact device carried by said sleeve and having a bifurcated upper portion and a depressible rail mounted in said bifurcated upper portion. 24th. An electrical contact system, consisting of contact receptacles having a tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the receiver and source of electrical supply, a sleeve movably mounted in said tubular projection and having outwardly directed arms, springs supporting said arms, an insulated contact device carried by said sleeve and having a bifurcated upper portion and an enlarged lower extremity adapted to contact with said mercury and a depressible rail mounted in said bifurcated portion. 25th. An electrical contact system consisting of contact receptacles, having a tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the mercury receiver and a source of electrical supply, a sleeve mounted in said tubular projection and having outwardly directed arms, an insulated contact device carried by said sleeve and having a bifurcated upper portion and a removable lower portion adapted to contact with the mercury and to retain the parts in position and a depressible rail mounted in said bifurcated portion. 26th. In an electrical contact system the combination with parallel segmental plates having exterior curved ribs and upper and lower horizontal attaching flanges, and curved guard plates secured to the upper horizontal flanges, of contact receptacles located with said plates and having a tubular projection formed in the cover thereof and being provided with a mercury receiver, connections between the receiver and source of electrical supply, a sleeve mounted in said projection and having outwardly projecting arms, springs supporting said arms, a contact device carried by said sleeve, a depressible rail connected with the contact device and means adapted to travel between said guard plates and be guarded thereby to depress said rail.

**No. 62,838. Process of Obtaining Nickel.**  
(*Procédé pour obtenir du nickel.*)



Ludwig Mond, 20 Avenue Road, Regent's Park, London, England, 8th March, 1899; 6 years. (Filed 21st January, 1898.)

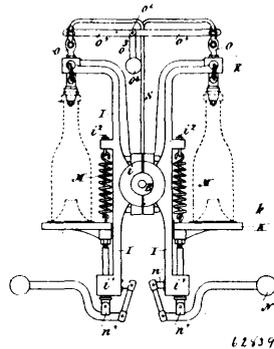
*Claim.*—1st. The herein described process for separating metallic nickel from nickel carbonyl, by passing the gases containing the carbonyl through interstices between heated pellets or small pieces of nickel which are removed as they become enlarged by deposit of nickel upon them. 2nd. Apparatus for effecting the process set forth in claim 1, characterized by an externally heated vessel containing nickel pellets provided with a central cooled perforated tube from which gases containing nickel carbonyl pass through the pellets, which are kept in motion, sifted and disposed of by worm conveyers, screens and elevators.

**No. 62,839. Machine for Aerating Liquids.**  
(*Machin pour aérer les liquides.*)

Camille Ameye, Iseghem, Belgium, 8th March, 1899; 6 years. (Filed 24th February, 1898.)

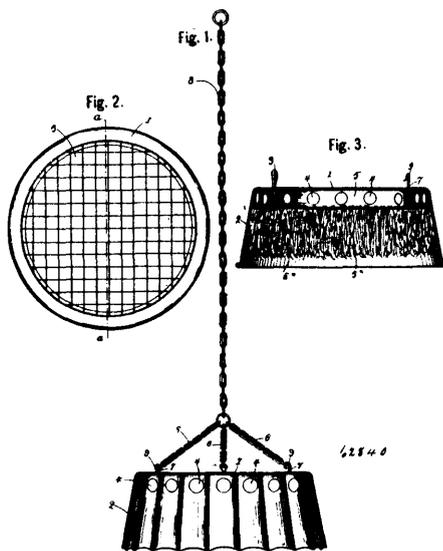
*Claim.*—1st. The combination with a revolvable shaft having an axial gas passage, bottle-carriers detachably connected with and arranged in pairs on opposite sides of said shaft, said carriers bent outwardly and provided with a cross-head at one end, stoppers fitted to said cross-heads, and gas passages leading from the cross-heads through the respective stoppers, of a detachable valved pipe

for each cross-head, in communication with the gas passage therein and with the like passage in the shaft, for the purpose set forth.



2nd. The combination with a revolvable shaft having an axial gas passage, bottle-carriers detachably connected with and arranged in pairs on opposite sides of said shaft, said carriers bent outwardly and provided with a cross-head at one end, stoppers fitted to said cross-heads, and gas passages leading from the cross-heads through the respective stoppers, of a detachable valved pipe for each cross-head, in communication with the gas passage therein and with the like passage in the shaft, and means for operating the valves of said pipe simultaneously, for the purpose set forth. 3rd. A bottle-carrier, for the purpose set forth, comprising a frame adapted to be secured to a revolvable shaft, a cross-head at its upper end and provided with a pair of stoppers and a gas-duct and connections between said duct and the stoppers, spring-held supports for holding the bottles against their stoppers, and levers for lowering the supports, substantially as described. 4th. The combination of a revolvable shaft provided with an internal gas passage connectable with a source of gas supply, with two bottle-carriers secured in pairs on said shaft, each carrier provided with two bottle-supports, with a cross-head above said supports having an internal gas passage, two cork-holders provided with a gas outlet in communication with said gas passage, and a pipe connection between the last-named passage and the passage in the shaft, said carrier and pipe connections detachable from said shaft, for the purpose set forth. 5th. The combination with a revolvable shaft, of a bottle carrier composed of two frames provided about their longitudinal centre with semi-circular bearings for said shaft and with suitable bolt-flanges for securing said frames to the shaft, substantially as described. 6th. The combination of a revolvable shaft, provided with an internal gas passage connectable with a source of gas supply, bottle-carriers mounted on said shaft provided with gas-ducts, pipe connections between the said ducts and hollow shaft, valves for said pipe connections adapted to be operated simultaneously by link connections with a common shaft, and a valved pipe on the revolvable shaft for the collection and expulsion of the air driven from the bottles during charging, substantially as described.

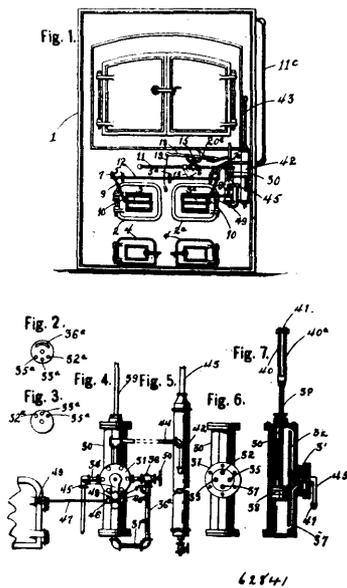
**No. 62,840. Smoke Bell.** (*Garde-juméc.*)



Truman Christian Ottway Sherk, Buffalo, N. Y., U.S.A., 8th March, 1899; 6 years. (Filed 22nd February, 1898.)

*Claim.*—1st. A smoke bell comprising a bell portion, and a filling of asbestos loosely sustained within said bell portion. 2nd. A smoke bell comprising a bell portion and a filling of fire proof material loosely sustained within said bell portion and adapted to collect and retain the unconsumed or partially unconsumed matter in the smoke or hot gasses thrown off by the flame. 3rd. A smoke bell comprising a bell portion, a suspending medium, a filtering medium and devices for securing the filtering medium therein, and the suspending medium to the bell portion. 4th. A smoke bell comprising a bell portion, a suspending medium, an asbestos supporting device, and devices for detachably securing the suspending medium to the bell portion and the asbestos supporting device within the bell portion. 5th. A smoke bell comprising a bell portion provided with a series of draft openings, a net suspended within said bell portion and a series of asbestos portions loosely suspended from said net. 6th. A smoke bell comprising a bell portion, provided with a series of openings in its top, a net, a series of asbestos portions loosely suspended from said neck, a supporting chain or chains and devices passed through the openings in the top of the bell portion for detachably securing the chain or chains to the bell portion and the net within the interior of the bell portion, as set forth. 7th. A smoke bell adapted to be suspended over the flame of a lamp, gas jet or other light, and comprising a bell portion having openings at or near its top and a filtering device composed of fire-proof material, as set forth.

**No. 62,841. Smoke Consumer. (Fumivore.)**



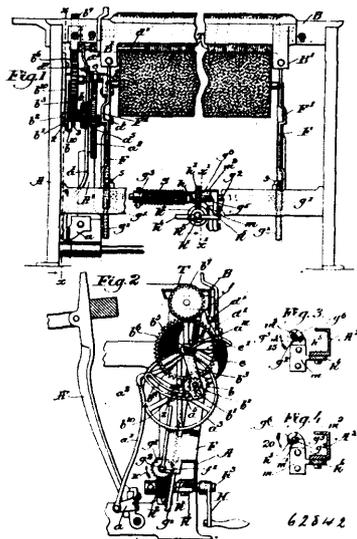
John H. Schmahl and Otto E. Westphal, both of Buffalo, New York, U.S.A., 8th March, 1899; 6 years. (Filed 18th November, 1897.)

*Claim.*—1st. The combination with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, an arm for controlling the valve and the dampers, a piston between the door and the arm, the rod of which operates the arm, a valve for the piston provided with a perforated arm, a rod pivotally secured to the door and having its free end projected through the perforation in the valve-arm, and collars adjustably secured upon the rod for engaging with the valve-arm, substantially as set forth. 2nd. The combination, with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, a support on the valve-case, provided with a shoulder, an arm pivotally secured to the support, an end portion pivotally secured to the arm, a sliding catch connected with the end portion, and means for moving the catch when the end portion is turned upon its pivoted point, and a motor connected with the door and with the end portion, substantially as set forth. 3rd. The combination with a furnace, of a steam pipe connected with the boiler and carrying steam jet-nozzles, a valve connected with said pipe, an arm pivoted to a support on said valve for operating the valve, means connecting said arm with dampers located in the furnace doors for opening or closing them, a locking tooth at the opposite side of said valve, a spring catch connected with the opposite end of said valve, a spring catch connected with the opposite end of said arm for engaging said tooth, and an arm pivoted to the pivoted arm and connected by a chain for operating said catch, for the purposes described. 4th. The combination with a furnace, of a steam pipe communicating with the boiler and provided with steam jet nozzles, a valve connected with said pipe having a support on one side carrying a pivoted arm, having at one side means connecting with the dampers for opening and closing

them, a locking-tooth and support at the opposite side of said valve, a spring catch mounted so as to be movable longitudinally on the pivoted arm and adapted to engage with the locking tooth, an arm jointed to the pivoted arm and connected thereto by a chain for disengaging the spring catch, and means connected with the furnace doors for operating said arm, substantially as described. 5th. The combination, with a furnace door, of an inwardly and downwardly extending plate, and a damper pivotally secured to the door in front of the plate, substantially as set forth. 6th. The combination with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, an arm for operating the valves and the dampers, a catch connected with the arm for holding the valve and the dampers open, and a motor connected with the door for releasing the catch, substantially as set forth. 7th. The combination with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, an arm for operating the valve and the dampers open, a motor connected with the door for releasing the catch, and means for varying the speed of the motor, substantially as set forth. 8th. The combination, with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, an arm for operating the valve and controlling the dampers, a catch connected with the arm for holding the valve and the dampers open, a piston between the arm and the doors for releasing the catch, a valve for the piston, and a connector between the door and the valve of the piston, substantially as set forth. 9th. The combination, with a furnace, the doors of which are provided with dampers, of a steam pipe projecting into the furnace, a valve in the pipe, an arm, a catch connected therewith, a piston, a valve for the same, provided with an arm, a connector from the door to the arm of the valve, and means for varying the point of engagement between the connector and the arm, substantially as set forth. 10th. The combination with a furnace and its door, of a steam pipe projecting into the furnace, a valve connected with said pipe for admitting steam, an arm for operating said valve, and a device connected with and controlled by the opening of the furnace door for operating said arm, as set forth.

**No. 62,842. Take-up Mechanism for Looms.**

(Mécanisme de tension pour métiers.)



The Draper Company, Hopedale, Massachusetts, U.S.A., 9th March, 1899; 6 years. (Filed 23rd November, 1898.)

*Claim.*—1st. In a loom, sliding supports upon which the journals of the cloth-roll are mounted, connections between said supports to effect their movement in unison, and means to control said movement with a variable resistance. 2nd. In a loom, sliding supports for the cloth-roll journals, fixed guides for the supports, having open portions to permit insertion and removal of the cloth-roll journals, and spring-controlled means connecting and to govern the movement of said supports in unison. 3rd. In a loom, fixed guides, rack-bars movable thereon and adapted to support the cloth-roll journals, a shaft having gears fast thereon, said gears meshing with the rack-bars, and a spring adapted to control the rotation of the shaft and thereby the movement of the rack-bars. 4th. In a loom, sliding supports for the cloth-roll journals provided with rack-teeth, a shaft geared to said supports to effect their movement in unison, a controlling-spring attached at one end to the shaft and fixed at its other end, and means to manually vary the spring tension. 5th. In a loom, fixed guides, rack-bars movable thereon and adapted to support the cloth-roll journals, a shaft having gears fast thereon, said

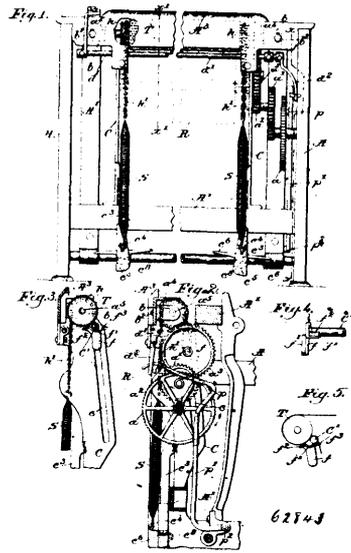
gears meshing with the rack-bars, a worm-gear loose on the shaft, a meshing-worm, to normally lock said gear, and a spring attached at its ends to said shaft and worm-gear respectively, to control the movement of the rack-bars, rotation of the worm-fixed acting to relieve the tension of the spring. 6th. In a loom, fixed guides, rack-bars movable thereon and adapted to support the cloth-roll journals, a shaft having gears fast thereon, said gears meshing with the rack-bars, a worm-gear loose on the shaft, a meshing-worm shaft, to normally lock said gear, and a spring attached at its ends to said shaft and worm-gear respectively, to control the movement of the rack-bars, rotation of the worm-shaft acting to relieve the tension of the spring, combined with means to positively limit the rotative movement of said worm-shaft. 7th. In a loom, toothed, sliding, cloth-roll supports, a rotatable shaft, gears fast thereon in mesh with said toothed supports, a worm-gear loose on said shaft and having a laterally projecting lug, an adjacent collar loose on the shaft and having a projection in the path of said lug, and a fixed stop adapted to engage said projection and limit the rotative movement of the collar, combined with a spring connected at its ends to said shaft and worm-gear respectively, and a worm-shaft to manually rotate the worm-gear, the lug, projection and stop co-operating to limit the rotative movement of the worm-gear in either direction. 8th. In a loom, a take-up roll, fixed stands below it, longitudinally slotted and having openings for the entrance and removal of the cloth-roll shaft, sliding supports for said shaft, movable on said stands within the slots thereof, connections between and to effect simultaneous movement of said sliding supports, and a single controlling-spring connected with said connections and adapted to maintain the cloth-roll yieldingly against the take-up roll, with a pressure which increases as the weight of the cloth-roll increases. 9th. In a loom, connected, longitudinally-movable supports for the journals of the cloth-roll shaft, a controlling-spring for said supports, located and arranged to be wound up as the weight of the cloth-roll increases, and thereby increase the tension of the spring, and independent means to decrease the spring tension when the cloth-roll is to be removed from its supports. 10th. In a loom, connected, longitudinally-movable supports, for the journals of the cloth-roll shaft, a controlling-spring for said supports, located and arranged to be wound up as the weight of the cloth-roll increases, to thereby increase the tension of the spring, independent means to unwind or wind the spring, and a device to positively limit the effective operation of said means. 11th. In a loom, longitudinally-movable cloth-roll supports provided with teeth, a connecting-shaft geared to said supports to effect their movement in unison, a spring attached at one end to said shaft, means to normally hold the other end of the spring fixed, and a controlling device for said means. 12th. In a loom, longitudinally-movable cloth-roll supports, provided with teeth, gears in mesh with said toothed supports, spring-controlled means connected with and to govern the rotation of the gears and thereby the longitudinal movement of the supports, and a governing device for said means. 13th. In a loom, sliding supports for the cloth-roll journals, provided with rack-teeth, spring-controlled gears meshing with said rack teeth, the resistance of the gears to rotation increasing as the weight of the roll of cloth increases, and normally-locked, normally-operated means to relieve the gears from the spring control, or vary the latter. 14th. In a loom, a fixed guide, a longitudinally-movable rack-bar thereon and adapted to support a journal of the cloth-roll shaft, a gear meshing with said bar, a spring to control the rotation of the gear, and means to normally vary the spring tension. 15th. In a loom, a fixed guide, a longitudinally-movable rack-bar thereon and adapted to support a journal of the cloth-roll shaft, a gear meshing with said bar, a spring to control the rotation of the gear, a worm-gear with which one end of the spring is connected, and a meshing-worm shaft, to normally lock said worm-gear. 16th. In a loom, a fixed guide, a longitudinally-movable rack-bar thereon and adapted to support a journal of the cloth-roll shaft, a gear meshing with said bar, a spring to control the rotation of the gear, a worm-gear with which one end of the spring is connected, and a meshing worm, to normally lock said worm-gear, combined with means to positively limit the rotative movement of said worm-gear.

**No. 62,843. Take-up Mechanism for Looms.**  
(*Mécanisme de tension pour metiers.*)

The Draper Company, Portland, Maine, assignee of James Henry Northrop, Hopedale, Massachusetts, U.S.A., 9th March, 1899; 6 years. (Filed 28th November, 1898.)

*Claim.*—1st. In a loom, the lay, a positively actuated, continuous take-up roll over which the cloth passes directly from the lay, and means to vertically adjust said take-up roll, substantially as described. 2nd. In a loom, the lay, a take-up roll located near the fell, the cloth passing directly from the lay over the said roll and between the latter and the breast-beam acting as a guard for the front of the roll, and means to vertically adjust the latter, substantially as described. 3rd. In a loom, a take-up roll, the core or bar upon which the cloth is wound, travelling bearings for said core, coiled springs, flexible connections between said bearings and the upper ends of the springs, whereby the core or bar is yieldingly supported, and manually controlled locking means to normally retain the other ends of the springs fixed, unlocking of the said means relieving the core or bar from the action of the springs, substantially as described. 4th. In a loom, a take-up roll, travelling

bearings for the journals of the roll of cloth, guides for said bearings, spring-controlled means to act upon said bearings and normally



press the roll of cloth against the take-up roll, and sliding locking members for said spring-controlled means, to normally retain the latter operative, substantially as described. 5th. In a loom, the take-up roll, inclined side guides, open bearings movable thereon and adapted to support the journals of the roll of cloth, spiral springs, normally fixed at their lower ends, flexible connections between the upper ends of the springs and the bearings, guide rolls over which said connections pass, and means to release the lower ends of the springs and permit them to relax, substantially as described. 6th. In a loom, the take-up roll, the core or bar for the roll of cloth, springs to normally maintain the roll of cloth pressed yieldingly against the take-up roll, and means to release the normally fixed ends of said springs and permit removal of the roll of cloth, substantially as described. 7th. In a loom, a take-up roll, the core or bar upon which the cloth is wound, travelling bearings therefor, springs, flexible connections between said bearings and the springs at one end of the latter, to normally support the bearings, and means to normally hold in fixed position the other ends of the springs, release of the said means permitting the roll of cloth to move away from the take-up roll as the springs relax, substantially as described. 8th. In a loom, the take-up roll, the core or bar for the roll of cloth, springs to normally maintain the roll of cloth pressed yieldingly against the take-up roll, fixed guides, and movable locking members normally maintained in operative position on said guides and attached to the springs, to provide a fixed point of attachment of the latter at one end, release of said locking members from the guides permitting them to move thereover and relax the springs, whereby the roll of cloth may be removed from the take-up roll while the springs are relaxed, substantially as described.

**No. 62,844. Explosive. (Explosif.)**

Vickers Sons and Maxim, River Don Works, Sheffield, York, and John Karstairs, Crayford, Kent, both in England, 9th March, 1899; 6 years. (Filed 25th November, 1898.)

*Claim.*—An explosive consisting of urea, alcohol and nitric acid compounded and treated, substantially as described.

**No. 62,845. Dynamite Thawing Box.**  
(*Boîte à dégeler la dynamite.*)

Daniel Smith and Colin A. Macpherson, Kingston, Ontario, Canada, 9th March, 1899; 6 years. (Filed 14th December, 1898.)

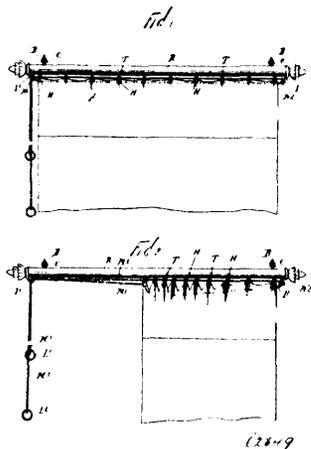
*Claim.*—1st. A box A, for use in thawing cartridges, constructed with a number of separate horizontal cartridge chambers, C, C &c., so placed that each chamber will be individually immersed and completely surrounded by hot water poured into the box, substantially as and for the purposes hereinbefore set forth. 2nd. A box A, for use in thawing cartridges, having an inlet for water D, with a cover or stopper F, and an outlet or tap E, and separate stationary cartridge chambers, C, C &c., horizontally traversing the interior of the box and having their ends opening flush with the ends thereof, and which may be closed by doors, G, G &c., all substantially as and for the purposes hereinbefore set forth. 3rd. The combination in a box for use in thawing cartridges of separate stationary horizontal chambers for cartridges with a receptacle for water surrounding



pleats together, for the purposes set forth. 3rd. A non-conducting covering made of a layer of soft, porous, fibrous material pleated or folded upon itself so that the edges of the pleats extend across the covering from side to side, are presented outwardly therefrom and form its outer surfaces, filling material placed between the pleats, and adhesive material in the filling material, for the purposes set forth. 4th. A non-conducting covering made of a layer of soft, porous, fibrous material pleated upon itself so that the edges of the pleats extend from side to side of the covering, are presented outwardly therefrom and form the outer surfaces thereof, the edges of the pleats on the side of the covering which is not in contact with the heated surface being attached to each other, for the purposes set forth. 5th. A non-conducting covering made of a sheet or bat of fibrous material, folded or pleated upon itself so that the pleats are substantially at right angles to the plane of the covering, and the edges whereof form its outer surfaces, filling material between some of the pleats, the outer edges of such pleats being turned over and attached to adjoining pleats, thus confining the filling material, for the purposes set forth. 6th. A non-conducting covering made of a sheet or bat of fibrous material folded or pleated upon itself so that the pleats are substantially at right angles to the plane of the covering and the edges whereof form its outer surfaces, filling material between some of the pleats, adhesive material in the filling material, the edges of the pleats forming one continuous smooth surface, for the purposes set forth. 7th. A non-conducting covering comprising an unbroken sheet or bat of flexible fibrous material folded upon itself in pleats which, when in position on the surface to be protected, are in contact with each other laterally and with the adjacent pleats throughout the covering, and are substantially at right angles to the said surface, for the purposes set forth. 8th. A non-conducting covering, composed of a sheet of soft, porous, fibrous material, the fibres of one or both surfaces of which are in a loosened or unconfined condition, the same being folded into pleats at substantially right angles to the plane of the covering so that their edges form the outer surfaces of the covering, said pleats being attached to each other sidewise, for the purpose set forth. 9th. A non-conducting covering made of a sheet or bat of fibrous material folded or pleated upon itself at substantially right angles to the plane of the covering, the sides of the adjoining pleats being in contact and attached together, and the whole attached to a base sheet of suitable material, for the purposes set forth. 10th. A non-conducting covering composed of a layer of soft, porous, fibrous material folded or pleated upon itself, the pleats resting upon and supporting each other laterally and being bent or inclined relative to the surface upon which they rest, and secured together side by side as by adhesive material, for the purposes set forth. 11th. A non-conducting covering composed of a continuous layer of soft, porous, fibrous material supplied with adhesive material and compressed vertically and laterally into a succession of parallel ribs or pleats which extend transversely of the covering, the edges of which pleats form the exposed surfaces of the covering, for the purposes set forth.

#### No. 62,849. Curtain Hanging Apparatus.

(Appareil à tendre les rideaux.)



Paul Goldsmith, Troy, New York, U.S.A., 9th March, 1899; 6 years. (Filed 3rd September, 1897.)

*Claim.*—1st. In an apparatus for hanging curtains, the combination with a slideway having a slot in its under side, of riders or travellers entered within said slideway, a shank making a swivelled connection with each of said riders or travellers and arranged to depend therefrom within said slot, a depending ring formed integrally with the lower end of each of said shanks, a washer on the latter between the ring and the slot, hooks, each having a downwardly and laterally projected prong, and a depending ring with each of said hook-prongs, adapted to be passed through a curtain at intervals with the latter resting on the hook-rings, and with each of the hooks hooked into the depending ring of one of the travellers or

riders, substantially in the manner as and for the purpose set forth. 2nd. The combination with a bar provided with a groove having a slot in its under side, of travellers or riders, each provided with a head arranged within said groove to straddle said slot, and each having a shank making a swivelled connection with the head, and depending therefrom within said slot, and at its lower end below the slot, each provided with a depending ring, a washer arranged on the travellers or riders, between the shank and the sides of the slot, curtain hooks each provided with a hook having a downwardly and laterally projected prong, and at the lower end of the shank provided with a ring, a disc-form washer threaded onto each of the hook shanks above the ring thereon, with each of said hooks adapted to have a curtain passed on over it to rest on the disc form washer, with the hooks each hooked into one of the traveller or rider rings, substantially in the manner, as and for the purpose set forth. 3rd. The combination with the groove G, made with the slot G<sup>2</sup>, forming the slideway of the riders or travellers T, each made with a swivel-head h, shank h<sup>2</sup>, swivel-washer h<sup>3</sup>, and ring h<sup>4</sup>, entered within said slideway and their heads interiorly straddling the same and their shanks and rings depending therefrom, the hooks H, each having a hook proper at its upper end made with an offset prong p, and at its lower end provided with the ring R<sup>2</sup>, with the hooks proper, each adapted to be passed through the curtain C, with the latter resting upon the ring R<sup>2</sup>, and the hooks proper, each hooked into one of the rings upon each of the riders or travellers, substantially in the manner, as and for the purpose set forth. 4th. The combination with the rod or bar R, having the slideway formed therein, and provided with slide-rollers N<sup>1</sup>, and N<sup>2</sup>, each downwardly projected from one of its opposite ends of the travellers or riders T, each provided with a head having a swivelled head adapted to interiorly straddle said slideway when inserted therein with the shank of the rider or traveller within the slot G<sup>2</sup>, and depending therefrom and having a ring on its lower end, the hooks H, each provided with a hook proper at its upper end having an offset point on its prong p, and at its shank end with the ring R<sup>2</sup>, the curtain C, at its upper end depending from said hooks, the cord M<sup>3</sup>, passed over the roller N<sup>1</sup>, to connect with the adjacent front edge of the curtain, and the cord M<sup>2</sup>, passed over the roller N<sup>1</sup>, and the roller N<sup>2</sup>, and carried horizontally to connect with the curtain at its front edge near its top, substantially as shown and described. 5th. In a curtain hook, the combination with the hook proper, of a downwardly and laterally extended prong, a ring formed integrally with the hook-shank at the lower end of the latter, and a disc-form washer on the hook-shank, between the ring and the hook-prong, substantially as shown and described.

#### No. 62,850. Thawing and Preserving Method for Skins, Hides, etc. (Méthode de dégeler et préserver les peaux.)

Ury de Günzburg, Vitry-sur-seine, France, 9th March, 1899; 6 years. (Filed 21st September, 1898.)

*Claim.*—1st. The method of treating skins, consisting in first immersing the skin in water, then subjecting the same to the action of a bath, formed of water and sulphohydrate of calcium sulphide in a nascent state, and then depilating the skins and freeing them from adhering flesh, substantially as described. 2nd. The process of treating shaved skins or hides, consisting in subjecting the skins or hides to the action of a bath of water and sulphohydrate of calcium sulphide in a nascent state, then depilating the skins and freeing them from adhering flesh, and then subjecting them to the process of tawing, substantially as described. 3rd. A bath for preserving and bleaching skins formed of approximately three parts of water to one part of sulphohydrate of calcium sulphide in a nascent state. 4th. The method of treating shaved skins or hides consisting in subjecting the skins or hides to the action of a bath of water and sulphohydrate of calcium sulphide in a nascent state, then depilating the skins and freeing them from adhering flesh, and then subjecting the skins to a bath formed of water and bisulphite of alumina, substantially as described. 5th. The method of treating shaved skins or hides, consisting in subjecting the skins or hides to the action of a bath of water and sulphohydrate of calcium sulphide in a nascent state, then depilating the skins and freeing them from adhering flesh and then subjecting the skins to a bath formed of water, bisulphate of alumina and hydrochloric acid, substantially as described. 6th. The process of tawing skins, which consists in subjecting them to the action of a bath formed of water and bisulphite of alumina, substantially as described. 7th. The process of tawing skins, which consists in subjecting them to the action of a bath formed of water, bisulphite of alumina and hydrochloric acid, substantially as described. 8th. A bath for tawing skins or hides, formed of ten parts of water to one part of bisulphite of alumina, substantially as described. 9th. A bath for tawing skins or hides formed of ten parts of water to one part of bisulphite of alumina, to which is added a small quantity of hydrochloric acid, substantially as described. 10th. The method of treating tawed skins, which consists in subjecting them to the action of a bath formed of water and a liquid ammoniac, substantially as described. 11th. The method of treating tawed skins, which consists in subjecting them to the action of a bath formed of water, liquid ammoniac, a salt of chromium and a neutral chromate of soda, substantially as described. 12th. The method of treating tawed skins, which consists in subjecting them to the action of a bath formed of water and liquid ammoniac,

then draining the skins thoroughly, and then subjecting them to the action of a paste formed of wheaten flour, glycerine and the residues of precipitation of the ammonia bath, located in a fulling mill, substantially as described. 13th. The method of treating tawed skins which consists in subjecting them to the action of a bath formed of water, liquid ammoniac, a salt of chromium and a neutral chromate of soda, then draining the skins thoroughly, and then subjecting them to the action of a paste formed of wheaten flour, glycerine and the residues of precipitation of the ammonia bath, located in a fulling mill, substantially as described. 14th. A fulling paste for treating skins formed of eight parts of wheaten flour, one part of glycerine and the residues of a bath formed of water and liquid ammoniac, substantially as described. 15th. A fulling paste for treating skins formed of eight parts of wheaten flour, one part of glycerine and the residues of a bath formed of water, liquid ammoniac, a salt of chromium, and a neutral chromate of soda, substantially as described.

**No. 62,851. Method of Manufacture, Soluble Products from Proteids.** (*Méthode de fabrication de produits solubles de protéine.*)

Dr. Leon Lilienfeld, 20 Ottakringerstrasse, Vienna, Austria, 9th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. The process for converting proteids into albuminous compounds soluble in alcohol, which consists in digesting the proteid with alkalies and precipitating the novel substance from the product of the reaction by the addition of acid, in the manner substantially as described. 2nd. The process for converting proteids into albuminous compounds soluble in alcohol, which consists in digesting the proteids with alkalies, then precipitating from the product of the reaction the potassium or sodium compound by the addition of alcohol and finally decomposing the said compound by the addition of acid, in the manner substantially as described.

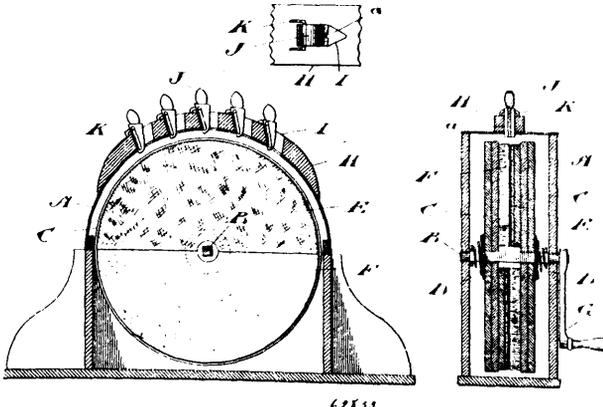
**No. 62,852. Liquid Caustic.** (*Caustique liquide.*)

Arthur Cannitzer, New York City, New York, U.S.A., 9th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. A liquid caustic, being a thick gelatinous solution and comprising essentially an alcoholic solution of chlorid of zinc, collodium and an alcoholic solution of methylene blue, substantially in the proportions specified. 2nd. The process of compounding a liquid chemical composition, comprising essentially chlorid of zinc and collodium, and consisting in dissolving 50 parts by weight of chlorid of zinc in 3 to 5 cc. of hydrochloric acid and 12 cc. of alcohol, then mixing with it 25 parts of collodium, and then adding 15 cc. of ethylic ether and a few drops of methylene blue solution, as specified. 3rd. The process of compounding a liquid chemical composition, comprising essentially chlorid of zinc and collodium, and consisting in dissolving 50 parts by weight of chlorid of zinc in 3 to 5 cc. of hydrochloric acid and 12 cc. of alcohol, then mixing with it 25 parts of collodium specially prepared, and containing 1 part by weight of colloxylene in 1 cc. of alcohol and 23 cc. of ethylic ether, and finally adding to the whole 15 cc. of ethylic ether and a few drops of methylene blue solution, as specified.

**No. 62,853. Knife Polishing Machine.**

(*Machine à polir les couteaux.*)

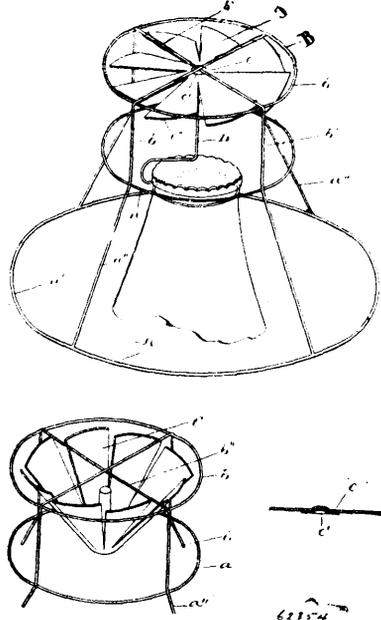


Henry Spencer Weller and Frederick Spencer Weller, both of Toronto, Ontario, Canada, 9th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. In a knife polishing machine a shaft, two discs suitably supported on the shaft and provided with brushes and pads, in combination with a spring or springs tending to press the discs together, and means for holding one or more knives in position with their blades between the discs, substantially as and for the purpose specified. 2nd. In a knife polishing machine a shaft, two discs suitably supported on the shaft in proximity to one another each provided with a pad and a brush, the brush on each disc being opposite the pad on the other, in combination with means for holding

one or more knives in position with their blades between the discs, substantially as and for the purpose specified. 3rd. In a knife polishing machine a knife holder comprising a wedge shaped holder vertically movable in an opening in the casing, in combination with a wire connected to the casing and extending through a longitudinal slot in the holder, substantially as and for the purpose specified. 4th. In a knife polishing machine a knife holder vertically movable in an opening in the casing, which opening is tapered as to the portion in front of the holder, substantially as and for the purpose specified. 5th. In a knife polishing machine a knife holder comprising a wedge shaped holder having a strip of leather inserted in a vertical groove in its face, and vertically movable in an opening in the casing which opening is tapered as to the portion in front of the holder, substantially as and for the purpose specified.

**No. 62,854. Light Shade.** (*Abat-jour.*)

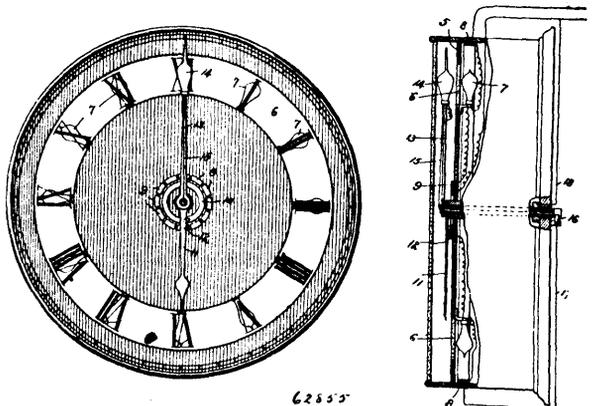


William Wallace Conover, Toronto, Ontario, Canada, 9th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. The combination of a lamp or gas jet, and a revolvable shade to be actuated by the air currents from the light flame, substantially as specified. 2nd. The combination of a lamp or gas-jet, a pivot supported by the lamp or gas jet extending above the light flame, and a revolvable shade embracing in its construction a skeleton frame, and a propeller carried by the skeleton frame to be actuated by the air currents and having a pivot seat for the pivot, substantially as specified. 3rd. The combination of a lamp or gas jet, a pivot to be attached to the lamp or gas jet and held above the flame, a revolvable shade embracing in its construction a skeleton frame having a turret-top, and a propeller secured to the turret-top having a frictionless pivot-seat for the top of the pivot, substantially as specified.

**No. 62,855. Method of Illuminating Clocks.**

(*Méthode d'illuminer les horloges.*)

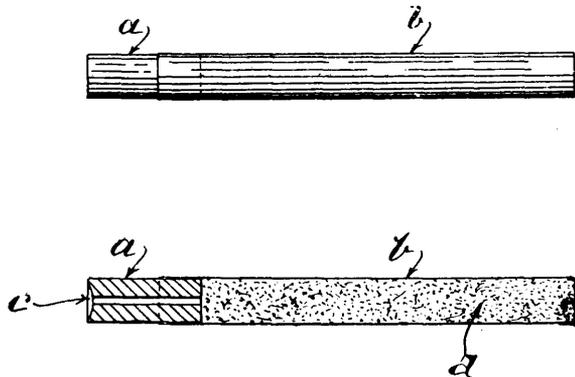


Richard Teller Crane, jr., Chicago, Illinois, U.S.A., 9th March, 1899; 6 years. (Filed 12th December, 1898.)

*Claim.*—1st. The combination with a clock dial and an indicating pointer moving over the same, of means for illuminating the indicating characters successively and synchronously with the registration herewith of the pointer. 2nd. The combination with a clock dial, and an indicating pointer moving over the same, of means for illuminating the indicating characters successively and synchronously with the registration therewith of the pointer, said means being controlled by mechanism of the clock.

**No. 62,856. Cigarette Mouth Piece.**

(*Embouchure de liège pour cigarettes.*)

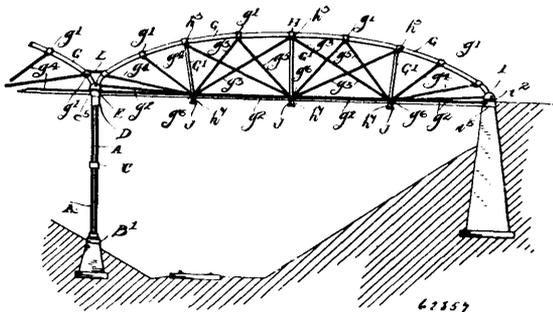


62856

Claude Champ, London, Middlesex, England, 9th March, 1899; 6 years. (Filed 12th December, 1898.)

*Claim.*—In cigarettes, a cork mouth piece having an aperture, said mouth piece being attached to the cigarette in any convenient manner, substantially as described and illustrated and for the purpose set forth.

**No. 62,857. Truss and Bridge.** (*Support et pont.*)



62857

Charles M. Horton, West Superior, Wisconsin, U.S.A., 9th March, 1899; 6 years. (Filed 13th December, 1898.)

*Claim.*—1st. In a truss, the combination of top-chord beams, hooked clips hung from the edges of said beams and adapted to secure posts, supports and braces to said top-chord beams without passing bolts or pins through the same and thereby weakening them, substantially as described. 2nd. In a truss, the combination of top-chord beams, splicing clips applied thereon for locking them in place, and adapted to secure suitable posts, supports and braces to said beams without weakening the same by bolt holes, and vertical webs formed upon said clips for strengthening them, substantially as described. 3rd. In a truss, the combination of arched I-beams, forming a top-chord beam, splicing clips adapted to fit the contour of said beams for locking the ends of the same in place, vertical webs formed upon the said clips for strengthening them, and means for securing posts, supports, tie rods and braces to said clips, the construction being such that the arched beams are not weakened by perforations for bolts, pins or the like, substantially as described. 4th. In a truss, the combination of arched I-beams, hooked clips adapted to fit upon the flanges of said I-beams and be locked thereon, and means for attaching supports, posts and braces to said clips, the construction being such that the arched beams are not weakened by perforations as for bolts, pins or the like, substantially as described. 5th. In a column or post for supporting structures, the combination of a plurality of angle beams meeting at a central point and divided clips adapted to be bolted together so as to inclose the said beams for holding them together, the construction being such that the said angle beams are not perforated as for bolting, and thereby weakened, substantially as described. 6th. In a column for supporting structures, the combination of a plurality of

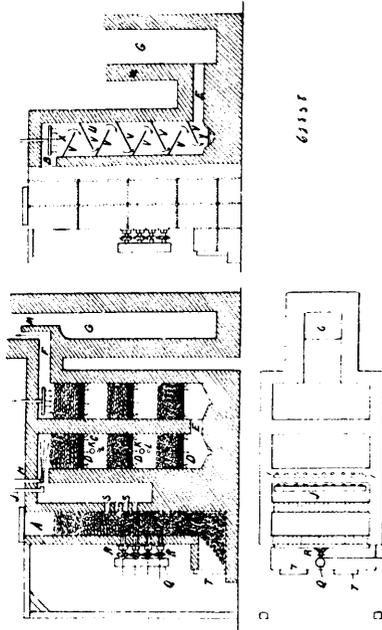
angle irons, the legs of which meet at a central point, a base plate provided with grooves adapted to fit the end contour of said angle irons, and laterally extending ears upon said base-plate for receiving and securing the end of the brace rods, and divided clips adapted to be bolted together so as to inclose the said beams and bind the said irons together without perforating them for bolting, substantially as described. 7th. In a supporting column or post, the combination of a plurality of angle irons, the legs of which meet at a central point, grooved plates for holding the ends in position, and sleeves formed of divided clips provided with external bolting ears, the said clips being adapted to be bolted together so as to inclose said irons and bind them together without perforating them for bolting, substantially as described. 8th. In a support for bridges, viaducts or the like, the combination of columns comprising a plurality of T-beams having their leg portions turned toward each other, end plates having grooves for holding the ends of said beams in place, sleeves consisting of divided clips, having external bolting flanges whereby the clips are adapted to inclose said beams and to bind them together, projections on said clips adapted to engage notches in the edge of flanges of the beams to prevent slipping, and means secured to said plates and sleeves for bracing the said columns laterally, the construction being such that the said T-beams are not perforated as for bolting or riveting, and consequently weakened, substantially as described. 9th. In a column for bridges, viaducts or the like, the combination of a plurality of angle irons meeting at the centre, means for binding said angle irons together without passing bolts through the same, a cap plate adapted to fit upon the upper ends of said irons, and provided with a channel or recess upon its upper surface adapted to receive rollers, and a shoe resting upon said rollers adapted to receive and support the end of a truss beam, without bolting, substantially as described. 10th. In a column for supporting adjacent spans or trusses, the combination with a suitable cap plate, of a shoe, or trunnion box for supporting the ends of the top chord beam of said spans, roller bearings interposed between the said cap plate and shoe, overhanging flanges upon said shoe completely covering the rollers and the cap-plate for keeping out water or ice, and trunnion plates upon said shoe adapted to support the end bottom chord links of said spans, substantially as described. 11th. In a truss, the combination with a top-chord beam, of panel posts adapted to connect the said top-chord beam with the floor beam of the said truss, clips having bolting-flanges adapted to inclose and be secured to the web of said panel-posts, ears at right angles to said flanges for securing the same to the top and bottom tie bolts, substantially as described. 12th. In a truss, the combination with a top-chord beam, of hooked clips hung from the opposite edges of the same, depending ears upon said clips extending below the top-chord beam and adapted to receive a connecting bolt for locking them in place, said bolt being adapted to support the panel posts, braces and wind braces, substantially as described. 13th. In a truss, the combination of arched top-chord beams having a continuous curved form, roller bearings having shoulders and inclined surfaces upon their upper sides adapted to receive and support the ends of said top-chord beams, and means for securing posts, supports, braces and beams to said top-chord beams, substantially as described. 14th. In a truss for bridges, the combination with top-chord beams for shoes having inclined upper surfaces and shoulders thereon adapted to receive the shore ends of said beams, channel base plate secured to the shoe abutments, and rollers interposed between said shoes and channel plates, substantially as described. 15th. In a truss for bridges, the combination with top-chord beams and bottom chord links, of shoes adapted to receive the shore ends of said beams having inclined surfaces upon the said shoes for receiving the end thrusts of said beams, channel plates secured to the shore abutments, rollers interposed between said shoes and channel plates, and trunnion plates formed on said shoes adapted to have secured to them the shoe ends of the bottom chord links of the truss, substantially as described. 16th. In a truss, the combination with top-chord beams, of panel posts secured thereto, clips having bolting flanges adapted to inclose and be secured to the webs of said panel posts, and ears at right angles to the said flanges, bolts passed through the lower ends of said posts and said ears, I-beams for supporting the floor of the truss, yokes passing over the said tie-bolts and passing through the flanges of the said floor I-beams, and means for securing the said yokes to the said flanges, substantially as described. 17th. In a truss bridge or viaduct, the combination with top-chord beams, of panel posts, I-beams for supporting the floor of the truss, yokes at the lower end of said panel posts passing through the flanges of the said I-beams for securing the floor beams of said bridge or viaduct to said posts, and diagonal brace rods interposed between said floor beams and having bifurcated ends adapted to embrace the flanges of said floor beams, the said bifurcated ends having apertures to receive the said yokes for laterally bracing the bridge, substantially as described.

**No. 62,858. Sulphuric Acid.** (*Acid sulphurique.*)

Amédée M. G. Sebillot, Paris, France, 9th March, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—1st. The improved process or mode of manufacturing sulphuric acid from sulphurous acid gas by the action of air and especially the arrangements hereinbefore described for ensuring the perfect mixture of the gas with water and air and the regulation, at will, of the supply of air and water vapour as well as the temper-

ature, substantially as hereinbefore set forth. 2nd. In a process of manufacturing sulphuric acid from sulphurous acid gas, the use of a



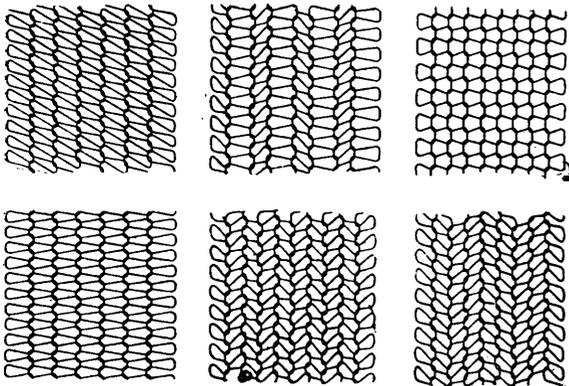
blast furnace for the roasting of the ores, constructed and arranged, substantially as hereinbefore described with reference to the drawings annexed.

**No. 62,859. Method of Finishing Fabrics.**  
(*Traitement ou achèvement de tissus.*)

Jules Richard, Elbeuf, France, 9th March, 1899; 6 years. (Filed 14th December, 1898.)

*Claim.*—1st. The method of finishing fabrics for the purpose of effecting the maximum amount of shrinkage of said fabrics, consisting in passing the fabrics to be treated in a moistened or damp condition over a dry heated table cylinder or surface for the purpose of obtaining the maximum amount of shrinkage of the fibres by the sudden vapourization of the moisture contained in the fabric, substantially as described. 2nd. The method of finishing fabrics for the purpose of effecting the maximum amount of shrinkage of said fabrics, consisting in passing the fabric to be treated in a moistened or damp condition over a heated perforated table or cylinder or surface, for the purpose of obtaining the maximum amount of shrinkage of the fibres from the sudden vapourization of the moisture contained in the fabric, the table cylinder or surface being heated by means of hot air which can pass through its perforation and act directly or indirectly upon the fabric to be treated, substantially as described.

**No. 62,860. Method of Making Fabrics.**  
(*Méthode de fabrication des tissus.*)



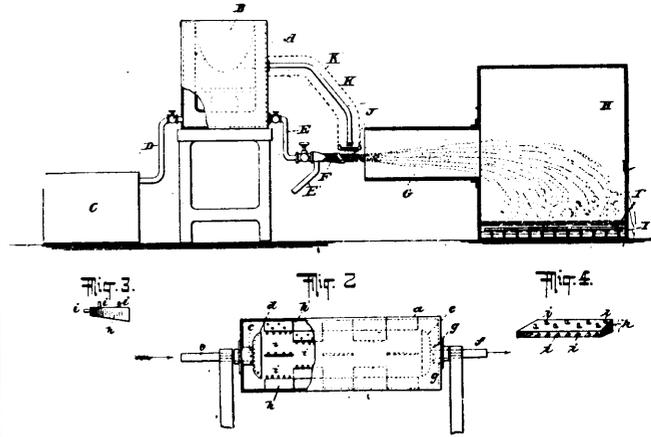
Gottlieb Benger, Stuttgart, Germany, 9th March, 1899; 6 years. (Filed 19th December, 1898.)

*Claim.*—1st. A fabric composed of threads twisted in different directions. 2nd. A fabric having two threads, one twisted in a right-hand direction and the other in a left-hand direction. 3rd.

A fabric having meshes formed from a plurality of threads twisted in different directions. 4th. A fabric having meshes formed from a plurality of threads having twists in opposite directions, the tendencies of the threads to untwist being equalized, substantially as described. 5th. A fabric having a row of meshes formed from threads twisted in one direction and a row of meshes formed from threads twisted in the opposite direction, substantially as described.

**No. 62,861. White Lead Making Process.**

(*Procédé pour la fabrication de blanc de plomb.*)

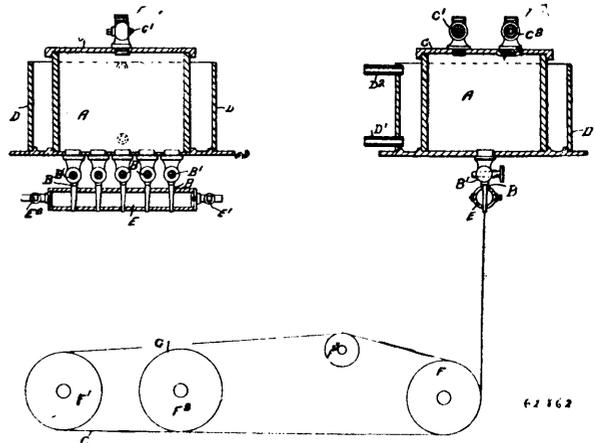


62861

Arthur H. Eyles, H. S. Rapelye and Addison Applegate, all of Mount Vernon, New York, U.S.A., 9th March, 1899; 6 years. (Filed 20th December, 1898.)

*Claim.*—1st. The herein described process of manufacturing carbonate of lead, the same consisting in oxidizing the lead by feeding the same in a molten state closely approaching volatilization into a stream of fluid at high temperature and pressure and carrying the same along in the stream, whereby the lead is oxidized to different degrees of oxidization, dropping the said mixture of oxides into a fluid whereby the said oxides will not become fixed and subsequently converting the said mixture of oxides into a uniform state of protoxide and thereupon carbonating the protoxide so produced. 2nd. The herein described process of manufacturing protoxide of lead, which consists in heating the lead to a molten condition closely approaching volatilization, feeding the said lead while in such highly heated condition into a stream of fluid at high temperature and pressure and carrying the same along in the stream, thereby oxidizing the lead to different degrees of oxidation, dropping the said mixture of oxides into a fluid which will prevent said oxides from becoming fixed and thereupon heating the said mixture of oxides and simultaneously agitating the same to convert the said mixture of oxide into a uniform protoxide of lead.

**No. 62,862. Manufacture of Textile Fabrics.**  
(*Fabrication de tissus textile.*)



Adam Millar, 45 Montrose Street, Glasgow, Scotland, 9th March, 1899; 6 years. (Filed 22nd December, 1898.)

*Claim.*—The manufacture of threads and filaments, applicable to various textile purposes, from gelatine or albumen treated to render them insoluble in water, substantially as described.

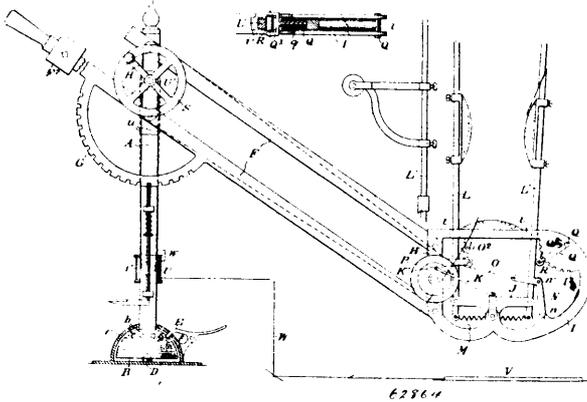
**No. 62,863. Alumina Extraction.** (*Extraction d'aluminium.*)

Emil Raynaud, Tessenderloo, Belgium, 9th March, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—For extracting alumina from aluminous ores which are either non-attackable, or attackable with difficulty, by acids, the treatment hereinbefore described, consisting in heating the ore with a sulphuretted body, or a mixture capable of its generation, without transforming the alumina into an aluminate, in order to obtain a product from which the alumina can afterwards be easily extracted by subjecting it to the action of sulphurous gas in presence of water, clarifying the solution, heating it, and calcining the precipitate obtained.

**No. 62,864. Magnetic Massage Machine.**

(*Machine pour massage magnetique.*)

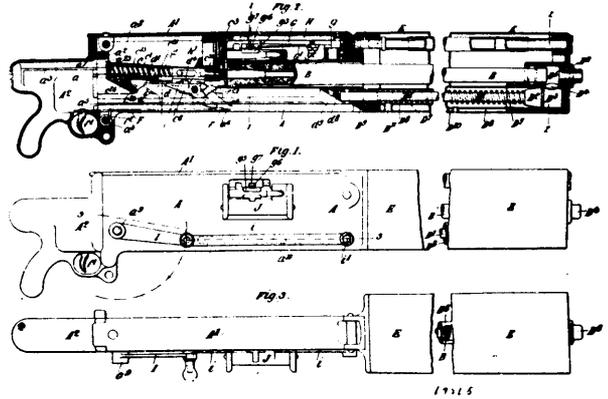


White Wolf M. Hickey, San Francisco, California, U.S.A., 9th March, 1899; 6 years. (Filed 7th January, 1899.)

*Claim.*—1st. The combination, in a massage apparatus of the character described, of the standard, having parallel counterbalanced arms pivoted to the upper part, a curved yoke connected with the opposite ends of the arms, bars and rubbers attached thereto carried by said curved yoke, an intermediate mechanism whereby the bars and rubbers are reciprocated, and a means for turning and adjusting the standard consisting of a semi-globular foot-piece, a correspondingly shaped base and socket within which the foot-piece is turnable, said foot-piece having holes made horizontally around it and a spring-pressed foot-pawl with point adapted to engage with said holes, whereby the standard may be turned and the parts carried thereby moved horizontally around a circle. 2nd. A massage apparatus, consisting of the standard or support with a semi-circular globular foot-piece, a case having a correspondingly shaped casing within which the foot-piece is fitted and turnable, and a controlling pawl mechanism, arms pivoted to the upper part of the standard, having their opposite ends connected with a centrally pivoted bar, and means for raising and lowering the arms about their connection with the standard and a curved retaining rack therefor, in combination with a semi-circular yoke having its ends connected with the centrally pivoted bar, a lug or projection upwardly from the lower part of the curved yoke, a lever arm centrally pivoted thereto with upwardly projecting rubber-carrying arms connected with its outer ends and guided through slots in the upper part of the yoke, pulleys upon the main standard and the pivoted bar at the outer end of the connecting arms, with a belt whereby motion may be transmitted from the standard pulley to the other one, a crank arm fixed to the outer pulley shaft, a rocker arm fixed to the fulcrum shaft of the oscillating lever, a pitman connecting the two whereby the reciprocation of the rubber arms is effected. 3rd. In an apparatus of the character described, the combination of a horizontally rotatable and adjustable standard, vertically adjustable arms, and a curved yoke carried at the outer end thereof with the interiorly fulcrumed reciprocating bar and mechanism whereby it is actuated, rubber arms connecting with its outer ends and movable in unison therewith, a convexed toothed rack curving inwardly within the arm of the yoke, a spring-pressed slidable pulley-carrying yoke fulcrumed at the centre of the curved rack and adapted to engage the teeth thereof, said pulley standing in the line of reciprocation of the outermost of the rubber-carrying bars and adjustable to regulate the angle at which said bar is moved. 4th. The combination, in an apparatus of the character described, of a vertical horizontally rotatable and adjustable standard with arms pivoted thereto, the horse-shoe shaped yoke connected with the outer ends of the arms, vertically disposed rubber-carrying arms, a centrally fulcrumed oscillating lever to the outer ends of which said arms are connected, springs by which the arms are normally drawn together, a mechanism intermediate between the standard and the lever whereby the latter is oscillated and the rubber arms reciprocated, a fulcrumed arm having a roller pressing against the back of one of the rubber arms and a weight whereby the yielding pressure of the rollers upon the arm is effected, in combination with the inwardly

curved toothed rack forming a part of the horse-shoe yoke, and a spring-pressed roller-carrying yoke adapted to engage the teeth of the rack and adjust the roller with relation to the reciprocating rubber-carrying arm. 5th. In an apparatus of the character described, the adjustable standard, directing and rubbing mechanism carried thereby, a mechanical magneto-electric device fixed to the standard, having an actuating pulley, a corresponding pulley fixed upon the crank shaft upon the standard, and a belt through which motion is transmitted to excite the electric device, a metallic plate adapted to support and contact with the patient and wires, one of which connects the electric apparatus with said plate, and the others with the rubbers through the mechanism of the apparatus, substantially as described.

**No. 62,865. Gun.** (*Fusil.*)



Vickers Sons & Maxim, 32 Victoria Street, London, England, assignee of Louis Silverman, Crayford Works, Crayford, Kent, England, 10th March, 1899; 6 years. (Filed 3rd October, 1898.)

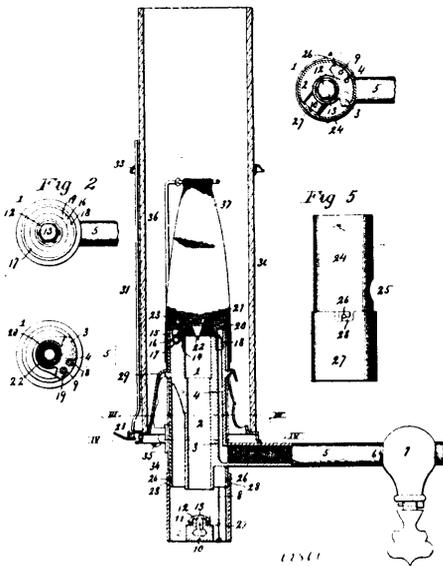
*Claim.*—1st. In an automatic gun, the combination with a reciprocating breech block or lock, of a rear portion pivoted thereto, of fixed abutments with which such rear portion engages to act as a strut when the breech is closed and of means for actuating said rear portion and reciprocating the breech block at each discharge of the gun, substantially as described. 2nd. In an automatic gun, the combination with a reciprocating breech block or lock of a rear portion pivoted thereto, of fixed abutments with which such rear portion engages to act as a strut when the breech is closed, of a sliding action bar provided with means for shifting said rear portion into and out of engagement with the abutments and for reciprocating the breech block during the movements of the action bar and for means for operating said action bar at each discharge of the gun, substantially as described. 3rd. In an automatic gun, the combination with a reciprocating breech block or lock, of a strut pivoted thereto by a pin passing transversely through the longitudinal axis of said lock, of fixed abutments with which such strut engages when the breech is closed, of a sliding action bar provided with means for actuating said strut and lock by the movements of the action bar, and of means for operating said action bar at each discharge of the gun, substantially as described. 4th. In an automatic gun, the combination with a reciprocating breech block or lock of a strut pivoted thereto, of fixed abutments with which such strut engages when the breech is closed, of inclined projections on said strut, of a sliding action bar provided with a rib to act upon said inclined projections for shifting the strut into and out of engagement with the abutments and for reciprocating the lock during the movements of the action bar and of means for operating said action bar at each discharge of the gun, substantially as described. 5th. In an automatic gun, the combination with a reciprocating breech block or lock of a strut pivoted thereto, of fixed abutments with which such strut engages when the breech is closed, of two inclines on the said strut, of a sliding action bar provided with a rib which in the rear-most movement of the action bar, acts upon one of the inclined projections to first shift the strut downwardly out of engagement with the abutments and then retract the lock to open the breech, the said rib in the forward movement of the action bar acting upon the other inclined projection to return the lock and raise the strut into re-engagement with the abutments, and of means for operating said action bar, substantially as described. 6th. In an automatic gun, the combination with a reciprocating breech block or lock of a strut pivoted thereto, of fixed abutments carried by the side plates of the gun casing, of lugs on said strut having inclined working faces to engage with correspondingly inclined working faces of the said abutments, of a projection on the strut to engage with a fixed stop and limit the extent of its upward movement, of two inclined projections on the underside of the strut, of a sliding action bar provided with a rib to engage with such inclined projections and actuate the strut breech block as the said action bar performs its reciprocating movements and of means for operating the action bar, substantially as described. 7th. In an automatic gun,

the combination with a reciprocating breech block or lock having a sliding cartridge-carrier and means for operating the same as the lock reciprocates, of a strut pivoted to the lock, of fixed abutments with which said strut engages when the breech is closed, of a forward and a rear inclined projection on the underside of said strut, of a sliding action bar provided with a rib to act upon the said inclined projections as said bar reciprocates, and of means for reciprocating said action bar, the inclination of the working face of the forward projection and that of the portion of the rib engaging therewith being such that the complete upward movement of the strut to finally close the breech, takes place immediately after the cartridge carrier has been elevated to its highest position by means of its lifting lever, substantially as described and for the purposes specified. 8th. In an automatic gun, the combination with the reciprocating breech block or lock, the pivoted strut, the fixed abutments, and the sliding action bar, of guiding ribs formed on the interior surface of a rear extension of the framing, the said ribs acting to prevent the strut from rising under the influence of the action bar as the latter and the lock perform their forward movement, until said strut escapes from said ribs and arrives in a position to re-engage with the abutments, substantially as described. 9th. In an automatic gun, the combination with the reciprocating breech block or lock, the sliding cartridge carrier, the pivoted strut, the fixed abutments, the action bar and means for operating the same, of a lifting lever pivotally mounted on a transverse pin carried by said lock and provided with a curved nose to engage with a slot in the carrier, of a lateral pin on said lifting lever to engage with a cam path formed in one of the side plates of the gun casing, of a heel near the pivot of said lifting lever, and of a shoulder on the action bar adapted to act upon said heel and thereby elevate the carrier just prior to the said action bar completing its forward movement, substantially as described and for the purpose specified. 10th. In an automatic gun, the combination with the reciprocating breech block or lock, the sliding cartridge carrier, the pivoted strut, the fixed abutments, the action bar and means for operating the same, of a pivot pin extending transversely through the longitudinal axis of the lock, and of a spring controlled firing pin provided with a longitudinal slot through which the said pin passes so as to permit of the firing pin performing its cocking and firing movements, substantially as described. 11th. In an automatic gun, the combination with a reciprocating breech block or lock having a sliding cartridge carrier and with means for operating said lock, of a spring controlled firing pin located within the lock and adapted to be cocked by the action bar, of a pivoted and detachable head to said firing pin, of a transverse cylindrical rear end or tee piece on said head to permit of its being inserted into or withdrawn from a corresponding recess in the body of the firing pin by a lateral movement, and of a shoulder at the lower part or margin of said recess to support the head in an approximately horizontal position, the upper part or margin of said recess being free to permit the head to shift upwardly about its cylindrical end or tee piece, substantially as described and for the purpose specified. 12th. In an automatic gun, the combination with the reciprocating breech block or lock having a sliding cartridge carrier and with a sliding action bar for operating said lock, of a spring controlled firing pin located within the lock and adapted to be cocked by the action bar, of a pivoted and detachable head to said firing pin, of a transverse cylindrical rear end or tee piece on said head to permit of its being inserted into or withdrawn from a corresponding recess in the body of the firing pin by a lateral movement, and of a shoulder at the lower part or margin of said recess to support the head in an approximately horizontal position, the upper part or margin of said recess being free to permit the head to shift upwardly about its cylindrical end or tee piece, substantially as described and for the purpose specified. 13th. In an automatic gun, the combination with the reciprocating breech block or lock, the sliding cartridge carrier, the pivoted strut, the fixed abutments, the action bar and the means for operating the same, of a spring controlled firing pin within the lock, of means on said action bar for cocking the firing pin, of spring controlled safety and firing sears for retaining the firing pin cocked, of a shoulder on the action bar to engage with and release the safety sear as said bar completes its forward movement, of a sliding trigger bar located below the action bar, and of a protuberance on said trigger bar which is adapted to release the firing sear when the trigger bar is drawn backward by pulling the trigger, substantially as described. 14th. In an automatic gun, the combination with a reciprocating breech block or lock and the sliding action bar for operating the same, of a spring controlled firing pin located within the lock and adapted to be cocked by the said action bar, of spring controlled sears for engaging with said firing pin when it is cocked, of a sliding trigger bar located below the action bar and having a cavity or recess in it of a hinged end cover for the casing of the gun, of a cam piece near the pivot of said end cover adapted to engage with the cavity or recess in the said trigger bar and to lock the same, when said end cover is turned downward about its pivot to expose the breech mechanism, substantially as described. 15th. In an automatic gun, the combination with the reciprocating breech block or lock, the pivoted strut, the fixed abutments, the sliding action bar, and the means for operating said action bar at each discharge of the gun, of a pivoted extension piece at the rear of the gun casing into which extension piece the block enters during its rearward movement, of means for enabling said extension piece to be released and permitted to turn about its pivot to uncover the rear end of the gun casing and of means whereby the block can be retracted by a crank handle and be brought into a position to enable it to be readily detached from the gun, substantially as described. 16th. In an automatic gun, the combination with a reciprocating breech block or lock, the sliding cartridge carrier and the lifting lever for actuating the latter, of a sliding action bar having an elongated opening or slot therein and provided with means for acting on said lifting lever to cause it to elevate the carrier as the

said bar performs its forward movement, and of a block at the forward end of said action bar, such block having a downwardly inclined surface facing the slot in the action bar, so that as the action bar performs its rearward movement and an empty cartridge case is falling through the slot, the said block will prevent the cartridge case from getting in front of the action bar and the said incline will direct it in a downward direction, substantially as described and for the purpose specified. 17th. In an automatic gun, the combination with a reciprocating breech block or lock and a sliding action bar for operating the same, of a lateral shoulder on the forward end of the action bar, of a pin projecting through a longitudinal slot in one end of the side plates of the gun casing and adapted to lie in front of and in engagement with said shoulder, without however being connected therewith so that the action bar when automatically operated will slide without acting on the pin, of an external crank handle mounted on a stud on the aforesaid side plate, and of a link coupling the said handle with the said pin whereby the action bar can be operated by hand, substantially as described. 18th. In an automatic gun provided with a non-recoiling barrel, the combination with a reciprocating breech block or lock and a sliding action bar for operating the same, of a rod connecting the said action bar with a piston, of a gas cylinder within which the piston works, of a chamber surrounding the muzzle of the barrel and communicating with the said gas cylinder and also provided with an aperture at its front through which the projectile passes as it is discharged from the barrel, and of means for returning said piston to its normal position each time it has been actuated by the gases of discharge escaping from the muzzle, substantially as described. 19th. In an automatic gun provided with a non-recoiling barrel, the combination with a reciprocating breech block or lock and a sliding action bar for operating it, of a rod connecting the said action bar with a piston, of a gas cylinder located below the barrel at the muzzle thereof, and within which the said piston works, of a chamber surrounding the muzzle and communicating with the said gas cylinder at a point in front of the piston, of a screw plug in the front of said chamber provided with a longitudinal aperture for the projectile to pass through as it is discharged from the barrel, of a spiral spring surrounding said rod and located between the piston and a fixed sleeve through which the said rod slides, and of a casing forming part of the gas cylinder and enclosing the said rod and spring, suitable passages being formed in the wall of the casing for the escape of the gases and for the entrance of air, substantially as described and for the purposes specified. 20th. In an automatic gun, the combination with a reciprocating breech block or lock and of means for operating it at each discharge of the gun, of a sliding cam plate, of a pivoted cartridge feed-lever furnished with a projection to engage with said sliding cam plate, and of means for connecting said plate with said lock so that the plate receives rectilinear motion from the lock as the latter reciprocates and the feed-lever oscillates about its pivot, substantially as described. 21st. In an automatic gun, the combination with a reciprocating breech block or lock and with means for operating it at each discharge of the gun, of a pivoted cartridge feed-lever, of means for connecting said lever with the lock so that it will be oscillated during the lock's reciprocation, of a spring pawl carried by the said cartridge feed-lever, and of means for retaining such pawl in engagement with the cartridge belt during each feeding stroke of the said lever, substantially as described and for the purpose specified. 22nd. In an automatic gun, the combination with a reciprocating breech block or lock and with means for operating it at each discharge of the gun, of a pivoted cartridge feed-lever, of means for connecting said lever with the lock so that it will be oscillated during the lock's reciprocation, of a spring pawl connected to said feed-lever by a pivot pin to permit of its performing a short independent movement in a plane parallel with the plane of movement of the feed-lever, and of a head on the pawl adapted to engage with a slot in the free end of the feed-lever when the latter performs an outward stroke so as to render the pawl free to rise, or adapted to engage with a lateral aperture in the outer wall of the aforesaid slot when said feed-lever performs its outward stroke so as to restrain said pawl from rising, substantially as described and for the purpose specified. 23rd. In an automatic gun, the combination with a reciprocating breech block or lock and with means for operating it at each discharge of the gun, of a pivoted cartridge feed-lever, of means for connecting said lever with the lock so that it will oscillate during the lock's reciprocation, of a spring pawl connected to said feed-lever by a pivot pin to permit of its performing a short independent movement in a plane parallel with that of the movement of the feed-lever of a head on the pawl adapted to engage either with a slot in the free end of the feed-lever or with a lateral aperture in the outer wall of the said slot, of a lateral projection on the pawl, which projection extends through the aforesaid lateral aperture and is capable of being operated by the fingers of the gunner, and of means for limiting the amount of the aforesaid independent movement of the pawl, substantially as described. 24th. In an automatic gun, the combination with a reciprocating breech block or lock and with means for operating it at each discharge of the gun, of a sliding plate having a cam slot or groove therein, of a feed-lever located below said plate and furnished with a vertical pivot pin entering a vertical hole for its reception in the gun frame at a point forward of the cartridge feed box of a stud on said feed-lever engaging with the said cam slot or groove in the sliding plate, and of a depending arm on said plate engaging with

a recess in the lock so that as the lock reciprocates the said plate is likewise reciprocated and oscillatory movement thereby imparted to the feed lever, substantially as described. 25th. In an automatic gun, the combination with a reciprocating breech block or lock having a sliding cartridge carrier and with the oscillatory feed lever, the spring pawl and the means for oscillating said feed lever, of a lateral projection on said feed lever which acts to guide the rim of the cartridges into proper position into engagement with the cartridge carrier, substantially as described. 26th. In an automatic gun, the combination with a reciprocating breech block or lock operated by a sliding action bar connected with a spring-controlled piston working in a gas chamber, of a non-recoiling barrel of rectangular cross-section formed with a series of transverse passages in the walls thereof to enable currents of air to flow through said passages and cool the barrel without a water jacket, substantially as described.

**No. 62,866. Hydro Carbon Burner. (Foyer à hydrocarbures.)**



Alfred A. Arnott and William A. Granville, New Haven, Connecticut, U.S.A., 10th March, 1899; 6 years. (Filed 3rd January, 1899.)

*Claim.*—1st. A hydro-carbon burner, comprising a circular body portion, a vaporizing coil, a mixing chamber, a gas discharge orifice, a passage connecting the vaporizing coil with said orifice, a supply pipe cast integral with the burner, and a passage connecting said supply pipe with the other end of the vaporizing coil, substantially as described. 2nd. A hydro-carbon burner, provided with an integrally formed mixing chamber and integral supply pipe, one or more vaporizing coils, a passage connecting one end of said coil or coils with the supply pipe, a discharge orifice with the other end of said coil, substantially as described. 3rd. In a hydro-carbon burner, a body portion provided with an integral supply pipe, a mixing chamber, a vaporizing coil, a passage connecting one end of the said coil with the supply pipe, a stem depending from the body portion and provided with an arm or foot below the mixing chamber, and provided with a passage connecting with the other end of said vaporizing coil, and with a boss through which said passage extends, and a cap provided with a vapor jet orifice vertically below the mixing chamber and registering with said boss passage, substantially as described. 4th. A hydro-carbon burner, provided with a shield or casement consisting of an upper portion clapsed around the burner and the lower portion detachably connected to the upper portion, and encircling the lower end of the mixing chamber, and the vapor jet orifice of the burner, substantially as described. 5th. A hydro-carbon burner, provided with an integrally formed mixing chamber and supply pipe, a vaporizing coil, a passage connected with the vaporizing coil and supply pipe, a stem having a passage connected to the other end of the vaporizing coil and provided with a foot portion through which said passage extends, a vapor jet orifice cap upon said foot portion, a burner tip provided with a flame deflector or spreader extending above and below the tip, a gallery upon the burner, a mantle embracing the upper end of the burner and gallery, a chimney upon the gallery, and rods maintaining the chimney in position, substantially as described. 6th. A hydro-carbon burner, provided with a groove and a wall surrounding and projecting above the same, a vaporizing tube 17, fitting in said groove, a passage communicating with the oil supply, and one end of the vaporizing tube, a mixing chamber surrounding said groove, a vapor passage connected to the opposite end

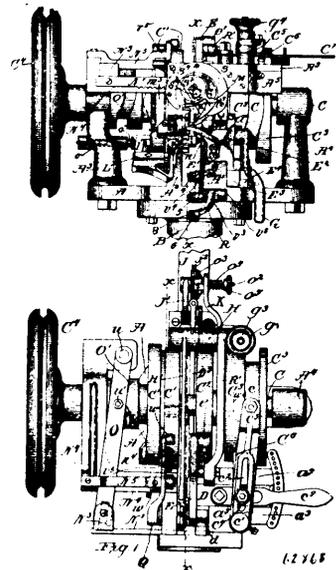
said tube and arranged to discharge into the mixing chamber, and a burner cap surrounded by said wall and resting upon said tube, substantially as described.

**No. 62,867. Method of Decorating Glass. (Méthode de décorer le verre.)**

Joseph A. Luxheim and Webb R. Millar, both of Chicago, Illinois, U.S.A., 10th March, 1899; 6 years. (Filed 22nd December, 1898.)

*Claim.*—1st. The process of decorating glass which embraces the steps of first supplying to the surface of the glass a coating of colour, then applying over said colour coating a design by the use of a substance or compound of sufficient hardness to resist the action of a sand blast, then subjecting the surface of the glass to the action of a sand blast, and finally firing the glass to fix the colour. 2nd. The process of decorating glass which embraces the steps of first applying to the surface of the glass a coating of colour, then applying over said colour coating a design by the use of a substance or compound of sufficient hardness to resist the action of a sand blast, then subjecting the surface of the glass to the action of a sand blast, then colouring the roughened surface of the glass by the use of a colour of a kind which will not dissolve or remove the colour first applied and finally firing the glass to fix all the colours. 3rd. The process of decorating glass which embraces the steps of first applying to the surface of the glass a coating of colour, then applying thereto a coating of a soluble substance, then transferring or applying to the glass over said coating a design by means of ink which is not soluble in a liquid which is a solvent of said coating, then removing the soluble coating, then subjecting the glass to the action of a sand blast, then removing the soluble substance from the lines of the design, then colouring the roughened surface of the glass by the use of colouring material of a kind which will not dissolve or remove the colour first applied and then firing the glass to fix all the colours. 4th. The process of decorating glass which embraces the steps of first applying to the surface of the glass a coating of oil colour mixed with balsam copaiba or the like, then applying thereto a coating of dextrine or like soluble substance, then transferring or applying to the glass over said coating a design by means of water proof ink, then removing the dextrine or soluble substance by a suitable solvent, then subjecting the glass to the action of a sand blast, then removing the dextrine from the lines of the design, then colouring the roughened surface of the glass by the use of water colours and finally firing the glass to fix all of the colours.

**No. 62,868. Sewing Machine for Waxed Thread. (Machine à coudre pour fil ciré.)**



The Bay State International Shoe Machinery Company, Portland, Maine, assignee of Joseph Eli Bertrand, Boston, Massachusetts, U.S.A., 10th March, 1899; 6 years. (Filed 27th December, 1898.)

*Claim.*—1st. In a lock stitch sewing machine, the combination with a curved barbed needle and a curved awl, constructed and arranged to enter the work from opposite sides thereof, a loop for delivering the thread to the barb of the needle, and means for feeding the work while the awl is inserted therein, of a stitch setting lever, an oscillating shuttle arranged to move in a plane at right angles to the plane of reciprocation of said needle, said shuttle having the point of its hook in a plane at the rear of and parallel to the rear surface of the main body of the shuttle, and also at a

greater distance from its axis of motion than the periphery of the main body of said shuttle, and in position to intersect the path of said needle, and provided upon its rear face at its periphery and about ninety degrees from the point of its hook with a convex boss or rearward projection adapted to increase the expansion of the loop just at the end of the forward movement of the shuttle and thus assist the discharge of the thread from the barb of the needle, when the stitch setting lever is moved downward to draw the loop from the shuttle, and means for imparting to said shuttle a forward movement of about three-fourths of a revolution, and a corresponding backward movement, with a standstill at the end of each movement. 2nd. In a lock stitch sewing machine, the combination with a curved barbed needle and a curved awl, constructed and arranged to enter the work from opposite sides thereof, a looper for delivering the thread to the barb of the needle, and means of moving the awl laterally to feed the work, of an oscillating shuttle arranged to move in a plane at right angles to the plane of reciprocation of said needle, with the point of its hook in a position to intersect the path of the needle, a suitable raceway for said shuttle, a pinion and its shaft mounted in a fixed bearing, a shuttle carrier secured to said pinion within said raceway, a reciprocating rack mounted in fixed bearings, a lever and cam for reciprocating said rack, proportioned and timed to impart to said shuttle a forward movement of substantially three-fourths of a revolution, and a corresponding backward movement, with a standstill after each movement. 3rd. In a lock stitch sewing machine, the combination with a curved barbed needle, a curved awl, an awl work-feeding mechanism, a looper, and mechanism for moving said looper around the needle, of mechanism for imparting to said needle downward and upward strokes, each complete in a single movement, with a standstill after each movement, a fixed raceway located above the needle, a shuttle mounted in said raceway and arranged to oscillate in a plane at right angles to the plane of reciprocation of said needle, with the point of its hook in a plane at the rear of and parallel to the plane of the rear face of said shuttle, and at a greater distance from the axis of motion of said shuttle than the periphery of the main body of said shuttle and in position to intersect the path of the needle, and means for imparting to said shuttle intermittent movements, in opposite directions, through arcs approximating two hundred and seventy degrees. 4th. In a lock stitch sewing machine, the combination with a curved barbed needle, a curved awl, an awl work-feeding mechanism, a looper and mechanism for moving said looper around the needle, of mechanism for imparting to said needle downward and upward strokes, each complete in a single movement, with a standstill after each movement, a fixed raceway above the needle, a shuttle mounted in said raceway, and arranged to oscillate in a plane at right angles to the plane of reciprocation of said needle, with the point of its hook in a plane at the rear of the plane of the rear face of said shuttle and in position to intersect the path of the needle, and provided with a bobbin receiving chamber, a thread delivering orifice through the peripheral wall of said chamber, and a thread guiding eye located in the axial line of said shuttle, said thread delivering orifice and thread guiding eye both always being in a plane cutting longitudinally through the axis of said shuttle and which plane is substantially vertical when said shuttle has completed its forward movement, and means for imparting to said shuttle a forward movement of approximately three-fourths of a revolution, and a corresponding backward movement, with a standstill after each movement. 5th. In a lock stitch sewing machine, the combination with a curved barbed needle, a curved awl, means for reciprocating said needle and awl, an awl work-feeding mechanism, a looper and means for moving the thread carrying end of said looper around the end of the needle when in its lowest position, a thread manipulating finger, means for operating the same, co-operating with the other elements of the stitch forming mechanism to discharge the thread from the barb of the needle, an oscillating shuttle mounted in a suitable raceway above said needle with the point of its hook in position to intersect the path of the needle, and in a plane at the rear of the rear face of the main body of said shuttle, and at a greater distance from its axis of motion than the periphery of the main body of said shuttle, means for imparting to said shuttle a forward and backward movement through an arc of about two hundred and seventy degrees with a period of rest after each movement, and means to maintain the needle in a fixed position at the extreme of its upward movement while the shuttle makes both its forward and backward movement. 6th. In a lock stitch sewing machine, the combination with a curved needle provided with a barb upon its side towards which the shuttle moves to enter the loop, a curved awl, means for reciprocating said needle and awl, an awl work-feeding mechanism, a looper and means for carrying the thread-carrying end of said looper around the end of the needle when in its lowest position, an oscillating shuttle constructed and arranged to enter, open, and pass through the loop of thread, drawn through the work by the needle, a brake or clamping device to prevent the thread being drawn from the source of supply while the shuttle is passing through the loop of thread held by the barb of the needle, a pivoted sheave carrying lever, a system of thread guiding sheaves arranged between said clamping device and the work support, and means for intermittently vibrating said sheave carrying lever, constructed, arranged, and timed to raise said lever while the shuttle is passing through the loop, to give off thread to enlarge said loop, and then move said lever abruptly downward

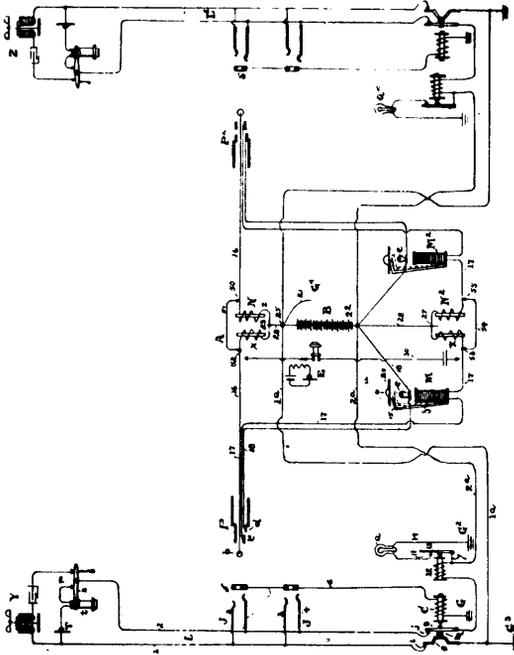
when the shuttle has completed its forward movement, to set the stitch. 7th. In a lock stitch sewing machine, the combination of a curved needle provided with a barb upon the side thereof toward which the point of the shuttle hook moves to enter the loop of thread held thereby, and with a groove on its front or convex side extending in a straight line from said barb to its point, means for reciprocating said needle in a curved path, an oscillating shuttle located above said needle with the point of its hook in position to intersect the path of said needle, and means for intermittently oscillating said shuttle whereby said shuttle is adapted to enter, open and pass through the loop of thread held by the barb of said needle. 8th. In a lock stitch waxed thread sewing machine, the combination with a frictional tension wheel, of a thread guiding sheave in near proximity to said tension wheel, means for locking said sheave against backward revolution, a thread measuring finger arranged above a line tangent to the top of said sheave and tension wheel, and having its lower end forked or notched to engage the thread between said sheave and tension wheel in near proximity to said tension wheel, and means for reciprocating said finger, and causing it to engage and depress said thread below a line tangent to said tension wheel and sheave, and thus draw thread from said tension wheel and the source of supply. 9th. In a lock stitch wax thread sewing machine, the combination with a frictional tension wheel, and a work support and presser-foot co-operating to clamp the work, of a thread guiding sheave in near proximity to said tension wheel but between it and said work support, freely revolvable in a forward direction, means for locking said sheave against backward revolution, a thread measuring finger arranged to engage the thread between said tension wheel and sheave, means for reciprocating said finger and causing it to depress said thread to draw thread from the tension wheel and the source of supply, and mechanism between the axis of said sheave and the work support constructed and arranged to cause the downward and upward movements, respectively, of the work support, due to varying thicknesses of the work, to move the axis of said sheave toward and from said tension wheel, and thus cause the amount of thread drawn from said tension wheel to correspond with the amount required to form a stitch. 10th. The combination of the tension wheel J<sup>2</sup>, the pivoted lever K, provided with a cam truck, a cam constructed and arranged to act upon said truck to move said lever in one direction, a spring to move said lever in the opposite direction, a brake shoe carried by said lever, and arranged to engage and clamp the thread on said tension wheel, the reciprocating bar L, the sheave r<sup>1</sup>, provided with ratchet teeth and mounted upon a stud set in said bar L, a pawl to lock said sheave against backward movement, the lever D<sup>3</sup>, provided with the cam truck a<sup>2</sup>, the measuring finger r, carried by said lever D<sup>3</sup>, and having its lower end forked or notched, as set forth, and the cam path b<sup>1</sup>, to act upon and vibrate said lever, all substantially as described. 11th. The combination of the pivoted work support E<sup>1</sup>, E<sup>2</sup>, the sliding bar E<sup>3</sup>, and extension L, the lock-lever F, the cam i<sup>3</sup>, for operating said locking lever, the sheave r<sup>1</sup>, provided with ratchet teeth, the pawl r<sup>2</sup>, the tension wheel J<sup>2</sup>, the lever D<sup>3</sup>, the measuring finger r, carried by said lever, and the cam path b<sup>1</sup>, for operating said lever and finger. 12th. In a lock stitch sewing machine, a shuttle constructed and arranged to move about its centre and provided with a bobbin receiving chamber, a loop engaging hook, the opening c, through the same, and the thread delivering perforation i, between said chamber and opening, in combination with a bobbin fitted to and revolvable in said bobbin receiving chamber and constructed and arranged to be filled with thread to be unwound from its periphery, the spring k, located in said opening c, and arranged to press toward the axis of the shuttle, and bear upon the thread between the delivery opening and the front face of the shuttle, and the thread guiding eye l located in the axial line of said shuttle. 13th. In a lock stitch waxed thread sewing machine, a shuttle constructed and arranged to be moved about its centre and provided with a loop engaging hook, and also having a convex boss on its rear face about ninety degrees from the point of the loop engaging hook, the outer edge of which projects beyond the periphery of the main body of the shuttle, as and for the purpose specified.

#### No. 62,869. Telephone Circuits. (*Circuit de téléphone.*)

The Bell Telephone Company of Canada, Montreal, Quebec, assignee of George Knox Thompson, Malden, Massachusetts, U.S.A., 10th March, 1899; 6 years. (Filed 18th November, 1898.)

*Claim.*—1st. The combination in a telephone system, of a number or group of substation circuits, each extending to switch connections upon the switchboard sections at a central station, a line-signal, and signal and circuit controlling devices for each circuit, with a switch cord circuit having two main circuit and one local circuit conductors, a supervisory circuit in the local circuit conductor, an electro magnet controlling by a shutter or like device the display of said signal in one of the said main circuit conductors, a bridge uniting the said three conductors, and a battery included therein, and provided with separate normal connections between its poles and the ends of the main conductors of the several substations, whereby the said battery is enabled to supply current for all of the several circuits and signals concerned, substantially as described. 2nd. The combination of a substation circuit provided with spring jacks at the switchboard sections, and adapted for the operation of automatic signals, current

in the line from a central source being determined by the telephone switch at the substation, a line lamp signal, a controlling device



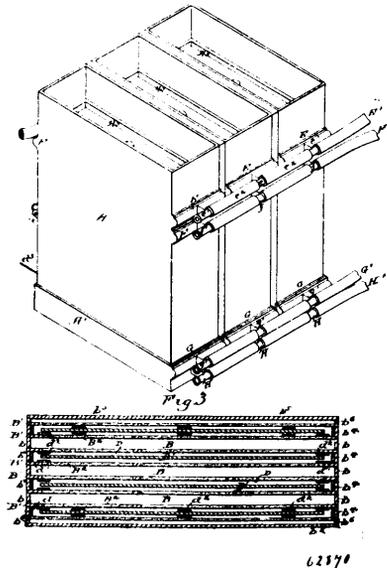
therefor, and a circuit controlling device and test circuit, the conductors of said circuit terminating at the poles of a battery, with a cord circuit comprising three conductors, a bridge between the conductors including said battery, and supervisory lamp signals in one, and electro magnets for controlling the same in another of the said cord conductors, whereby upon the removal of the telephone from its switch at the substation, the line signal is lightened, and upon the insertion of the answering plug the line signal is extinguished, a test circuit established, a supervisory signal lighted and its rays shielded, as set forth. 3rd. In a telephone exchange system, the combination of a substation circuit, having at the central station spring jack switches at switchboard sections, and at the substation a telephone switch controlling its conductive continuity, with a plug and cord connection circuit comprising two main conductors with the said battery bridged between them, and a third conductor in a local signal and test circuit of said battery, a supervisory or disconnecting signal lamp contained in said local and test circuit, and adapted for illumination whenever the plug is in the spring jack switch of any line, and a shutter or screen for said lamp signal controlled by an electro magnet in one of said main cord conductors, the said magnet being arranged to operate the said screen, and conceal said lamp when the substation telephone is in use, but to remove the same, and display the said lamp when the telephone is replaced, and its hook switch thereby actuated to open the main circuit, substantially as described. 4th. In a cord circuit the combination of two plugs each provided with three contacts which are respectively connected with each other by separate conductors including a battery, and repeating impedance coils as set forth, supervisory lamp signals in each side of the bridge in one of the conductors, and electro magnets in another of the conductors, provided with armatures controlling screens for the said lamps, the said lamps being in local circuits at the central station, and the said electro magnets being in the main circuit, when their respective plugs are inserted in line switches or spring jacks, substantially as set forth.

#### No. 62,870. Electric Battery. (*Pile électrique.*)

Hermann Dercunn, John R. Drexel and George T. Eyanson, assignees of Henry Kasper Hess, all of Philadelphia, Pennsylvania, U.S.A., 10th March, 1899; 6 years. (Filed 12th November, 1898.)

**Claim.**—1st. The combination in a primary battery, of the series of partitions formed of frames of conducting metal acting as one terminal of the battery and supporting sheets of porous material, said partitions forming chambers, the alternate chambers being for the reception of the depolarizing agent, the other chambers being for the reception of the exciting fluid and zinc electrodes, substantially as described. 2nd. The combination in a primary battery, of a series of partitions formed of frames of conducting metal acting as one terminal of the battery supporting sheets of porous carbon and forming chambers, the alternate chambers being for the reception of the depolarizing agent, the other chambers being for the reception of the exciting fluid and the zinc electrodes, substantially as described. 3rd. The combination in a primary battery, of a casing, a

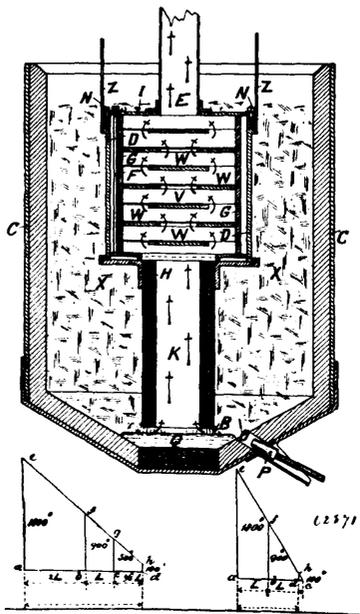
series of negative electrodes, consisting of partitions formed of frames of conducting metal having portions exposed to the electro-



lyte, said frames supporting sheets of porous material, each pair of partitions being secured together to form closed compartments for the depolarizing agent, and spaces between each pair of said partitions for the exciting fluid, and positive electrodes in said spaces, substantially as described. 4th. The combination in a primary battery, of a series of porous carbon plates spaced a given distance apart forming compartments, each alternate compartment adapted to receive a depolarizing agent, the other compartments adapted to receive a zinc electrode and exciting liquid, and containing casing of conducting metal forming the terminal for the carbon plates, substantially as described. 5th. The combination in a primary battery, of a series of partitions, each partition made up of a frame of conducting material supporting a number of thin porous plates, the said partitions being separated by strips of conducting metal, said partitions and strips forming compartments for the reception of the liquids and acting as one terminal of the battery, substantially as described. 6th. The combination of a series of partitions, each partition made up of a number of thin porous carbon plates held together by a conducting metallic frame, each pair of partitions being secured together forming closed compartments for the depolarizing agent, the space between each pair of partitions being for the reception of the exciting fluid and the zinc electrodes, and a conducting casing enclosing the several partitions and acting as a terminal for the carbon plates, substantially as described. 7th. The combination in a primary battery, of a series of porous conducting plates dividing the battery into a series of cells, each alternate cell being closed and adapted to receive the depolarizing agent, the other cells being adapted to receive the zinc plates and the exciting fluid, the closed cells stopping short of the bottom, and a conducting plate at the bottom on which the zinc plates rest, substantially as described. 8th. The combination in a primary battery, of a series of porous conducting plates dividing the cell into a series of compartments, the alternate compartments being closed and adapted to receive the depolarizing agent, the other compartments adapted to receive the zinc plates and exciting fluid, the removable bottom, and the conducting plate mounted on said bottom on which the zinc plates rest, said conducting plate being insulated from the bottom, substantially as described. 9th. A porous conducting partition plate for a primary battery consisting of a series of porous carbon sections held together in a metallic conducting frame, substantially as described. 10th. A porous conducting partition plate for a primary battery consisting of a series of porous carbon sections held together in a cast metallic conducting frame, the said sections being notched so the metal enters the notches, substantially as described. 11th. A section of a primary battery consisting of two side plates composed of a frame cast around thin plates of porous carbon, with strips of lead mounted between the two side plates and fused thereto, substantially as described. 12th. A battery made up of a series of sections, each section having side plates made of cast lead surrounding a series of thin carbon plates and separated by thin strips of lead fused thereto, the sections of the battery being separated by other strips of lead at the side secured to the sections by being fused to the side plates of sheet lead and the bottom, the whole constructed, substantially as described. 13th. The combination in a primary battery, of a main body portion made up of a series of lead frames having porous carbon sections, the alternate chambers being closed and stopping short of the bottom, with a removable bottom section having a flange fused to the main body, and a conducting plate in the said bottom section and insulated therefrom, the terminal

extending through the bottom section, substantially as described. 14th. A primary battery made up of a series of conducting partitions suitably spaced to form compartments, the alternate compartments being closed, a bottom having a conducting plate, zinc plates adapted to open compartments of the battery resting upon the said bottom conducting plate, two channels at the upper portion of the battery, one channel communicating with the closed compartments, the other channel communicating with the open compartments, an outlet pipe communicating with the open compartments at the bottom, and an outlet channel at the bottom communicating with the closed compartments, substantially as described. 15th. A primary battery made up of a series of conducting partitions suitably spaced to form compartments, the alternate compartments being closed, a bottom having a conducting plate, zinc plates adapted to the open compartments of the battery resting upon the said bottom conducting plate, two channels at the upper portion of the battery, one channel communicating with the closed compartments, the other channel communicating with the open compartments, an outlet pipe communicating with the open compartments at the bottom, an outlet channel at the bottom communicating with the closed compartments, and an air vent channel communicating with the closed compartments, substantially as described. 16th. The combination in a primary battery, of a series of conducting porous partitions forming compartments, the alternate compartments being closed, a bottom conducting plate, zinc plates mounted in the open compartments and resting upon the bottom conducting plate, insulating material separating the zinc plates from the porous conducting plates and end insulating strips separating the zinc plates from the casing, a terminal secured to the casing and a terminal secured to the bottom plate, substantially as described. 17th. The combination in a primary battery, of a series of conducting porous plates forming compartments, the alternate compartments being closed, a removable bottom plate, a bed of non-conducting material, a conducting plate imbedded in said bed, zinc plates resting upon said conducting plate, an extension of the conducting plate passing through the casing, a nipple screwed onto said extension and having an external screw thread, a nut adapted to the external screw thread and mounted on the outside of the casing forming a non-conducting and water tight joint, substantially as described. 18th. The combination in a primary battery, of a cell having a series of partitions forming alternate compartments for the depolarizing agent and the exciting fluid, a channel secured to the end of the cell and communicating with each alternate compartment and having nipples to which may be attached a coupling tube when a series of cells are placed side by side, substantially as described.

**No. 62,871. Apparatus for Distilling Metals and Similar Substances.** (*Appareil pour la distillation des métaux, etc.*)

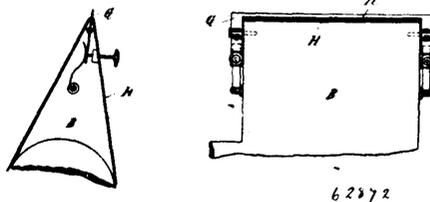
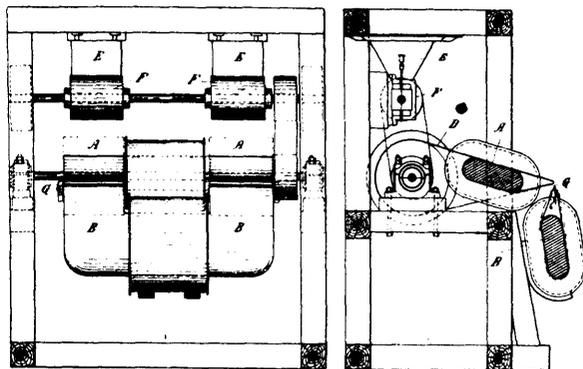


Siemens & Halske, Berlin, Germany, assignees of Dr. Oscar Frolich, Steglitz, Germany, 10th March, 1899; 6 years. (Filed 24th September, 1898.)

*Claim.*—1st. An electric furnace for distilling metals or other similar substance consisting of the combination of a crucible filled to a predetermined height with the raw material that is to be worked, of a tube-shaped carbon fixed to the lower end and communicating with the interior of a condensing chamber, of a pipe arranged at the upper end and likewise communicating with the interior of said condensing chamber and of means for raising and

lowering the said condensing chamber with the tube-shaped carbon affixed substantially as and for the purpose set forth. 2nd. In an electric furnace, consisting of a crucible open at the top and closed at the bottom by a tapping plug and filled to a predetermined height with the raw material that is to be worked, the said material being in a finely pulverized and thoroughly mixed state, immersed in the said material a tube-shaped carbon, the interior of which communicates with the interior of a condensing chamber fastened to the upper end of said carbon and provided with a pipe at the top likewise communicating with its interior, said condensing chamber being fitted with a number of horizontal partitions alternately perforated at the edges and in the centre, substantially as and for the purpose described. 3rd. In an electric furnace consisting of a crucible open at the top and closed by a removable tapping plug at the bottom, a tube-shaped upper electrode made of carbon and fixed at the lower end of a condensing chamber and communicating with the interior of said chamber, the said chamber being provided with a suitable number of horizontal partitions which are arranged to be removed when it is filled with precipitate, substantially as and for the purpose set forth.

**No. 62,872. Magnetic Separator.** (*Séparateur magnétique.*)

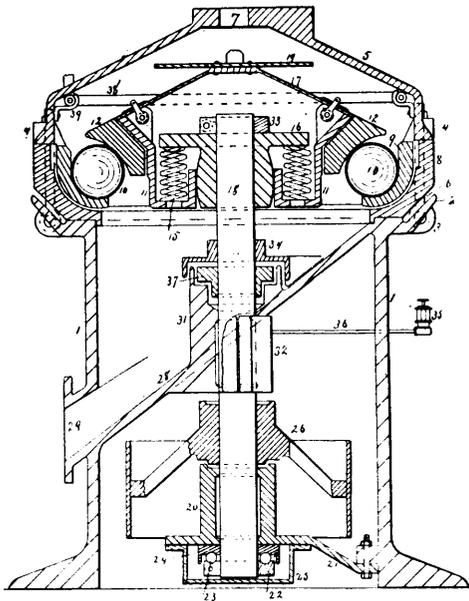


The Metallurgische Gesellschaft, 14 Gunghsstrasse, Frankfurt-on-the-Rhine, Germany, assignee of Fredrich A. M. Schiechce, of the same place, 10th March, 1899; 6 years. (Filed 27th May, 1898.)

*Claim.*—1st. In a magnetic separator, the combination of two wedge-shaped pole pieces, the edge of the one being located higher than the edge of the other, with means to convey the material to be separated to the edge of the upper magnet in such a direction and with such velocity that the non-magnet bodies drop at the one side of the lower magnet in close proximity to its edge, substantially as described. 2nd. In a magnetic separator, the combination of two wedge-shaped pole pieces, the edge of the one being located higher than the edge of the other and sideway of it, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies are carried over the edge of the lower magnet and drop in close proximity to the plane connecting the edges of the lower and the upper magnet, substantially as described. 3rd. In a magnetic separator, the combination of two wedge-shaped pole pieces, the edge of the one being located higher than the edge of the other and placed in such distance to it as to allow the magnetic bodies to pass, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies drop at one side of the lower magnet in close proximity to its edge, substantially as described. 4th. In a magnetic separator, the combination of two wedge-shaped pole pieces, the edge of the one being located higher than the edge of the other and sideway of it and placed in such distance to it, as to allow the magnetic bodies to pass, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies are carried over the edge of the lower and over the upper magnet, and drop in close proximity to the plane connecting the edges of the lower and of the upper magnet, substantially as described. 5th. In a magnetic separator, the combination of one wedge-shaped pole piece placed in an approximately horizontal position, with another wedge-shaped pole piece having its edge below the edge of the first said

pole piece and being inclined upwardly, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies drop at the one side of the lower magnet in close proximity to its edge, substantially as described. 6th. In a magnetic separator, the combination of one wedge-shaped pole piece placed in an approximately horizontal position, with another wedge-shaped pole piece having its edge below the edge of the first said pole piece and having inclined upwardly, and with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies are carried over the edge of the lower and drop in close proximity to the plane connecting the edges of the lower and of the upper magnet, substantially as described. 7th. In a magnetic separator, the combination of one wedge-shaped pole piece placed in an approximately horizontal position, with another wedge-shaped pole piece having its edge below the edge of the first said pole and being inclined upwardly and placed in such distance to it as to allow the magnetic bodies to pass, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies drop at the one side of the lower magnet in close proximity to its edge, substantially as described. 8th. In a magnetic separator, the combination of one wedge-shaped pole piece placed in an approximately horizontal position, with another wedge-shaped pole piece having its edge below the edge of the first said pole piece and being inclined upwardly, and placed in such distance to it as to allow the magnetic bodies to pass, and sideways of it, and with the means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies are carried over the edge of the lower magnet and drop in close proximity to the plane connecting the edges of the lower and of the upper magnet, substantially as described. 9th. In a magnetic separator, the combination of two wedge-shaped pole pieces the edges of the one being located higher than the edge of the other and sideways of it, of means to regulate the sideways distance of the edges of the two pole pieces, with means to convey the material to be separated to the edge of the upper magnet in such direction and with such velocity that the non-magnetic bodies are carried over the edge of the lower magnet and drop in close proximity to the plane connecting the edges of the lower and of the upper magnet, substantially as described. 10th. In a magnetic separator of the kind described an adjustable separating plate placed over and in close proximity to the edge of the lower magnet, substantially as described. 11th. In a magnetic separator of the kind described, a conveyor band arranged to move around the edge of the lower magnet, substantially as described.

**No. 62,873. Ball Pulverizing Machine.**  
(Moulin à pulvériser.)



62873

The Morris Ball Pulverizer Company, assignee of William Lorenzo Morris, Cleveland Ohio, U. S. A., 10th March, 1899; 6 years. (Filed 3rd May, 1898.)

*Claim.*—1st. In a pulverizing mil, the combination of a driving shaft, a revolvable hollow driver including springs interposed between said driver and a wabller longitudinally adjustable upon said driving shaft, the lower end of said shaft being journalled in anti-friction bearings and secured against end displacement, and a driving ring revolvable with said hollow driver and exerting a vertical, tangential

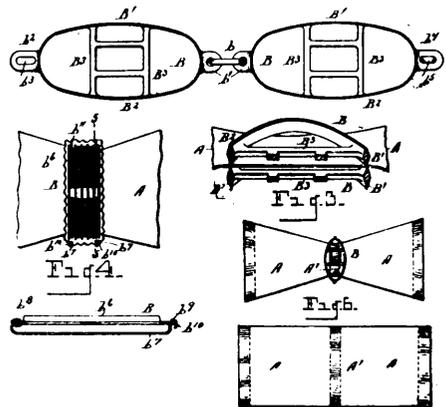
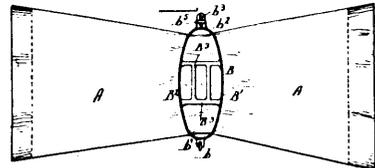
and centrifugal pressure upon grinding balls travelling in a rigid concentric grinding track, substantially as and for the purpose set forth. 2nd. In an ore pulverizer, in combination, an inclosing frame, a concaved ring track, crushing balls within said track, a concave driving ring in peripheral contact with said crushing balls, a hollow driver engaging said driving ring, a wabller movable longitudinally upon an actuating shaft, springs interposed between said wabller and said hollow driver, an adjustable nut upon the upper end of said shaft, and a cap removably secured to the said driver and carrying a distributing disc, substantially as and for the purpose set forth. 3rd. In a pulverizing mill of the character described, in combination, a driving shaft, a wabller longitudinally adjustable upon said shaft, a hollow driver engaging said wabller, springs interposed between said hollow driver and said wabller, an adjusting nut upon the upper end of said shaft, rigid bearings for the lower end of said shaft, a loose collar upon said shaft below said rigid bearings, an adjustable nut upon the lower end of said shaft, and anti-friction balls between said loose collar and said nut, substantially as and for the purpose set forth.

**No. 62,874. Steel Hardening Process.**  
(Procédé pour durcir l'acier.)

Gustav Behr, Mozartstr. Kohn, Theodor Wallfisch, 213 Breite Wegat Magdeberg, assignees of Ludwig Schiecke, 49 Bahnhofstraas, Magdeberg, all of Germany, 10th March, 1899; 6 years. (Filed 9th May, 1898.)

*Claim.*—A new and improved process for hardening steel consisting in coating the steel with an apt mass, then heating it dark red, plunging it some seconds in water of about 24° C, and then double the time in apt oil and at least in petroleum.

**No. 62,875. Shoe Cleaner.** (Nettoyeur de chaussures.)



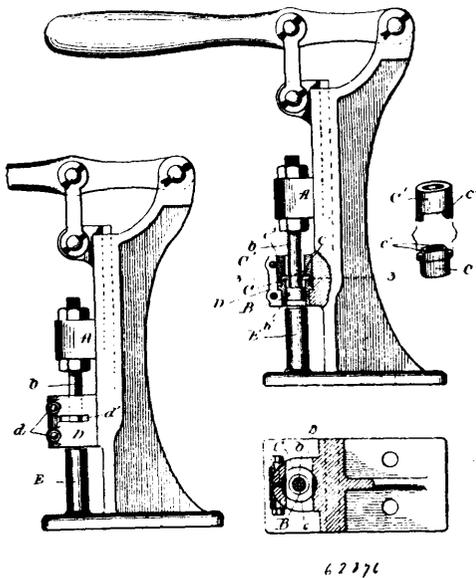
62875

Israel Kenney, Burford, Ontario, Canada, and William P. Sumner, Detroit, Michigan, U.S.A., 13th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. In a boot and shoe cleaner, a clamping jaw constructed with one or more transverse ribs or ridges, and an additional jaw or arm to clamp a flexible material therebetween, substantially as set forth. 2nd. A boot and shoe cleaner, consisting of clamping devices having a flexible material held in a gathered, creased or crimped condition therebetween, substantially as set forth. 3rd. A boot and shoe cleaner, consisting of clamping jaws, and a flexible material held in a gathered, creased or crimped condition between said jaws, one of said jaws having a projecting blade or ridge extending transversely of the flexible material, and lateral projections longitudinal of said flexible material to prevent the scraper from tilting when in use, substantially as set forth. 4th. A boot and shoe cleaner, consisting of clamping jaws, and flexible material held in a gathered, creased or crimped condition between said jaws, said jaws being provided with a projecting scraper blade or ridge whereby the device is reversible, substantially as set forth. 5th. The clamping jaws herein described, having a jointed connection at adjacent ends, and a fastening device to engage the opposite ends of said jaws, each of said jaws provided with a ridge projecting inward toward the corresponding ridge to clamp a flexible material therebetween, substantially as set forth. 6th. The scraper clamp-

ing jaws herein described, having a jointed connection at adjacent ends, and means to engage the opposite ends of said jaws, each of said jaws provided with a ridge projecting inward, the one toward the other, to engage a flexible material therebetween, and one of said jaws provided with a scraper blade or ridge projecting from the outer or opposite side thereof, substantially as set forth. 7th. The scraper clamping devices herein described, having a jointed connection with adjacent ends, and means to fasten said devices at the opposite ends, one of said devices having a projecting rib or ridge extending transversely of said material and constructed to prevent the same from tilting, substantially as set forth. 8th. In a boot and shoe cleaner, consisting of a flexible material having portions of the filling left out intermediate its ends and gathered into a creased or crimped condition, and clamping devices to hold said flexible material in said condition, substantially as set forth. 9th. In a boot and shoe cleaner, clamping devices, and a flexible material having a portion of the filling left out intermediate its ends, said portion held in a gathered, crimped or creased condition between said devices, one of said devices having projecting ribs or ridges, substantially as set forth. 10th. In a boot or shoe cleaner, a flexible material having a portion of the filling left out intermediate its ends, and means to hold said material at the point where the filling is left out in a gathered, crimped or creased condition, substantially as set forth. 11th. In a boot and shoe cleaner, a flexible material, and means to hold said material in a gathered, crimped or creased condition, substantially as set forth.

**No. 62,876. Punch. (Emporte-pièce.)**



The Austin Cartridge Company, assignees of William L. Morris, all of Cleveland, Ohio, U.S.A., 13th March, 1899; 6 years. (Filed 1st December, 1898.)

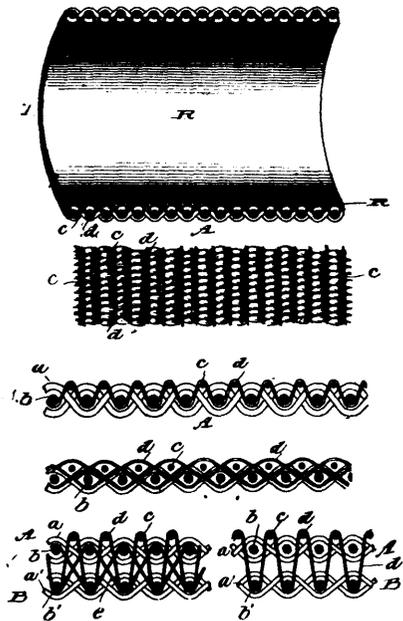
*Claim.*—1st. The combination with a die of uniform bore, of a punch fitting and reciprocable in said bore, said die provided with an aperture intersecting said bore having adjustable walls, for the admission of material to be punched, substantially as set forth. 2nd. The combination of a die of uniform bore, a punch fitting and reciprocable in said bore, the said die provided with an aperture intersecting said bore, for the admission of the material to be punched, and means for varying the width of said aperture, substantially as set forth. 3rd. The combination of two members, consisting of a die and guide of equal bore, a punch fitting and reciprocable in said bore, said die and guide forming an aperture for the admission of the material to be punched and adjustable relatively to each other, the lateral faces of said aperture overlapping the lateral surface of one of said members, substantially as set forth. 4th. The combination with a die and a guide formed with equal bores having a common axis, said die and guide each provided with a cutting edge, of a punch having two cutting edges, substantially as set forth.

**No. 62,877. Woven Fabric. (Produit tissé.)**

Benjamin Levi Stowe, Jersey City, New Jersey, U.S.A., 13th March, 1899; 6 years. (Filed 19th August, 1898.)

*Claim.*—1st. A tubular woven fire or hydraulic hose fabric, having incorporated in its structure levelling weft strands laid on the interior surface of the tubular fabric in the furrows or corrugations between the usual filling strands of said fabric, and warp strands by which said additional levelling strands are held, substantially as and for the purposes hereinbefore set forth. 2nd. Hydraulic or fire hose, consisting of a tubular woven fabric having incor-

porated in its structure additional levelling weft strands *c* laid on the interior surface of said fabric to fill the corrugations or furrows

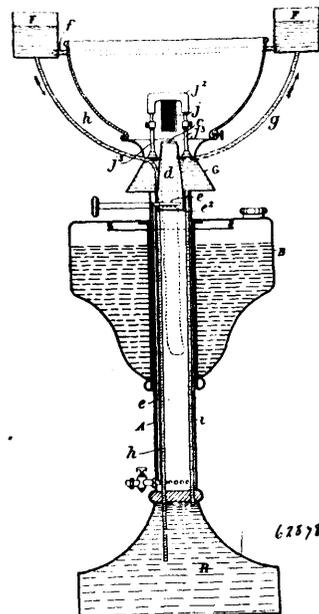


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which otherwise would exist between the usual filling strands of the fabric, warp strands *d* for said additional levelling strands, and a rubber lining applied and secured to the interior surface of said tubular fabric, substantially as and for the purposes set forth. 3rd. Tubular woven fabric for fire or hydraulic hose, having incorporated in its structure levelling weft strands laid on the interior surface of the tubular fabric in the furrows between the usual filling strands of said fabric, and warp strands for holding said levelling strands, which stop short of and do not extend through to the exterior of said fabric, substantially as and for the purpose hereinbefore set forth. 4th. Tubular multiply woven fabric for hydraulic or fire hose, having incorporated in its structure levelling weft strands laid on the interior surface of the inner ply in the furrows between the usual filling strands, and warp strands for holding said additional levelling strands, which stop short of and do not extend into the outer ply of said fabric, substantially as and for the purposes hereinbefore set forth.

**No. 62,878. Means for Obtaining Light.**

(Moyen d'obtenir de la lumière.)

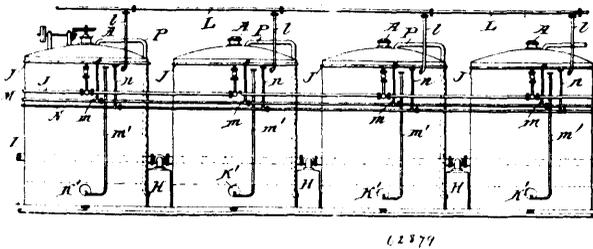


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Edwin Tatham, Colfe Lodge, Lewisham Hill, Kent, England, 13th March, 1899; 6 years. (Filed 5th October, 1897.)

*Claim.*—1st. The production of light by the combustion of liquid or gaseous hydro-carbons and oxygen supplied at the point where the hydrocarbon is ignited and burned, pencils of refractory material being supported in the zone of combustion, substantially as hereinbefore described. 2nd. In lamps for the combustion of liquid hydrocarbon a jet for the emission of oxygen gas under pressure in proximity to a wick or wicks to and by which the liquid hydrocarbon is supplied and refractory pencils situated in the zone of combustion of the hydrocarbon and the oxygen substantially as hereinbefore described. 3rd. In lamps for burning liquid hydrocarbons a nozzle and means for passing oxygen gas under pressure therethrough and in proximity to the outlet of a nozzle from a pipe inserted into a reservoir of the hydrocarbon and pencils of refractory material supported in the zone of combustion of the oxygen and hydrocarbon substantially as hereinbefore described. 4th. In lamps for burning gaseous hydrocarbons a nozzle for the supply of oxygen gas under pressure in proximity to orifices through which gaseous hydrocarbon is emitted and pencils of refractory material in the zone of combustion of the gaseous hydrocarbon and oxygen substantially as hereinbefore described.

**No. 62,879. Apparatus for the Manufacture of Alcohol.**  
(Appareil pour la fabrication d'alcool.)



Auguste Collette Fils and Auguste Boidin, both of Seclin, North France, 13th March, 1899; 6 years. (Filed 10th October, 1898.)

*Claim.*—1st. In the manufacture of alcohol by means of mucedineae, the use and combination of a system of apparatuses, consisting of a vat or series of vats provided with disinfecting, sterilising and impregnating apparatuses, also air, steam, and water inlets, means for discharging carbonic acid and steam, an air and steam collector and an agitator, substantially as hereinbefore described and shown in the accompanying drawings. 2nd. In combination with a fermentation vat or vessel for the manufacture of alcohol by mucedineae and with the parts connected therewith, a pipe for supplying wort to the said vat or vessel and a pipe for introducing steam for sterilising the said wort by an injection of said steam, said pipe being provided with a tap, substantially as hereinbefore described and shown in the accompanying drawings. 3rd. In combination with a fermenting vat for the manufacture of alcohol by mucedineae, and with the parts connected therewith hereinbefore mentioned, the use of a pipe for supplying air under pressure, said air passing into a filter and then into a collector which is capable of being sterilised in order to reach the vat perfectly pure, substantially as hereinbefore described and shown in the accompanying drawings. 4th. In combination with a fermenting vat for the manufacture of alcohol by mucedineae, and with the parts connected therewith, the use of a pipe surrounding the vat or vessel or even inserted in a spiral in the vat with the object of providing a circulation of cold water for the purpose of reducing the internal temperature in the said vat or vessel and its contents to a suitable degree for the treatment of the said material by impregnation with mucedineae, substantially as hereinbefore described and shown in the accompanying drawings. 5th. In combination with a fermentation vat or vessel for the manufacture of alcohol by mucedineae, and with the parts connected therewith, the use of a pipe for the impregnation with mucedineae, substantially as described and shown in the accompanying drawings. 6th. In combination with a fermentation vat for the manufacture of alcohol by mucedineae, and with the parts forming part of the said vat, the use of an internal agitator operator at the exterior of the vat, the shaft of said agitator passing through a water joint or stuffing box, substantially as described and shown in the accompanying drawings. 7th. In combination with a fermentation vat for the manufacture of alcohol by mucedineae, and with the parts forming part of said vat, the use of a pipe for discharging the air or carbonic acid produced during the period of saccharification or that of fermentation, such gas which produces in the vat a pressure superior to the atmospheric pressure being conveyed into a scrubber placed in proximity to the vat, substantially as described and shown in the accompanying drawings. 8th. In combination with a fermentation vat for the manufacture of alcohol by mucedineae and with the parts forming part thereof, the use of an apparatus for drawing samples of the manufactured material consisting of a chamber or bulb fitted at its lower part with a tap and its upper part with a pipe branching from the steam and air pipes, said steam and air pipes being in communication with the fermentation vat and with the sterilisable collector, substantially as hereinbefore described and shown. 9th. In combination with a fermentation vat for the manu-

facture of alcohol by mucedineae, and with the parts forming part thereof, the use of a water joint through which passes the driving shaft in the interior of the vessel, said joint consisting of two concentric tubes, one of which is closed at its lower extremity and in which water is contained which prevents all entrance of air, substantially as described and shown. 10th. The general construction and combination of parts, taken as a whole forming the improved apparatus for the manufacture of alcohol by mucedineae, substantially as hereinbefore described and shown in the accompanying drawings.

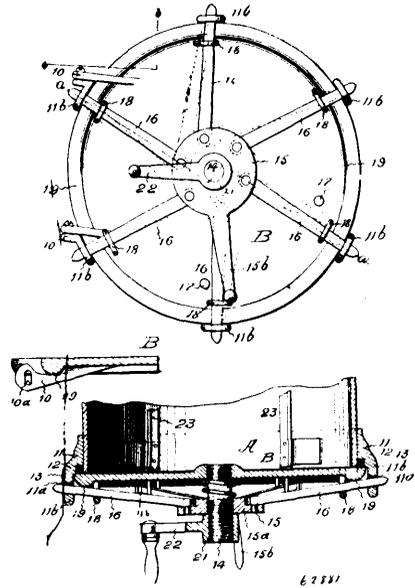
**No. 62,880. Rosin Soap for Paper Sizing.**

(Savon enduit de résine pour le collage du papier.)

Heurich Hampel, Klein Neusiedl, near Vienna, Austria, and Victor Zampis Durgasse, 13 Vienna VI., Austria, 13th March, 1899; 6 years. (Filed 9th November, 1898.)

*Claim.*—Method of preparation of a rosin soap for paper sizing containing admissible quantities of free rosin and characterized by the dissolving of the rosin with only 3 percent of soda ash, (carbonate of soda), little water and direct steam at a low temperature, (only 80° to 100° C.), without steam pressure and by continual stirring, and by supplementary addition of just the necessary quantity of carbonate of soda, to make the rosin soap soluble in water, this supplementary addition is mechanically made without employing any steam or heat.

**No. 62,881 Pressure Door.** (Porte à pression.)

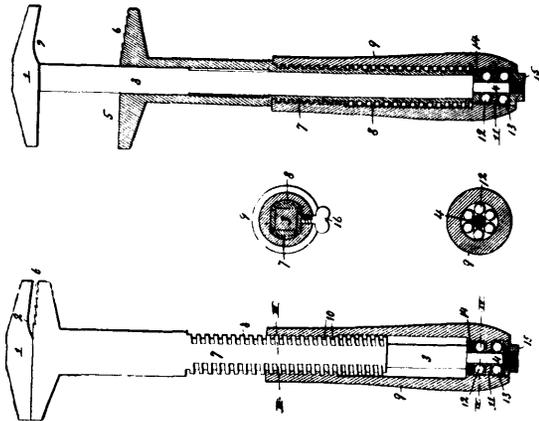


Thomas Shaw, Victoria, British Columbia, Canada, 13th March, 1899; 6 years. (Filed 26th November, 1899.)

*Claim.*—1st. In a door or closure having a rubber packing arranged therearound, a door arranged to seat upon said packing, lugs arranged at intervals around the outer rim of said door, apertures in said lugs, in combination with a threaded stud fixed in the centre of said door, a disc designed to move on said stud, bolts pivoted to the outer rim of said disc, the said bolts being tangentially placed to the axis of the disc, a rim on the outer edge of the door to form a fulcrum for the bolts, and means for moving the bolts in and out radially from the centre, and for moving the centres of said bolts in and out in the direction of the thrust of the door, as specified. 2nd. A door hinged or otherwise supported on a suitable seat around an opening, lugs projecting outwards at intervals round in proximity to said door, apertures or recesses in said lugs, in combination with a rim or bead around the outer edges of said door, a threaded stud fixed to the centre of the door, a stem or disc made to move on the stud, and bolts connecting therewith at a tangent to its axis, means for turning said disc, so that said bolts will be thrust through the openings in the said lugs, staples or keepers for holding the arms in place, a spring interposed between the disc and the door, and a nut on the outer end of the stud, whereby the disc, and consequently, the inner ends of the bolts will be moved in or out in the direction of the thrust of the door, as specified. 3rd. A door having a raised rim or bead around its outer edge, a stud secured to its centre having a disc to move thereon, a crank-handle secured to said disc, radial bolts pivoted to the rim of the disc, said bolts projecting beyond the edge of said door when the disc is turned, so that they are approximately in line with the axis thereof, but when the disc is turned back their outer ends will be withdrawn and their alignment will be tangent to the axis of the disc, means for moving the disc in or outward upon the stud, whereby when the bolts are projected

forward they will be engaged by lugs or fixtures on the walls of the opening to be closed, and by moving the disc inward on the stud the door will be held down by the bolts, acting as levers, substantially as specified.

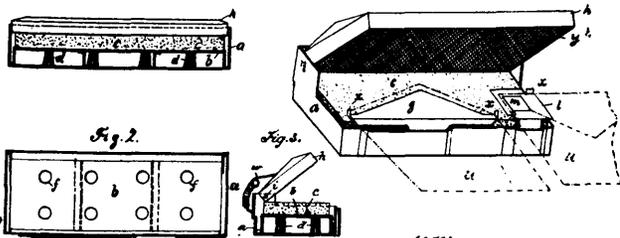
**No. 62,882. Wrench. (Clé à écrou.)**



Leslie Kane Hollyman and Benoni Swearingen, both of Kansas City, Missouri, U.S.A., 13th March, 1899; 6 years. (Filed 3rd January, 1899.)

*Claim.*—1st. A combined nut and pipe wrench, comprising a stationary member, a movable member mounted thereon to slide but not to rotate, and provided with a threaded surface, a handle mounted upon said movable member and provided with engaging threads and having a fixed position with relation to the stationary member, substantially as described. 2nd. A combined nut and pipe wrench, comprising a stationary jaw having a shank provided with a bolt-extension of reduced diameter, a removable jaw mounted to slide but not to rotate upon the shank of the stationary jaw, and provided externally with a threaded surface, a handle secured and rotatably mounted upon the bolt-extension, and provided internally with threads engaging the threads of the movable jaw, substantially as described. 3rd. A combined nut and pipe wrench, comprising a stationary jaw, a shank and a bolt-extension, a movable jaw mounted and adapted to slide but not to rotate upon the shank of the stationary jaw, and provided with external screw-threads, a handle internally threaded and engaging the threaded shank of the movable jaw and provided with a perforated partition journaled upon said bolt-extension, bearing-balls at opposite sides of said partition, a washer upon said bolt-extension between the stationary-jaw-shank and one of said balls, and a nut screwed upon said bolt-extension and holding the other set of balls against said partition, substantially as described. 4th. A combined nut and pipe wrench, comprising a stationary jaw having a shank and a bolt-extension, a movable jaw mounted and adapted to slide but not to rotate upon the shank of the stationary jaw, and provided with external screw-threads, a handle internally threaded and engaging the threaded shank of the movable jaw, and having a ball-bearing upon the bolt-extension, and a set-screw, mounted in the handle and adapted to impinge on the shank of the movable jaw, substantially as described. 5th. In a combined nut and pipe wrench, a stationary jaw provided with a shank at one side of said jaw with a segmental cavity at its under side, and a movable jaw mounted slidingly but not rotatably on the shank of the stationary jaw and having its surface vertically below said segmental cavity bevelled and serrated, substantially as described.

**No. 62,883. Apparatus for Dampening Envelopes and the like. (Appareil à humecter les enveloppes.)**

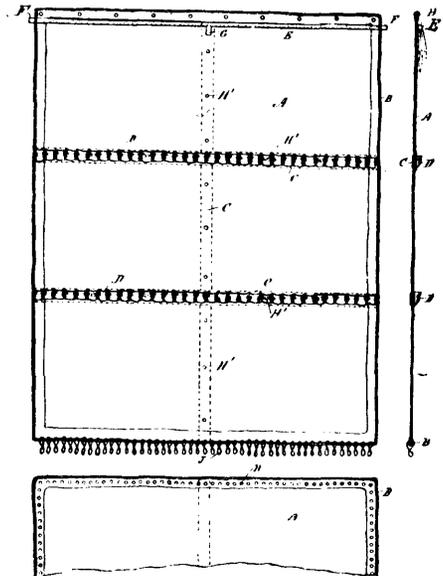


Count Conrad Kanitz, Melkof, Germany, 13th March, 1899; 6 years. (Filed 14th December, 1898.)

*Claim.*—1st. In a device for moistening or dampening envelopes, postage stamps and other gummed paper, said device having a pressure plate *h*, as set forth, the wire or other gauze fabric *y* cover-

ing the pressure surface of said plate, as and for the purpose set forth.

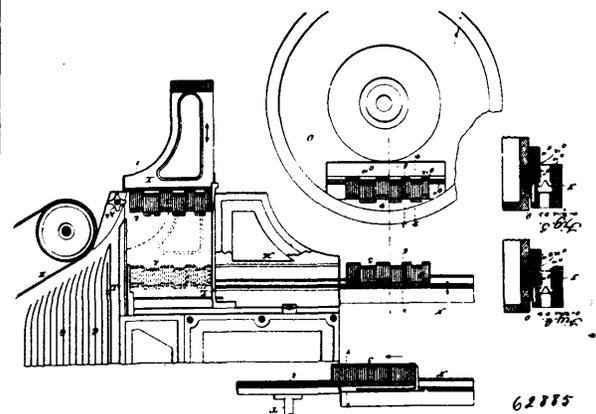
**No. 62,884. Fire Screen. (Ecran pour le feu.)**



Rasmus Buggé, 12 Annis Road, Victoria Park, South Hackney, London, England, 13th March, 1899; 6 years. (Filed 19th December, 1898.)

*Claim.*—1st. The provision of a fire screen for protecting buildings from and preventing the spread of fire to the same, substantially as and for the purpose herein set forth and described, and illustrated by the accompanying drawings. 2nd. The provision of a fire screen for protecting buildings from fire and preventing the spread of a conflagration, the said fire screen being arranged to revolve and carry water from a trough placed at the lower end of said revolving screen, substantially as and for the purposes herein set forth and described and illustrated by the accompanying drawings. 3rd. The application of this invention to the interior or exterior of any building, or portion of a building or buildings, substantially as and for the purpose herein set forth and described, and illustrated by the accompanying drawings.

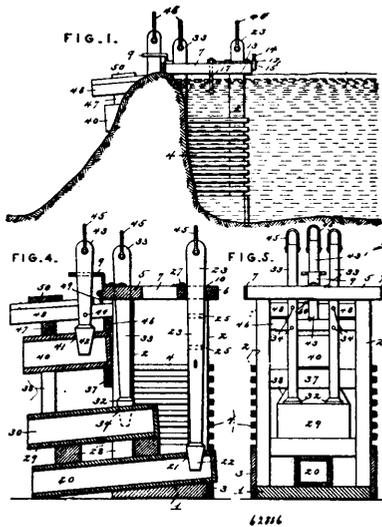
**No. 62,885. Linotype Machine. (Machine linotype.)**



John R. Rogers, Brooklyn, New York, U.S.A., 13th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. As an improvement in the Mergenthaler linotype machine, having matrices with two letters each, the assembling elevator provided with a blade *i*<sup>10</sup> and with a movable blade *i*<sup>11</sup>, so that the matrices entering the elevator may be adjusted to different levels, as required. 2nd. As an improvement in the Mergenthaler linotype machine, the assembling elevator *I*, having the blades *i*<sup>10</sup> and *i*<sup>11</sup> mounted therein, substantially as described. 3rd. As an improvement in the Mergenthaler linotype machine, the first elevator *N*, provided with a movable blade *n*<sup>10</sup>, and means for automatically moving said blade, substantially as described.

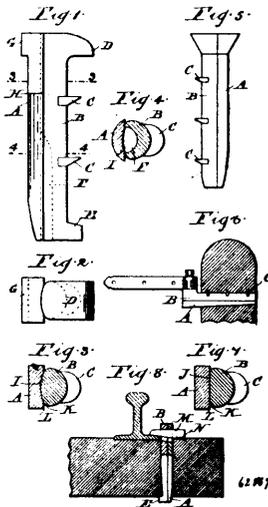
No. 62,886. Sluice Box and Bridge. (Boite d' ecluse et pont.)



Harry Hickmott, Brentwood, Essex, England, 13th March, 1899; 6 years. (Filed 9th November, 1898.)

Claim.—1st. In a device of the character set forth, the combination of a fish guard, a lower sluice box entering the same, a flood sluice box, upper waste water sluices, a bridge extending across the said waste water sluices, each of these sluices except the waste water sluices having upper rear feed openings, and plugs with elongated stems removably engaging the said feed openings, substantially as described. 2nd. In a device of the character set forth, the combination of a series of superimposed sluice boxes and plugs removably engaging the upper rear portions of the said sluice boxes, substantially as described. 3rd. In a device of the character set forth, the combination of a series of sluice boxes of varying lengths, having openings in the upper rear portions thereof, plugs removably engaging the said openings and having elongated stems projecting above the upper surface of the device, and means for holding the said stems and plugs elevated, substantially as described.

No. 62,887. Spike. (Cheville.)

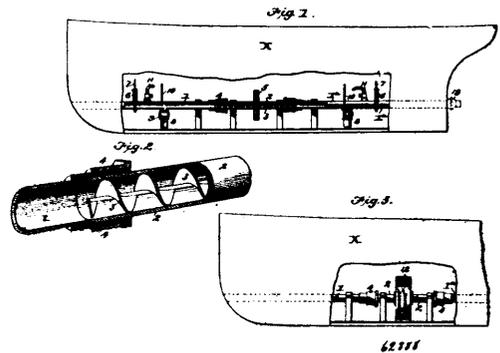


Frederick Baker, Maylands, Kambrook Road, Caulfield, near Melbourne, 13th March, 1899; 6 years. (Filed 25th November, 1898.)

Claim.—1st. A spike for securing rails, decking, platform, and the like formed in two parts longitudinally one part having two or three teeth (such as C) and the other arranged to be driven down behind the first part so as to force said teeth into the sleeper, joist or the like, substantially as and for the purpose herein described and explained and as illustrated in the accompanying drawings. 2nd. In a spike for securing rails, decking, platforms and the like made in two parts a projection (such as E) on the lower end of one part so as to be forced into engagement with the underside of the sleeper,

joist, or the like on driving the other part into the hole behind said first part, substantially as and for the purposes herein described and explained and as illustrated in the accompanying drawings. 3rd. A spike for securing rails, decking, platforms and the like made in two parts with the rear corners of the front or main part rounded off (as at K) and the corners of the other part left projecting (as at L), substantially as and for the purposes herein described and explained and as illustrated in the accompanying drawings. 4th. A spike or stud for securing rails, decking, platforms, and the like made in two parts with a head to fit into a counter sunk hole one of the parts being provided with projecting teeth (such as C) and the other part being driven down behind it so as to force said teeth into the wood of the sleeper, joist, or the like, substantially as herein described and explained and as illustrated in figure 5 of the accompanying drawings. 5th. A spike constructed as claimed in either of the preceding claims in combination with a tapering or inclined key (as M) passing through a slot in the upper end of the spike substantially as and for the purposes herein described and explained and as illustrated in figure 8 of the accompanying drawings.

No. 62,888. Hydraulic Propeller for Ships. (Propulseur hydraulique pour vaisseaux.)



Andrew Plecher, Savannah, Georgia, U.S.A., 14th March, 1899; 6 years. (Filed 27th December, 1898.)

Claim.—1st. The combination with a vessel's hull, of a jet or water conducting tube traversing the same from stem to stern, a rotatable screw section, aligned with fixed tube sections, and journalled on the latter, such rotatable section being composed of a tube proper and a spiral blade or screw proper whose side edges are secured to the tube, substantially as shown and described. 2nd. The combination with a vessel's hull, of fixed tube sections traversing the same as described, an interposed aligning tube section arranged rotatably in stuffing-boxes and having an interior spiral or screw proper, and a rotary driving wheel applied to such tube section exteriorly, as shown and described. 3rd. The combination with a vessel's hull and a tube traversing the same, of a propeller located in mid-length of the tube, cut-off valves arranged on each side of the screw, and other valves for controlling admission of water from the hold, substantially as shown and described. 4th. The combination with a vessel's hull, and a tube traversing the same, of valves for controlling admission of water from the hold, and a rotatable screw tube section, as shown and described. 5th. The combination with a vessel's hull, and a tube traversing the same, of cut-off valves, valves for controlling admission of water from the hold, fire-hose attachments, and a rotatable screw section, substantially as shown and described. 6th. The combination with a vessel's hull, and a tube traversing the same, of fire-hose attached to the latter, cut-off valves arranged in said tube exterior to such fire-hose, and a propeller, substantially as shown and described, to operate as specified. 7th. The combination with a vessel's hull, and a tube traversing the same, of a cut-off valve arranged in said tube, a propeller connected with the cut-off valves located exterior to the propeller, hose attachments arranged between the cut-off valves and the propeller, and short tubes pendent from the main tube, and having valves for regulating the inlet of water, substantially as shown and described.

No. 62,889. Process of Liming Furs.

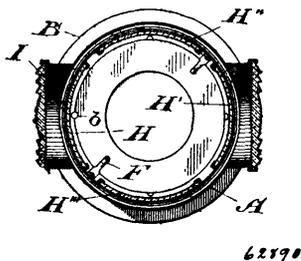
(Procedé pour le pelanage des fourrures.)

John Pullman, Edward England Pullman, both of 17 Greek Street, Soho Square, London, and Ernest Edward Munro Payne, Aylesbury, Buckingham, all in England, 14th March, 1899; 6 years. (Filed 27th December, 1898.)

Claim.—1st. In the process of liming furs, hair skins, skins, hides, pelts, or parts thereof, the treatment of such materials, raw or partially limed, first with a weak solution of caustic soda (NaHO) or caustic potash (KHO) or their carbonates, or a mixture of both in any proportions, and the subsequent treatment with a solution of chloride of calcium (CaCl<sup>2</sup>) or other suitable soluble salt of calcium, so that calcium hydrate (Ca(OH)<sup>2</sup>) is formed in the substance of the skin itself, substantially as described. 2nd. The process of treating such material, furs, hair skins, skins, hides, pelts, or parts

thereof, first with a solution of caustic alkali or alkalies and subsequently with a solution of a salt of calcium, so that calcium hydrate (Ca<sub>2</sub>(HO)) is produced in the substance of the skin itself, substantially as described. 3rd. The treatment of furs, hair skins, skins, hides, pelts, or parts thereof, first with a solution of a salt of calcium and subsequently with a solution of caustic soda or caustic potash or their carbonates, or a mixture of both in any proportions, substantially as described. 4th. In the process of liming furs or hair skins, the treatment of such materials with a solution of chloride of calcium or other suitable soluble salt of calcium until they are saturated or imbued with it, and then painting the caustic or alkaline solution upon the flesh side of the skin, so that by permeation a perfect liming results, without contact with the hair or fur, substantially as described. 5th. In the process of liming furs, hair skins, skins, hides, pelts, or parts thereof, the use, instead of a soluble salt of calcium, of a suitable soluble salt of magnesium or of metals of the alkaline earths, such as barium, substantially as described.

**No. 62,890. Railway Signal Lamp.**  
(*Lampe de signal de chemin de fer.*)



Edward Spencer Piper, Toronto, Ontario, Canada, 14th March 1899; 6 years. (Filed 18th April, 1898)

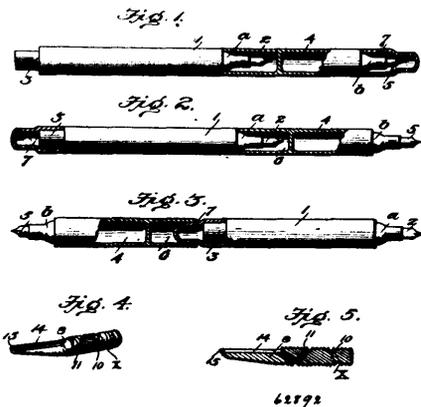
*Claim.*—1st. As a cupola tail lamp, a lamp-casing provided with lenses in front and rear and a shouldered flange at its base, in combination with a ring resting on the said flange within the shoulder, means for holding the ring of the flange, a frame connected to the said ring and carrying two green glasses or a green and white diametrically disposed, and a red and white or green glass diametrically disposed between them, a lamp detachably supported within the said ring, and means for locking the given colour of glass in front of any given lens, substantially as and for the purpose specified. 2nd. As a cupola tail lamp, a lamp-casing provided with lenses in front and rear and an inwardly projecting shouldered flange at its base in combination with a ring resting on the said flange within the shoulder, clips secured to the ring and extending under the flange, a frame connected to the said ring and carrying two green glasses or a green and white diametrically disposed, and a red and a white diametrically disposed, and a red and a white or green glass diametrically disposed between them, a lamp detachably supported within the said ring, and means for locking the given colour of glass in front of any given lens, substantially as and for the purpose specified. 3rd. As a cupola tail lamp, a lamp-casing provided with lenses in front and rear and an inwardly projecting shouldered flange at its base in combination with a ring resting on the said flange within the shoulder, clips secured to the ring and extending under the flange, a frame connected to the said ring and carrying two green glasses or a green and white diametrically disposed, and a red and a white or green glass diametrically disposed between them, a lamp detachably supported within the said ring, a spring actuated plunger carried by said ring and adapted to engage holes formed in the bottom flange of the lamp-casing, substantially as and for the purpose specified. 4th. As a cupola tail lamp, a lamp-casing provided with lenses in front and rear and an inwardly projecting shouldered flange at its base in combination with a ring resting on the said flange within the shoulder, clips secured to the ring and extending under the flange, a frame connected to the said ring and carrying two green glasses or a green and white diametrically disposed, and a red and a white or green glass diametrically disposed between them, a lamp detachably supported within the said ring, a spring actuated plunger carried by said ring and adapted to engage holes formed in the bottom flange of the lamp-casing, and coloured quadrants painted on the bottom of the ring, substantially as and for the purpose specified.

**No. 62,891. Method of Extracting Oil from Nuts.**  
(*Méthode d'extraire l'huile des noix.*)

Thornton Clem Graham, John Harvey Kellogg and Willie Keith Kellogg, all of Battle Creek, Michigan, U.S.A., 14th March, 1899; 6 years. (Filed 10th January, 1899.)

*Claim.*—The process herein described of obtaining oil from nuts and other similar substances, consisting in slightly roasting the nuts, removing their skins, then grinding them, then rolling them so as to form a thick pasty mass, and adding water to the mass in a certain regulated proportion, and stirring it, substantially as set forth.

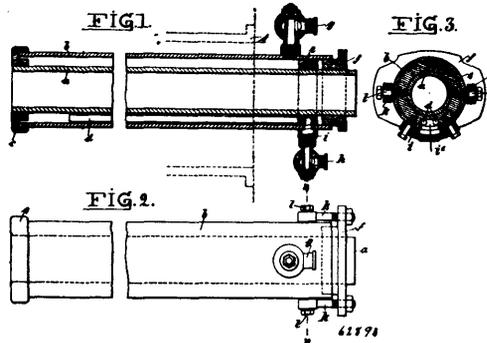
**No. 62,892. Fountain Pen.** (*Plume-fontaine.*)



Joseph Hampton Burton, Kingston, New York, U.S.A., 14th March, 1899; 6 years. (Filed 3rd January, 1899.)

*Claim.*—1st. In a duplex pen of the character described, the combination with the fountain 1, provided with a reduced extension 3, of the fountain 4 provided with a socketed end adapted to be slipped over the pen point of the fountain 1, a cap 7 adapted to be slipped over the pen point of fountain 4, and also adapted to be slipped over the extension 3 to receive the socketed end of the fountain 4 when the pen points of the two fountains are to be used alternately, or to be slipped over the pen point of the fountain 4 when the pen point of fountain 1 is to be used solely, substantially as described. 2nd. A feed device for fountain pens, consisting of a cylindrical body-portion provided with ink passages or grooves leading to the inclined duct extending through the lower end of said device, and an ink chamber communicating with said duct and provided at its end with an air vent, substantially as specified. 3rd. A feed device for fountain pens, consisting of a cylindrical body-portion provided with reversely-coiled ink passages or grooves leading to the inclined duct extending through the lower end of said device, and an ink chamber communicating with said duct and provided at its end with an air vent, substantially as set forth.

**No. 62,893. Apparatus for Removing Graphite Crusts from the Interior of Gas Retorts.** (*Appareil pour enlever les croûtes de graphites de l'intérieur des cornues à gaz.*)



Alphons Karris, Godesberg on the Rhine, Germany, 14th March, 1899; 6 years. (Filed 24th December, 1898.)

*Claim.*—1st. In an apparatus for removing the graphite incrustations from the interior walls of gas retorts, having an outer and inner tube and means for supplying cold water to the annular space between the two tubes, the combination of a front connecting piece for the two tubes and means in connection therewith for allowing room for the expansion of the tubes relative to one another, substantially as described. 2nd. The combination of an outer tube *b*, and an inner tube *a*, a ring to close the rear end of the annular space enclosed between the two tubes, means for supplying cold water to the rear end of the annular space and for conducting it off at the front end, a front gland *f*, to close the annular space at the front and means for securing the same to the front end of the outer tube substantially as described.

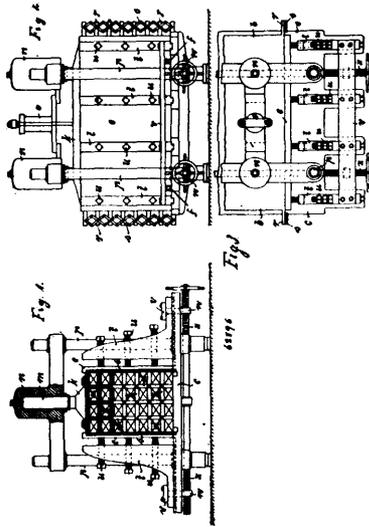
**No. 62,894. Albumen Imitation.** (*Imitation d'albumine.*)

Dr. Leon Lilienfeld, 20 Ottakrignerstrasse, Vienna, Austria, 14th March, 1899; 6 years. (Filed 5th December, 1898.)

*Claim.*—1st. A process for the synthetic production of compounds resembling natural albumen, which consists in condensing a com-

pound belonging to the class of phenols, with an amido acid by means of a compound of the kind specified, in the manner and for the purpose substantially as described. 2nd. A process for the synthetic production of compounds resembling natural albumen, which consists in condensing a mixture of compounds belonging to the class of phenols with an amido acid by means of a compound of the kind specified in the manner and for the purpose substantially as described. 3rd. A process for the synthetic production of compounds resembling natural albumen, which consists in condensing a mixture of amido acids by means of a compound of the kind specified in the manner, substantially as described. 4th. A process for the synthetic production of compounds resembling natural albumen, which consists in condensing a mixture of compounds belonging to the class of the phenols with a mixture of amido acids by means of a compound of the class specified in the manner substantially as described.

**No. 62,895. Wood Hardening Apparatus.**  
(Appareil à durcir le bois.)



George Friedrich Lebioda, Paris, France, 14th March, 1899; 6 years. (Filed 14th December, 1898.)

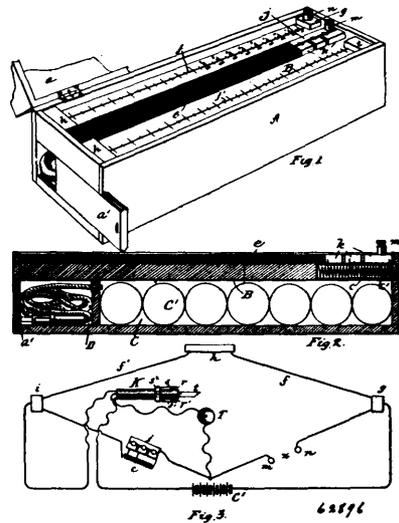
*Claim.*—1st. An apparatus for hardening wood, characterised by the arrangement of a number of horizontal plates *b* dependent on one another as to their distances apart, and a number of vertical plates *d* engaging in suitable grooves in the said horizontal plates *b* between which vertical and horizontal plates forming a solid casing, the blocks of wood to be treated are exposed to pressure between a presser plate *k* operated by hydraulic presses and the press table *c*, side plates *e* being also provided which are supported by two sets of supports *t* which allow of an exact adjustment of the points of support and may be adjusted against one another simultaneously by means of screwed spindles *x* which are provided with right and left hand threads, substantially as hereinbefore described. 2nd. In an apparatus such as described for hardening wood, the connecting together of the horizontal plates *b* by linked arms *s* resembling lazy-tongs and pins *r* in such a way that when the press plate *k* which is screwed to the uppermost plate *b* is lifted an even separation or movement apart of the horizontal plates *b* is automatically effected without the vertical plates *d* being liable to fall over, substantially as described. 3rd. In an apparatus such as described for hardening wood, the combination of the side plates *e* with two sets of supports *t*, the adjustable screws *u* of which allow of an exact adjustment of the points of support whilst they may be at any time mutually and easily adjusted in common by means of screwed spindles, substantially as described.

**No. 62,896. Electrical Measuring Instrument.**  
(Instrument électrique à mesurer.)

George Tilden Hanchett and Frederick Brittan Sage, both of Hackensack, New Jersey, U.S.A., 14th March, 1899; 6 years. (Filed 15th November, 1898.)

*Claim.*—1st. In a Wheatstone bridge, the combination of the circuits thereof, a circuit closer for the battery and a circuit closer for the bridge, both attached to a single movable handle, as and for the purpose set forth. 2nd. In a Wheatstone bridge of the slide wire type, the combination with the high resistance stretched wire forming one side of the circuit, a battery, a toucher and battery circuit closer mounted together and movable, and an indicator in

circuit with the toucher, substantially as described. 3rd. In a Wheatstone bridge, the combination of two metallic blocks or ter-



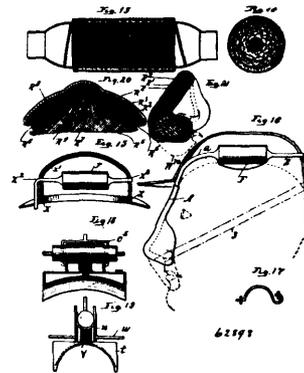
minals, insulated from each other, a metallic bar and two wires stretched between the respective blocks and the bar, said wires forming in series one side of the bridge circuit, a movable toucher and an indicating instrument in circuit therewith, substantially as described. 4th. In a Wheatstone bridge, the combination with the circuits thereof, of a bridge circuit closer and a battery circuit closer combined into a single movable device, substantially as described.

**No. 62,897. Composition Medicinale.**  
(Medicinal compound.)

Théodore Marsan, Montréal, Québec, Canada, 14 mars 1899 : 6 ans. (Déposé le 22 novembre 1898.)

*Résumé.*—Ce que je réclame et desire faire breveter est la préparation médicinale décrite dans la présente application composée de alcool trois onces et demie, huile d'olive cinq onces, térébentine une cuillerée à soupe, miel une livre, pastilles de menthe poivrée une once, tel que ci-dessus décrit et pour les fins spécifiées.

**No. 62,898. Thermal Inspirateur.** (Inspirateur.)

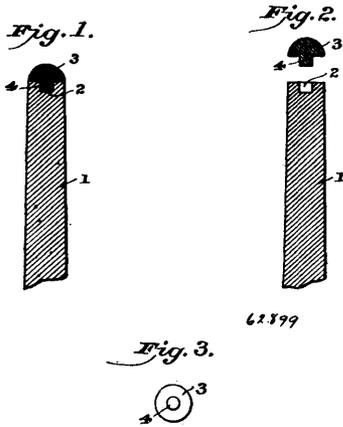


Charles Freemont Dight, Philadelphia, Pennsylvania, 17th March, 1899; 6 years. (Filed 4th March, 1898.)

*Claim.*—1st. In combination, a cap adapted to cover the nasal passages and a chamber filled with heat absorbing materials, a tube connecting said cap and chamber, said chamber having air passages through it and opening to the air, whereby the air may be exhaled and inhaled through said chamber. 2nd. In combination a tube leading to a heat storing chamber, and a strip connected to said tube and forming a frame on the side which bears against the face and a covering for said tube and frame, the whole forming a nasal cap. 3rd. The chamber for storing heat consisting of the heat retaining fillings with interstices, combined with an asbestos covering and case with a nasal cap and connecting tube. 4th. In combination, the cap, the heating storing chamber, and the device for supporting said chamber in the hat, consisting of the tube *a* and the projecting hat supported extension *S*. 5th. The heat storing chamber for a thermal inspirator and animal heat conserver comprising a heat absorbing and retaining filling, an impervious retainer being filled with heat retaining material, having interstices, single air

ports at the terminals of said interstices, whereby as air is discharged from the lungs in the breathing function, the heat thereof is absorbed by the filling and as air is inhaled the same will absorb the said stored heat.

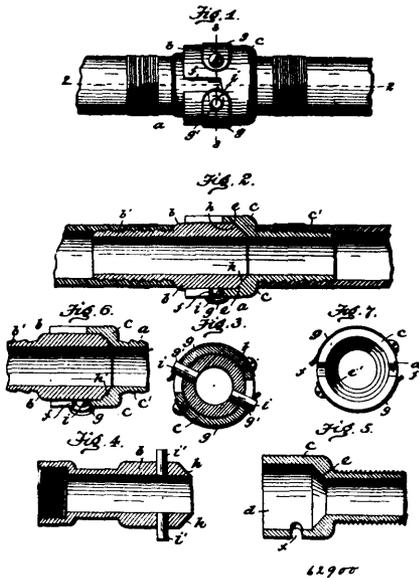
No. 62,899. Billiard Cue Tip. (Bout de queue de billard.)



William Henry Kane, Bridgeport, Connecticut, U.S.A., 17th March, 1899; 6 years. (Filed 12th December, 1898.)

Claim.—1st. The billiard cue tip which has a projection depending centrally from the rear face, which projection is adapted to be contained and secured within a sink or hole in the end of the cue. 2nd. The method of applying tips to billiard cues, which consists in providing a projection from the centre of the rear face of said tip, and glueing or otherwise securing said projection within a hole or sink formed centrally within the end of said cue.

No. 62,900. Hose Coupling. (Joint de boyau.)

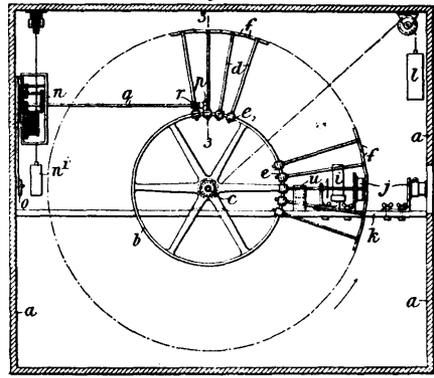


Ernest Albert Miller and Theodore Ernest Christman, oth of Jackson, Michigan, U.S.A., 17th March, 1899; 6 years. (Filed 10th December, 1898.)

Claim.—1st. A hose coupling, comprising in its construction a female member composed of a stem having an enlarged socket at the inner end thereof, said socket being provided with bayonet slots and a bulged out base portion at its junction with the stem, forming a shoulder which is bevelled internally to form a seat, a male member thickened at its inner end to form a head adapted to enter said socket and provided with a bevelled extremity to form a ground joint with or crimp a packing disc against said seat, removable locking pins fitted solely by frictional contact in openings in the head of the male member and adapted to engage the bayonet slots, and spring traps on the female member to engage the pins, substantially as described. 2nd. A hose coupling, comprising in its construction a female member composed of a stem having an enlarged socket at the inner end thereof, said socket being provided

with bayonet slots and a bulged out base portion at its junction with the stem forming a shoulder which is bevelled internally to form a seat having an annular concentric series of corrugations, a male member thickened at its inner end to form a head adapted to enter said socket and provided with a bevelled extremity formed with a similar series of corrugations to crimp a packing washer against said seat and thus provide a plurality of packed faces, removable locking pins fitted solely by frictional contact in openings in the head of the male member and adapted to engage the bayonet slots, and spring straps on the female member to engage the pins, substantially as described.

No. 62,901. Advertising Apparatus. (Appareil d'annonce.)

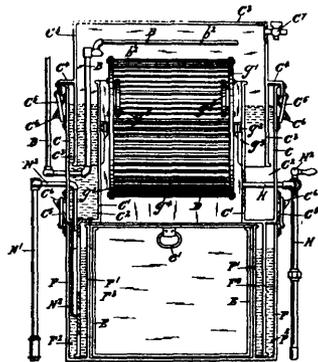


William John Hawkins and Reginald Harcourt Wright, both of Partington, Chester, England, 17th March, 1899; 6 years. (Filed 25th November, 1898.)

Claim.—1st. In an advertising apparatus, a wheel provided with a series of slides adapted to be successively brought into the focus of projecting lenses, and a series of arms adjustable radially and circumferentially upon the said wheel and carrying the lantern slides, substantially as described. 2nd. In an advertising apparatus, the combination of a wheel driven by a motor, the said wheel being provided with a series of circumferentially and radially adjustable arms carrying lantern slides, a star escapement co-operating with movable cogs in connection with the said wheel and operated by clock mechanism and a lamp or lenses for projecting the pictures or other advertisements on the slides on to a screen or the like, substantially as described. 3rd. In an advertising apparatus, the combination of a wheel driven by a motor, the said wheel being provided with a series of circumferentially and radially adjustable arms carrying lantern slides, a star escapement co-operating with movable cogs in connection with the said wheel and operated by clock mechanism, a brake for steadying the motion of the said wheel, and a lamp and lenses for projecting the pictures or other advertisements on the slides on to a screen or the like, substantially as described.

No. 62,902. Gas Making Machine.

(Machine pour la fabrication du gaz.)

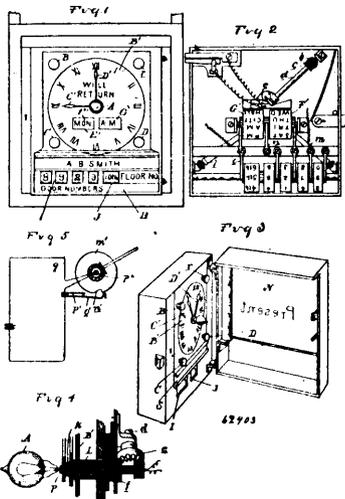


William J. Stinson, London, Ontario, Canada, 17th March, 1899; 6 years. (Filed 11th June, 1898.)

Claim.—1st. In a gas machine, a horizontal rotating carbide holder, substantially as and for the purpose set forth. 2nd. A rotating carbide holder, and details of the means for supporting and rotating the same, substantially as and for the purpose set forth. 3rd. The combination of the chambers C, and C', and F, and F', the water reservoirs C<sup>2</sup>, and F<sup>2</sup>, cover C<sup>3</sup>, and carbide holder D,

substantially as and for the purpose set forth. 4th. The combination of the water supply pipe B, with the chambers C, and C<sup>1</sup>, and F, and F<sup>1</sup>; the water reservoirs C<sup>2</sup>, and F<sup>2</sup>, cover C<sup>3</sup>, ash box E, and carbide holder D, substantially as and for the purpose set forth. 5th. The gas conducting pipe H, in combination with the chambers C, and C<sup>1</sup>, and F, and F<sup>1</sup>, the water reservoirs C<sup>2</sup>, and F<sup>2</sup>, cover C<sup>3</sup>, ash box E, and carbide holder D, substantially as and for the purpose set forth. 6th. The combination of the safety outlet pipe N<sup>2</sup>, with the chambers C, and C<sup>1</sup>, and F, and F<sup>1</sup>, the water reservoirs C<sup>2</sup>, and F<sup>2</sup>, cover C<sup>3</sup>, ash box E, and carbide holder D, substantially as and for the purpose set forth. 7th. In a gas machine, the gas conducting tube H, provided with a check valve H, for the purpose of automatically preventing the return of the gas to the generating chamber, substantially as and for the purpose set forth. 8th. The combination of a gas holder L, with a pipe B, and the valve b<sup>4</sup>, having the handle or arm b<sup>5</sup>, and weight b<sup>6</sup>, on the opposite sides of its stem for the purpose of automatically regulating the supply of water passing through said pipe, substantially as and for the purpose set forth. 9th. A pipe H, opening into a chamber I, located beneath, and in combination with a water tank J, spiral pipe K, tube M, and gas holder L, substantially as and for the purpose set forth. 10th. The water tank J, and gas holder L, in combination with telescoping pipes N, and N<sup>1</sup>, substantially as and for the purpose set forth. 11th. The water reservoir A, provided with an indicator a<sup>1</sup>, and the water supply pipe B, in which the perforations b<sup>2</sup>, are formed and which is provided with the valve b<sup>1</sup>, in combination with the chambers C, and C<sup>1</sup>, and F, and F<sup>1</sup>, the water reservoirs C<sup>2</sup>, and F<sup>2</sup>, cover C<sup>3</sup>, carbide holder D, safety outlet pipe N<sup>2</sup>, and gas conducting pipe H, substantially as and for the purpose set forth. 12th. The carbide holder D, a gas tight chamber containing the same and the water supply pipe B, in combination with the conducting pipe H, water tank J, chamber I, spiral pipe K, gas holder L, service tube M, and telescoping tubes N, and N<sup>1</sup>, substantially as and for the purpose set forth. 13th. The water reservoir A, and the water supply pipe B, in which the perforations b<sup>2</sup>, are formed and which is provided with the valves b<sup>1</sup>, and b<sup>4</sup>, the latter having an arm b<sup>5</sup>, on one side and a weight b<sup>6</sup>, on the other side of the stem in combination with the carbide holder D, and a gas tight chamber containing the same, gas conducting pipe H, chamber I, water tank J, spiral pipe K, service pipe M, and gas holder L, provided with a flange L<sup>1</sup>, substantially as and for the purpose set forth. 14th. The water reservoir A, and the water supply pipe B, in which the perforations b<sup>2</sup>, are formed, and which is provided with the valves b<sup>1</sup>, and b<sup>4</sup>, the latter having an arm b<sup>5</sup>, on one side and a weight b<sup>6</sup>, on the other side of the stem, in combination with a carbide holder D, and a gas tight chamber containing the same, a safety outlet pipe N<sup>2</sup>, gas conducting pipe H, chamber I, water tank J, spiral pipe C, service pipe M, and gas holder L, provided with a flange L<sup>1</sup>, substantially as and for the purpose set forth. 15th. The water reservoir A, and the water supply pipe B, in which the perforations b<sup>2</sup>, are formed, and which is provided with the valves b<sup>1</sup>, and b<sup>4</sup>, the latter having an arm b<sup>5</sup>, on one side and a weight b<sup>6</sup>, on the other side of the stem, in combination with a carbide holder D, and a gas tight chamber containing the same, a safety outlet pipe N<sup>2</sup>, gas conducting pipe H, chamber I, water tank J, spiral spring K, service pipe M, telescoping tubes N<sup>1</sup>, and N<sup>2</sup>, and gas holder L, provided with a flange L<sup>1</sup>, substantially as and for the purpose set forth.

**No. 62,903. Illuminated Clock Dial.**  
(*Cadran illuminé d'horloge.*)

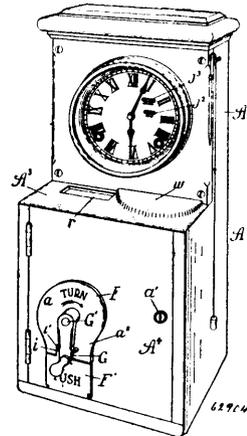


Roch R. Gareau, Detroit, Michigan, U.S.A., 21st March, 1899; 6 years. (Filed 13th February, 1899.)

*Claim.*—1st. The combination with the dial and the hour and minute hands thereof, of hollow arbors carrying the hands, a hollow

tube stationarily secured within said arbor, an incandescent lamp supported by said tube and an electric conductor connecting said lamp with the source of electricity, and a switch for controlling the lamp. 2nd. In an indicator, the combination of the frame or casing, a clock dial provided with indicator hands and with openings in the dial indicator, rollers in said opening and setting devices for said indicator hands, and rollers operated by buttons located on the face of the dial in proximity thereto, a miniature electric lamp mounted on the clock face in the axial centre of the indicator hands and a transparent curtain supported in front of the clock dial. 3rd. In an indicator, the combination with a primary indicating means, and a light therefor, of a supplemental indicator movably held in relation to the primary indicator and arranged in front thereof and of the light, and adapted to be moved to expose the primary indicator, substantially as described. 4th. In an indicator, the combination with a clock dial, of indicating hands, mechanism for imparting to said hands the proper relative movement provided with an operating device located in front of the clock dial, an indicating roll mounted in proximity to said dial and adapted to be seen through the latter, and means in front of the dial for setting said roller, substantially as described. 5th. In an indicator, the combination with a clock dial, and indicator hands, of hollow arbors for the hands, means for rotating said arbors to impart the proper relative movements to the hands, an electric light located at the front or outer end of the arbors, and a support and conductors for the light passing through said arbors. 6th. The combination with a clock dial and the hour and minute hands thereof, of hollow arbor carrying the minute hand, electric conductors passing through said hollow arbors, and an incandescent lamp connected to and supported by said conductors in the centre of the dial, independent of the minute hand and its arbor, substantially as described. 7th. The combination with a dial and the hour and minute hands thereof, of hollow arbors carrying the hands, a hollow tube stationarily secured within said arbors, an incandescent lamp supported by said tube, an electric conductor connecting said lamp with a source of electricity passing through said tube, a switch for controlling the lamp and means for operating the switch by the movement of said hands.

**No. 62,904. Time Recorder.** (*Registre horaire.*)



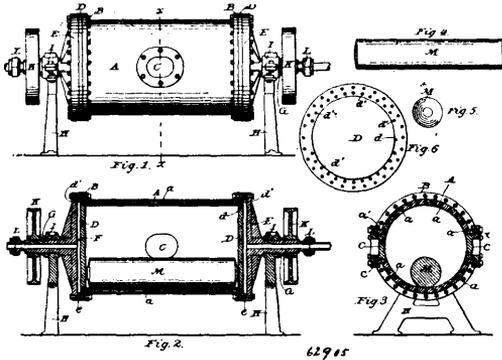
The National Time Recorder Co., assignee of Jacob John Busenbenz, all of Chicago, Illinois, U.S.A., 21st March, 1899; 6 years. (Filed 8th November, 1898.)

*Claim.*—1st. In a time-recorder, the combination with clock-movement-actuated printing mechanism, of a vertically movable carriage carrying paper-feeding mechanism and a support for the paper to be printed, and a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated to raise said support and to carry the support and paper against the type of the said printing mechanism to impress the paper, substantially as described. 2nd. In a time-recorder, the combination with clock-movement-actuated printing mechanism, of a vertically movable carriage carrying paper-feeding mechanism and a support for the paper to be printed, a handle connected with said carriage adapted when actuated to raise said support and the paper, and to carry the support and paper against the type of the said printing mechanism to impress the paper, and a stationary pawl engaging a ratchet on the paper-feed roll to move the paper as the carriage is lowered, substantially as described. 3rd. In a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening, a carriage vertically movable in the lower portion of the case and carrying paper-feeding mechanism and a support for the paper to be printed, and a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated to raise said support to bring the paper to said opening and to carry the support and paper against the type of the said printing mechanism, substantially as described. 4th. In

a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening, a door covering the lower portion of the case, a carriage vertically movable in supports on the inner side of the door and carrying paper-feeding mechanism and a support for the paper to be printed, and a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated, to raise said support to bring the paper to said opening and to carry the support and paper against the type of the said printing mechanism, substantially as described. 5th. In a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening for exposing the web to write thereon, a door covering the lower portion of the case, a carriage comprising a frame supported on the inner side of the door and movable by and down with relation to the type of said printing mechanism and table, an upper roll and a lower roll on said frame and movable therewith and carrying between them the web to be printed, a plate supported near the top of the frame to register with said opening, and an impression-pad similarly supported in advance of said plate to register with the printing mechanism, over which said plate and pad said web is drawn, feed mechanism for the web, comprising a ratchet on one of said rolls and a pawl engaged by the ratchet, and a handle connected with said frame to operate it, substantially as described. 6th. In a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening for exposing the web to write thereon, a door covering the lower portion of the case, a carriage comprising a paper-carrying frame supported on the inner side of the door and movable up and down with relation to said printing mechanism, an upper roll and a lower roll on said frame carrying between them the web to be printed, a plate supported near the top of the frame to register with said opening and an impression-pad similarly supported in advance of said plate to register with the printing mechanism, over which said plate and pad said web is drawn, feed-mechanism for the web, comprising a ratchet on one of said rolls and a pawl engaged by the ratchet, a crank journaled in the door to engage said frame and raise and lower it by turning the crank, and an operating handle connected with the crank, substantially as described. 7th. In a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening, a door covering the lower portion of the case, a carriage vertically movable in supports on the inner side of the door and carrying paper-feeding mechanism and a support for the paper to be printed, a crank engaging the paper-feeding mechanism, a handle connected with said crank and adapted when actuated to raise said paper-feeding mechanism and the support to bring the paper to said opening and to carry the support and paper against the type of the said printing mechanism, and a spring-lock for said handle, substantially as described. 8th. In a time-recorder, the combination of an inclosing case, a clock-movement in the upper part of said case, printing mechanism actuated by said clock-movement, a table interposed between the upper and lower portions of the case and having an opening for exposing the web to write thereon, a door covering the lower portion of the case, paper-feeding mechanism supported on the inner side of the door and movable up and down with relation to said printing mechanism, a crank engaging and actuating the paper-feeding mechanism, an operating handle connected with said crank, and a lock for the handle comprising a spring-plate carrying a stop for one side of the handle and a spring-stud for the opposite side thereof, substantially as described. 9th. In a time-recorder, the combination with clock-movement-actuated printing mechanism, of a vertically movable carriage carrying paper-feeding mechanism and a support for the paper to be printed, a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated to raise said support and to carry the support and paper against the type of the said printing mechanism, and an inking attachment for the printing mechanism supported in the path of the carriage to be actuated thereby, substantially as described. 10th. In a time-recorder, the combination with clock-movement-actuated printing mechanism, of a carriage carrying paper-feeding mechanism, movable up and down with relation to said printing mechanism, a handle connected with the carriage to operate it, and an inking attachment supported adjacent to said printing mechanism and comprising a lever pivotally supported to sweep across the face of the printing mechanism and carrying an inking roller and a bell crank lever for actuating said lever and having one arm extended into the path of movement of said carriage, substantially as described. 11th. In a time-recorder, the combination with clock-movement-actuated horizontally disposed concentric printing-rings, of a carriage carrying paper-feeding mechanism, movable up and down with relation to said rings, a handle connected with the carriage to operate it, and an inking attachment comprising a bracket depending adjacent to said rings, a spring-controlled head supported on said bracket to swing in a horizontal plane, a spring-controlled lever hinged to said

head to swing with it and carrying an inking-roller, and a bell-crank lever engaging said head and having one arm extended into the path of movement of said carriage, substantially as described. 12th. In a time-recorder, the combination with an inclosing case, of a vertically movable carriage carrying paper-feeding mechanism and a support for the paper to be printed, a clock-movement, horizontally-disposed concentric printing-rings rotatably supported between said carriage and clock-movement, and lever-mechanism engaging said rings and having an actuating-connection with said clock-movement to turn said rings at predetermined intervals, and a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated to raise said support and to carry the support and paper against said printing-rings, substantially as described. 13th. In a time-recorder, the combination with an inclosing case, of a vertically movable carriage carrying paper feeding mechanism and the paper to be printed, a plate and an impression pad over which the paper is stretched, a table  $A^3$  having a slot  $r$  to register with said plate and slots  $g$  and  $f$ , a clock movement, horizontally disposed concentric printing-rings  $M$  and  $M^1$  rotatably supported below said slots  $g$   $f$ , lever-mechanism engaging said rings and having an actuating connection with said clock movement to turn said rings at predetermined intervals and a handle connected with said carriage and adapted when actuated to raise it to bring the paper to said slot  $r$  and to carry the plate, pad and paper against the rings  $M$ ,  $M^1$ , substantially as described. 14th. In a time-recorder, the combination with an inclosing case of a carriage movable up and down an impression-pad over which the web of paper is stretched, a table on its support and carrying paper feeding mechanism, a plate and  $A^3$  having a slot  $r$  to register with said plate and slots  $g$  and  $f$ , a handle connected with said carriage to operate it, a clock-movement carrying a ratchet-wheel I provided with a cam  $h^1$ , horizontally disposed concentric printing rings  $M$  and  $M^1$  rotatably supported below said slots  $g$   $f$ , and levers  $K$  and  $K^1$  fulcrumed to engage at the upper side of their fulcrum respectively with said ratchet-wheel and tooth and engaging at their lower ends through said slots  $g$  and  $f$  with said printing-wheels, substantially as described. 15th. In a time-recorder, the combination with an inclosing case of a carriage movable up and down on its support and carrying paper-feeding mechanism, a plate and an impression-pad over which the web of paper is stretched, a table  $A^3$  having a slot  $r$  to register with said plate and slots  $g$  and  $f$ , a handle connected with said carriage to operate it, a clock-movement carrying a ratchet-wheel I provided with a cam  $h^1$ , horizontally disposed concentric printing-rings  $M$  and  $M^1$  rotatably supported below said slots  $g$   $f$ , and provided about their upper sides with radially arranged ribs at equal intervals apart, spring controlled levers  $K$  and  $K^1$  provided at their upper ends with teeth  $t^1$  respectively engaging the teeth of said ratchet-wheel and said cam  $h^1$ , and carrying at their lower ends pawls to engage said ribs and springs  $g^1$  and  $f^1$  extending over said slots  $g$  and  $f$  and carrying cams  $g^2$  and  $f^2$  engaged by studs on said levers and the detents  $g^3$  and  $f^3$  extending through said slots into engagement with said ribs, the whole being constructed and arranged to operate substantially as described. 16th. In a time-recorder, the combination with the inclosing case of a carriage movable up and down on its support and carrying paper-feeding mechanism, a plate and an impression-pad over which the web of paper is stretched, a table  $A^3$  having a slot  $r$  to register with said plate, a handle connected with said carriage to operate it, a clock-movement carrying a ratchet-wheel I provided with a cam  $h^1$ , horizontally disposed rotatable concentric printing-rings  $M$  and  $M^1$ , levers  $K$  and  $K^1$ , fulcrumed to engage at the upper side of their fulcrum respectively with said ratchet-wheel and cam and engaging at their lower ends with said printing-wheels, and handles on the levers accessible for manipulation by hand to actuate independently of the other for setting the printing-wheels, substantially as described. 17th. In a time-recorder, the combination with the inclosing case, of a clock-movement in the upper part of the case, printing-mechanism below and operatively connected with the clock-movement to be actuated thereby at predetermined intervals of time, a vertically movable carriage carrying paper-feeding mechanism and a support for the paper to be printed, a support for said carriage, and a rotatable handle provided with a crank operatively connected with said carriage and adapted when actuated to raise the paper support and to carry it and the paper against said printing mechanism, the support for said carriage being removable to separate the carriage and the parts carried thereby at will entirely from the printing-mechanism and clock-movement of the apparatus, substantially as described. 18th. In a time-recorder, the combination with the inclosing case of a door  $A^4$ , a carriage supported on said door, carrying paper-feeding mechanism and movable up and down on its support, and means for locking the carriage to the case and thereby locking the door against being opened while the carriage is in its normal position, substantially as described. 19th. In a time recorder, the combination of the inclosing case having the table  $A^3$ , provided with the slot  $r$ , clock-movement-actuated printing-mechanism, a paper-carriage provided with roll  $C^3$ , and a roll  $C$ , carrying the ratchet  $m$ , and movable up and down with relation to the printing-mechanism, a table  $D$  and an impression-pad  $D^1$ , one in advance of the other at the top of the carriage and over which the web  $C^1$ , is stretched, a pawl  $n^4$ , in position to be engaged by said ratchet, and means for raising and lowering the carriage, said carriage in dropping feeding the portion of the web exposed at the slot  $r$ , into alignment with said impression-pad, substantially as described.

**No. 62,905. Ore Amalgamating Method.**  
(*Méthode d'amalgame les minerais.*)

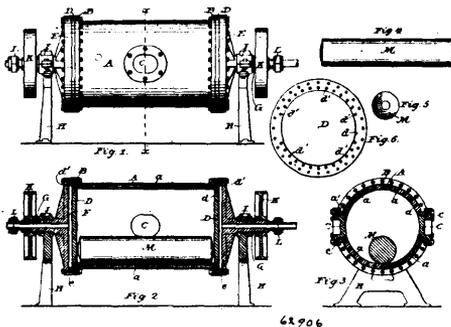


John E. Sutphen, Albany, New York, U.S.A., 21st March, 1899; 6 years. (Filed 17th August, 1898.)

*Claim.*—1st. The method of amalgamating ores of gold and silver consisting in first removing the moisture from the sand or ores, then grinding the same to a fine powder and mixing the same with suitable chemicals and moisture so as to produce a thick paste, and finally in subjecting the mass while confined in a revolving heated cylinder to the pressure of a roller having an evenly finished outer surface in harmony with the inner surface of the cylinder whereby such material while under the influence of heat is pressed by said roller without jars or concussion, substantially as shown and described. 2nd. The method of amalgamating ores of gold and silver, consisting in applying heat to the ore or pulp without coming in direct contact with such pulp, and at the same time subjecting such pulp to a continuous and steady pressure, substantially as shown and described.

urea while carbonic acid is formed in at times and thereby produced on the surface of the forged iron pieces a thin layer of carbonate of iron and of organic iron salts containing carbon and nitrogen, then the iron pieces after being rinsed with water, dried and heated, shutting off the air and having now on their surface a thin layer of very finely distributed nitrogenous carburetted iron (carbide) are cooled down, the air being still shut off, and then, the nitrogenous carburetted iron being heated in a crucible to above the melting point of a mixture or alloy of tin and zinc in suitable proportions, this mixture or alloy, in the proportions of 15 kilos (30 lbs.) to 5 kilos (10 lbs.) of iron, is put on the carburetted iron in the crucible and kept therein for the further 15 minutes in the melted state, the air being carefully excluded, thereby producing an alloy of tin, zinc and iron, and that finally the latter being poured off from the unattacked cores of the iron pieces, used for producing the carbide, is broken in pieces and placed in melted copper in a proportion of 20 to 50 parts, to 50 to 80 parts of copper.

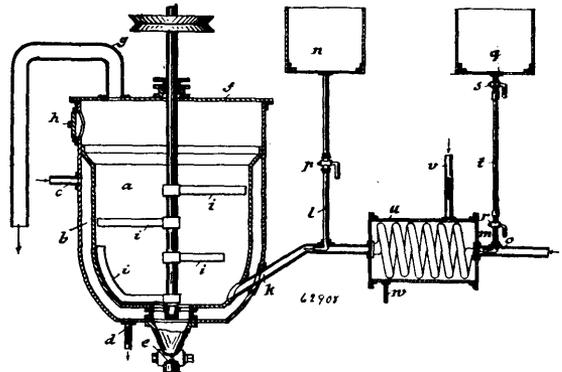
**No. 62,906. Amalgamator for Ore.**  
(*Amalgamateur pour minerais.*)



John E. Sutphen, Albany, New York, U.S.A., 21st March, 1899; 6 years. (Filed 17th August, 1898.)

*Claim.*—1st. In an ore amalgamator, the combination of a revolving cylinder having heat chambers formed in said cylinder, and a roller arranged within said cylinder and adapted to revolve therein without jars or concussion, substantially as shown and described. 2nd. In an ore amalgamator, the combination with a cylinder provided with longitudinal apertures formed within its shell, of inner cylinder heads provided with heat openings arranged in line with the apertures of said cylinder, and outer heads, separated from said inner heads so as to form heat chambers between said inner and outer heads and provided with hollow trunnions, substantially as shown and described. 3rd. In an ore amalgamator, the combination with a cylinder having heat chambers formed therein, of outer cylinder heads provided with trunnions having passage ways communicating with the heat chambers of the cylinder, and a central roller extending lengthwise of said cylinder and adapted to revolve within said cylinder without producing jars or concussion, substantially as shown and described.

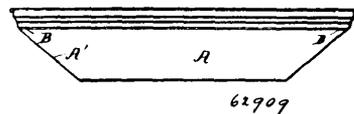
**No. 62,908. Method of Making Soap.**  
(*Méthode de fabrication de savon.*)



Heinrich Schaaf, No. 8 Hasstrasse, Eupen, Prussia, 21st March, 1899; 6 years. (Filed 20th December, 1898.)

*Claim.*—1st. A process for mixing resin soaps, oil soaps or fat soaps with more or less volatile substances, which consists in suitably volatilizing the latter substances and in this condition introducing them into the soap at a suitable stage of its manufacture or if desired in a finished condition, with the object of obtaining as thorough an admixture as possible, substantially as described. 2nd. A process for mixing resin soaps, oil soaps or fat soaps with more or less volatile substances, which consists in introducing the volatile substances in a liquid condition in small quantities into the soap at a suitable stage of its manufacture or if desired in a finished condition, the soap being previously heated to such a degree as to be able to evaporate or volatilize the volatile substances at the moment of their introduction, with the object of obtaining as thorough an admixture as possible, substantially as described.

**No. 62,909. Prospecting Dish.** (*Auge pour prospecteurs.*)



Walter George Collins, Caramba, New South Wales, 21st March, 1899; 6 years. (Filed 27th June, 1898.)

*Claim.*—A prospecting dish having along a portion of its inner surface a projecting ledge or bracket, such as B, formed in the manner and for the purposes herein described and as illustrated in the drawings.

**No. 62,910. Lead Ore Treatment.**  
(*Traitement de minerai de plomb.*)

Alice Pigott, Archer Lodge, Charles Road, St. Leonard, Sussex, England, 21st March, 1899; 6 years. (Filed 24th February, 1898.)

*Claim.*—1st. The herein described process for production of oxysulphides of lead having the formulæ Pb<sup>3</sup>S<sup>2</sup>, O<sup>8</sup> and Pb<sup>3</sup>S<sup>2</sup>, O<sup>9</sup> by melting galena or lead sulphide with or without lead, volatilizing the galena, by blowing air or hot non-oxidizing gas through the molten material and blowing air or air and steam through the galena vapour. 2nd. The herein described process for producing lead and sulphur dioxide by adding to molten galena while agitating and maintaining the heat the oxysulphides Pb<sup>3</sup>S<sup>2</sup>, S<sup>2</sup>, O<sup>8</sup> or Pb<sup>3</sup>S<sup>2</sup>, O<sup>9</sup> or a mixture of these obtained, as above set forth. 3rd. The herein described process for producing litharge and sulphur dioxide by melting lead and adding while agitating and maintaining the

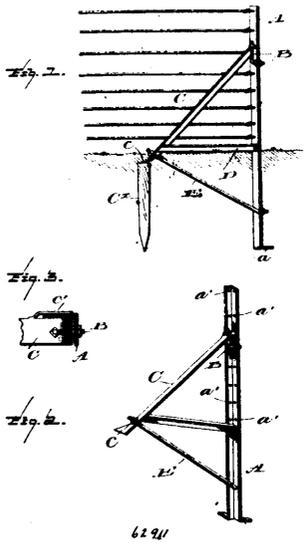
**No. 62,907. Process of Producing a Malleable Bronze.**  
(*Procédé pour la production d'un bronze malleable.*)

Maurice Marc Marcus, Terre-Noire, near Lyons, France, 21st March, 1899; 6 years. (Filed 24th February, 1898.)

*Claim.*—The new process for producing bronze that can be wrought when heated, thereby characterized, that first forged iron with as large a surface as possible is kept for a considerable time in a vessel that can be closed, with a solution containing 5 per cent of neutral, 5 per cent of acid carbonate of ammonia and 1½ per cent of

temperature the oxysulphides  $Pb^3, S^2, O^8$  or  $Pb^3, S^2, O^9$  or a mixture of these obtained as above set forth. 4th. The herein described process for concentrating the silver contained in lead or galena by melting the galena with or without lead and blowing hot non-oxidizing gas through the molten material. 5th. The herein described process for producing lead and sulphur dioxide by melting galena with or without lead volatilizing the galena by blowing hot non-oxidizing gas through the molten material and passing the galena vapour through molten litharge.

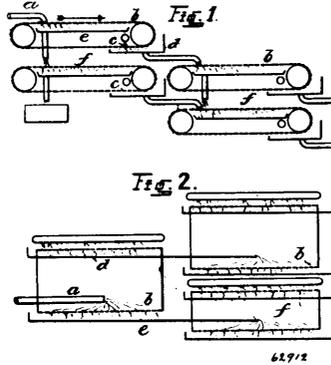
**No. 62,611. Fence Post.** (*Poteau de clôture.*)



Richard Barcroft Robbins, Adrian, Michigan, U.S.A., 21st March, 1899; 6 years. (Filed 26th October, 1898.)

*Claim.*—1st. The combination with the post proper, of an inclined brace bar connected to said post adjacent to the upper end thereof, and having its lower end supported adjacent to the ground, a horizontal bar connected to said post and to said brace bar adjacent to its lower end, a truss rod connected to the post adjacent to its lower end and below the surface of the ground, and connected also to said brace bar and means for adjusting said brace bar to move the upper portion of said post in line with the fence wires, to tighten or loosen said wires, substantially as described. 2nd. The combination with the post proper, of an inclined brace bar, connected to said post adjacent to the upper end thereof, and having its foot supported adjacent to the ground, a horizontal bar connected to said post and to said brace bar adjacent to the ground line, and an adjusting device interposed between the upper end of said inclined brace bar and the post, whereby the upper part of said post can be moved in line with the fence wires to straighten said post and to tighten or loosen the fence wires, substantially as described. 3rd. The combination with the post proper, of an inclined brace bar connected to said post adjacent to the upper end thereof and having its foot supported adjacent to the ground, a horizontal bar connected to the post and to said brace bar, a truss rod connected to its lower end to the post adjacent to its lower end, and its upper end adjustably secured to said brace bar, and an adjusting device interposed between said post and the upper end of said brace bar, substantially as described. 4th. The combination with the post proper, provided adjacent to its upper end with an adjusting bolt having a vertically disposed portion, an inclined brace bar having its upper end engaging said bolt and its lower end supported adjacent to the ground, the horizontal bar connected to said post and brace bar adjacent to the ground and the truss rod secured to the post adjacent to the lower end thereof and adjustably secured to said brace bar adjacent to its connection with said horizontal bar, substantially as described. 5th. The combination with the post proper, of a pair of inclined brace bars connected to said post adjacent to its upper end lying in vertical planes at right angles to each other and having their lower ends supported adjacent to the ground, horizontal bars connecting said post and said inclined brace bars adjacent to the ground line, truss rods connected to said post adjacent to its lower end, each of said truss rods being connected to one of said brace bars adjacent to the ground line and means for adjusting said brace bars to move said post, substantially as described. 6th. The combination with the post proper, of an inclined brace bar connected to said post adjacent to the upper end thereof and having its foot supported adjacent to the ground, a truss rod connected to its lower end to the post adjacent to the lower end of the same and its upper end adjustably secured to said brace bar and an adjusting device interposed between said post and the upper end of said brace bar, substantially as described.

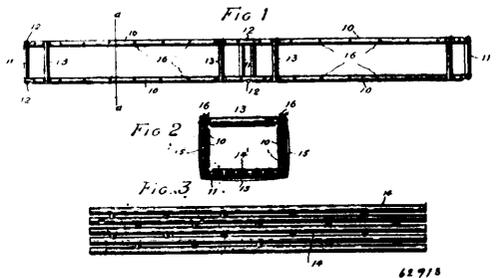
**No. 62,912. Apparatus for Treating Sea-Weed.** (*Appareil pour le traitement du varech.*)



Axel Krefting, 18 Kort Aldersgade, Christiania, Norway, 21st March, 1899; 6 years. (Filed 20th December, 1898.)

*Claim.*—A system or apparatus for filtering the sea-weed solution which is obtained by the dissolving of the sea-weed by any chemical process characterized by the sea-weed solution passing through a series of moving nets with decreasing sizes of the mesh, said meshes thereon being re-opened by suitable means before they again come below the sea-weed solution to be filtered.

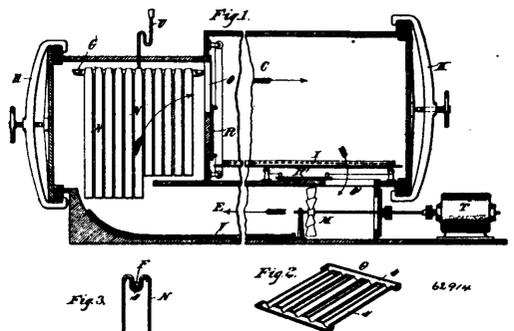
**No. 62,913. Sluice Box.** (*Boite d'écluse.*)



Robert Sparrow, Vancouver, British Columbia, Canada, 21st March, 1899; 6 years. (Filed 14th December, 1898.)

*Claim.*—A sluice or flume for the purpose described, having a supporting frame consisting of sides and a bottom, composed of riffles arranged in sections, in combination with a canvas or textile covering having its opposite edges secured to a peg or other fastening on the opposite upper edges of the side frames, as shown, and for the purpose specified.

**No. 62,914. Method of Preparing Anatomical, Entomologic and other Specimens.** (*Méthode de préparer des spécimens anatomiques.*)

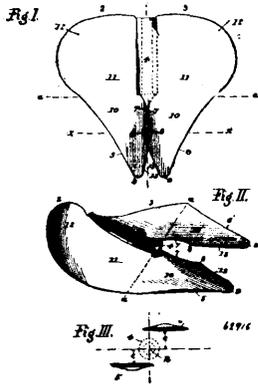


François De Recher and Gustave De Recher, both of Brussels, Belgium, 21st March, 1899; 6 years. (Filed 4th November, 1898.)

*Claim.*—1st. The process of sterilisation and preservation of specimens for collection and anatomical parts above described, which consists in submitting the objects to be treated to the action of an atmosphere constantly saturated with formic aldehyde, such saturation being obtained by a continuous circulation of the air contained in the apparatus in such a manner that its impoverish-

ment in gaseous aldehyde, due to the absorption of this latter by the objects exposed, is constantly compensated by its enrichment in contact with the evaporation and separation surface which is of large development and constantly impregnated with formic aldehyde in solution or with its polymerides. 2nd. The same process applied to the fixing of hair and of feathers upon skins, in order to render these latter suitable for all purposes in tawing and furriery. 3rd. As a novel industrial product, the entire organisms or portions or organisms for collections, rendered impurensible by means of formic aldehyde or its polymerides, in a permanent manner so that they may be preserved in the open air. 4th. As a novel industrial product, the skins of which the hair or feathers are fixed, in a durable manner, by the action of formic aldehyde or of its polymerides, employed in the state of gas or vapour or in the form of an alcoholic or other aqueous solution. 5th. In combination with the process above described, the use of an hermetic apparatus comprising a chamber in which the constant saturation of the active atmosphere is obtained by means of a continuous circulation of this atmosphere upon a considerable separating evaporation surface presented to the formic aldehyde or its polymerides.

**No. 62,915. Propeller. (Propulscur.)**



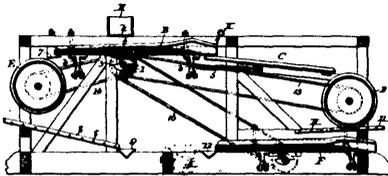
Willard Reed Green, Denver, Colorado, U.S.A., assignee of Augustus Howard, San Francisco, California, U.S.A., 23rd March, 1899; 6 years. (Filed 9th January, 1899.)

*Claim.*—1st. A propeller consisting of a central boss 4, severing as the axis of said propeller and having vanes of greater longitudinal dimension than the length of said boss, placed thereon and fixed thereto by the inner edges of the forward portion only of said longitudinal dimensions, and the rearward extension of which vanes is in lines practically parallel with the axis of said propeller. 2nd. A propeller consisting of a central boss or axis 4, and vanes of greater length than the radius of said propeller, placed thereon and fixed to said boss upon the inner edges of their longest dimension, and the rearward extension of which vanes is in lines practically parallel with the axis of said propeller. 3rd. A propeller consisting of a central boss or axis 4, and vanes of greater length than the radius of said propeller, placed thereon and fixed to said boss upon the inner edges of their longest dimension, the said vanes diminishing in width upon their outer edges in their rearward continuation, whereby a propeller is formed the greatest diameter of which is at its forward or entering end and of which the diameter diminishes towards its rear. 4th. A propeller consisting of a central boss or axis 4, and vanes of greater length than the radius of said propeller, placed thereon and fixed to said boss upon the inner edges of their longest dimension, the said vanes diminishing in width upon their outer edges in their rearward continuation, and the outer edges of said vanes forming a contour of diminishing radius of said propeller, whereby the water engaged is acted upon for a time inversely proportioned to the radius engaging said water. 5th. A propeller consisting of a central boss or axis 4, and vanes of greater length than the radius of said propeller, placed thereon and fixed to said boss upon the inner edges of their longest dimension, the said vanes diminishing in width upon their outer edges in their rearward continuation, and the outer edges of which vanes form a contour curve of diminishing radius of said propeller, whereby the area of the working surfaces of said propeller is in proportion to the radius and the impact thereof upon the water engaged. 6th. A propeller consisting of a central boss 4, severing as the axis of said propeller and having vanes 2 and 3, of greater longitudinal dimension in line parallel with the boss than the length of said boss, placed upon said boss and fixed thereto upon the inner edges of the forward portion only of said longitudinal dimension and the rearward continuations of which vanes beyond the rear of said boss line in planes substantially parallel with and clear of the axis of said propeller, whereby free-way is provided through the central portion of said propeller. 7th. A propeller having a central boss 4 constituting the axis of said propeller and vanes 2 and 3 fixed thereon, the greatest length of which propeller lies in planes practically parallel to its axis of rotation and whose greatest curvature is at the

forward or entering end of said vanes. 8th. A propeller having a boss 4 constituting the axis thereof and vanes 2 and 3 fixed to said boss throughout approximately the forward half of their inner edges only and the greatest length or extension of which vanes is rearward and of which the pitch or curvature diminishes as they extend rearward, and gradually merges into and continues in planes parallel the axis of rotation. 9th. A propeller having a boss 4 and vanes 2 and 3 fixed thereon and continuing beyond the rear of said boss in substantially parallel planes upon opposite sides of the rear of said boss and the inner edges 7, 8, of which continuations overlap and are not of equal distance from the axis of said propeller, whereby said rearward continuations of said vanes do not travel in the same path of revolution around the axis. 10th. A propeller consisting of a boss 4 and vanes 2 and 3 fixed thereon, said vanes being substantially longitudinal and of diminishing curvature as they progress rearward, and merging into parallel planes passing the rear of said boss on opposite sides thereof, and lying at different distances from the axis of said propeller, and whose inner edges 7, 8, partially superimpose or lap. 11th. A propeller consisting of a boss 4 and vanes 2 and three fixed thereto, which vanes 2 and 3 have flat continuations or sections 10 extending beyond the boss of said propeller and lying in substantially parallel planes on opposite sides of said boss and which continuations 10 diminish in width in their rearward progression by substantially similar contour lines of diminution, but not exactly equal in degree, whereby the inner edges 7 and 8 of said sections 10 may stand at different distances from a plane intersecting the axis of said propeller at right angles to said vanes and portions of said edges may lie upon opposite sides of said intersecting plane, and whereby said sections 10 will not travel in the same path around the axis of revolution of said propeller. 12th. A propeller consisting of the boss 4 and vanes 2 and 3 thereon, said vanes being divided into entering, middle, and rearward sections or planes 12, 11, and 10, of diminishing width upon their outer edges in their rearward progression, whereby said vanes act as continuous propulsion surfaces while performing different functions upon the water acted upon by different portions of their length and the least disturbance is produced upon said water and its greatest movement is rearward. 13th. The herein-described propeller, consisting of the boss 4 and the vanes 2 and 3 mounted thereon, the entering, middle, and rearward sections 12, 11 and 10 composing said vanes, the lines of curvature determining the same upon their outer and inner edges, all related and co-acting substantially as described. 14th. In a propeller, a vane whose greatest length is longitudinal in a line parallel to the axis of rotation of said propeller and longer than the boss of said propeller and is joined to said boss upon the inner edge of its forward portion only, and the rearward continuation of which vane extends beyond the rear of said boss, substantially in a plane with the circumference of said boss at the point of passing beyond the same. 15th. In a propeller, a vane whose greatest length is longitudinal in a line parallel to the axis of rotation of said propeller and longer than the boss of said propeller and is joined to said boss upon the inner edge of its forward portion only, and the line of juncture of which vane with said boss forms a varying curve around the circumference of said boss from the front to the rear thereof equal to approximately one-half a turn around said boss and the degree of which curve in its rearward progression is determined by the intended speed and working conditions of said propeller. 16th. In a propeller, a vane of which the greatest dimension is longitudinal in a line parallel with the axis of the propeller and of which the greatest width is toward the forward end and which is joined to the boss of said propeller along the inner edge of the forward portion of said vane and opposite to and at right angles with the line of its greatest width. 17th. In a propeller, a vane, the greatest dimension of which is longitudinal in a line parallel with the axis of said propeller, said vane having its greatest width toward the forward or entering end thereof and diminishing toward its rearward end, the reduction in the width of said vane being made in the outer edge thereof beyond the radius of the boss of said propeller. 18th. In a propeller, a vane of which the greatest dimension is its length longitudinal in a line parallel with the axis of said propeller, and the greatest portion of which length lies in a plane more or less parallel with the axis of rotation. 19th. In a propeller, a vane of greater longitudinal dimension than the boss of said propeller, joined to said boss of said propeller along the inner edge of its forward end and the rearward portion of the edge of which vane passes beyond the boss of said propeller in its rearward continuation at a point on the circumference of said boss approximately 180° from the point of juncture of the forward portion of said vane with said boss, following a line of varying curvature in its travel around the circumference of said boss, the degree of curvature of which line is greater toward the forward end of said propeller. 20th. In a propeller, a vane of which the greatest dimension is longitudinal in a line parallel with the axis of said propeller and substantially along the line of juncture of said vane with the boss of said propeller and the length of which propeller decreases as the radius thereof increases. 21st. In a propeller, a vane the greatest extent of which is longitudinal in a line parallel with the axis of said propeller, and the length of which vane is divided into entering, middle and rearward sections or planes of varying curvature, and of which the middle section 11 of the largest area consists of a plane lying approximately parallel with the axis of said propeller, and constitutes the main working or

propulsion surface of said propeller, the forward section 12 consists of a plane curved in the direction of rotation of said propeller and constitutes the entering edge or surface of said propeller, and the rearward section 10 consists of a flat plane lying substantially parallel to the axis of rotation and constitutes the smoothing and quieting section of said vane, the said sections merging each into the other and co-acting whereby the forward or entering section 12 cuts off and engages the water to be acted upon and projects the same rearward upon and into position to receive the impact of the middle section 11, which engages the same with a resultant pressure in a rearward direction, where it is laterally engaged by the section 10 and given an increased longitudinal speed by the longer extension of said section 10 in proportion to its diminishing radius. 22nd. In a propeller, a vane having greater length than the boss of said propeller, to which it is joined upon the inner edge of its forward portion and throughout the length of said boss, said vane having a greatest width equal to approximately one-half its length and diminishing toward the rear of said vane, the larger portion of the surface of said vane lying in a plane substantially parallel with the axis of said propeller, and constituting the main working or propulsion-surface of said vane, said vane bearing upon its forward portion an entering section curved in the direction of rotation adapted to enter and cut off the water upon which said propeller is advancing, whereby said middle or main working surface is enabled to engage and act upon the water through which said propeller is progressing. 23rd. In a propeller, a vane extending rearward beyond the rear of the boss of said propeller in a plane parallel with the circumference of said boss, the inner edge of which vane extends beyond a line at right angles with said vane and the axis of said propeller and which vane upon its said inner edge is concaved or cut away for a portion of said vane immediately adjoining the rear of said boss, whereby the free-way through said propeller and along the circumference of said boss is increased and the said vane at the place so concaved co-operates with an opposite vane in said propeller to counteract and prevent the formation of a vortex.

**No. 62,916. Separating Machine for Gold.**  
(*Séparateur pour l'or.*)



Benjamin William Sweet, Knoxville, Tennessee, and J. Platt Underwood, Chicago, Illinois, both in the U.S.A., 23rd March, 1899; 6 years. (Filed 17th October, 1898.)

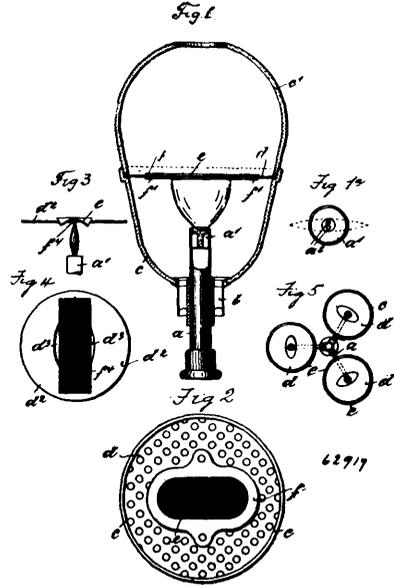
*Claim.*—1st. In a gold separating machine, the combination with the feed-trough, an inclined concentrating-table, and means for operating the same, of amalgamating surfaces at each end of said table for receiving the heavier and lighter grades respectively, substantially as described. 2nd. In a gold separating machine, the combination with a feed-trough, a concentrating-table, and means for operating the same, of an amalgamating-plate and an amalgamating-roll stationed in series at the head end of said table, and an amalgamating-roll stationed at the tail end of said table, substantially as described.

**No. 62,917. Gas Lamp, (Lampe à gaz.)**

Kurl Schultze, assignee of Konrad Trobach, both of Berlin, Prussia, 23rd March, 1899; 6 years. (Filed 4th October, 1898.)

*Claim.*—1st. In a gas incandescent lamp, the combination with a burner having bores of capillary width, of an incandescence body having the shape of a disc or band, a bipartite bulb enclosing said burner and incandescence body, and means for adjusting the latter with regard to the flame of the former, substantially as and for the purpose hereinbefore set forth. 2nd. In a gas incandescence lamp, the combination with a burner having bores of capillary width, of an incandescence body having the shape of a disc or band, bipartite frame holding the incandescence-body portion between its halves, a bipartite bulb enclosing said burner, incandescence-burner and frame, and means for vertically adjusting the latter, substantially as and for the purpose hereinbefore set forth. 3rd. In a gas incandescence lamp, the combination with a burner having bores of capillary width, of an incandescence body having the shape of a disc or band, a bipartite bulb enclosing said burner incandescence body and frame, and means for holding the latter between the two parts of said bulb, the bulb being arranged to allow of a vertical displacement along the burner tube, substantially as and for the purpose hereinbefore set forth. 4th. In a gas incandescence lamp, the combination with a burner having bores of capillary width, of an incandescence body having the shape of a disc or band, a bipartite frame serving as a holder for the incandescence body, a bipartite bulb enclosing said burner incandescence body and frame, a perforated or recessed mica plate serving as a holder for said frame and being

located between the two parts of said bulb, the latter being arranged to allow of a vertical displacement along the burner-bulb, substan-



tially as and for the purpose hereinbefore set forth. 5th. In a gas incandescence lamp, the combination with a burner having bores of capillary width and being secured to a burner tube of extraordinary length, of a bipartite bulb having an aperture at either of its ends, a fitting connected with the lower end of said bulb and adapted to be displaced along said burner tube, a perforated mica plate located between the two parts of the said bulb, a bipartite frame adapted to hold the incandescence body free of pressure, and said incandescence body, substantially as and for the purpose hereinbefore set forth.

**No. 62,918. Medicinal Compound. (Composé médicinal.)**

Arthur Gillespie Smith, Winchester, Ontario, Canada, 23rd March, 1899; 6 years. (Filed 19th November, 1898.)

*Claim.*—A compound of lard spermaceti and extract of witch hazel through which smoke has been blown, substantially in the proportions, in the manner and for the purpose set forth.

**No. 62,919. Metallic Alloy. (Alliage métallique.)**

Alexander Edwin Tucker and Theophilus V. Hughes, both of Birmingham, Warwick, England, 23rd March, 1899; 6 years. (Filed 29th October, 1897.)

*Claim.*—The method or process of alloying metals, consisting in adding to a hot liquid bath of the metal to be alloyed, a preparation or composition in the form of bricks or blocks composed and prepared as follows, namely one or more of the compounds of the alloying metal in a state of fine dry powder is mixed together with a suitable reducing agent also in a state of fine dry powder with a suitable binding material in the form of paste and the whole moulded by pressure into bricks or blocks which are then baked by external heat sufficiently to reduce the contained metallic compound or compounds to the metallic state, as in the proportions stated. 2nd. The preparation or composition in the form of a block for alloying metals composed and prepared as follows: namely, to one or more of the compounds of the alloying metal in a state of fine dry powder is added a suitable reducing agent also in a state of fine dry powder and the two are mixed together, there is then incorporated with this compound powder a suitable binding material in the form of paste till the whole is of firm consistency, it is then moulded by pressure into blocks which are baked by external heat sufficiently to reduce the contained metallic compound or compounds to the metallic state, as in the proportions stated.

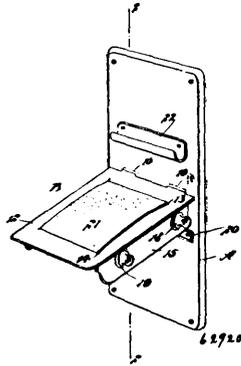
**No. 62,920. Telephone Desk and Register.**

(*Pupitre et registre de téléphone.*)

Horatio Frederick Forrest, Brandon, Manitoba, Canada, 23rd March, 1899; 6 years. (Filed 13th October, 1898.)

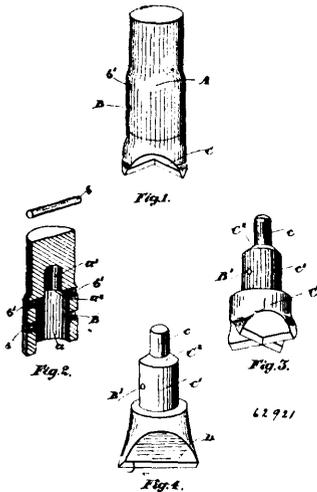
*Claim.*—1st. A desk, comprising a vertical back board having horizontally aligned openings and a projection below the said openings, a desk having openings in its top and provided with lugs engaging the openings of the back board, the lower rear portion of the desk being adapted to rest upon the said projection and against the back board, and rollers removably mounted in the desk, substantially as described. 2nd. A telephone desk, consisting of a vertical back board having horizontally aligned openings and a

transversely extending projection below the openings, a desk comprising a top plate and side plates, the top plate being provided



with openings and with curved lugs projecting from its rear end to enter the openings of the back board, the rear ends of the side boards resting upon the said projection and again against the back board, and rollers removably mounted in the side boards of the desk, substantially as described.

**No. 62,921. Drill. (Drille.)**



Henry Aylmer, Richmond, Quebec, Canada, 25th March, 1899; 6 years. (Filed 25th January, 1899.)

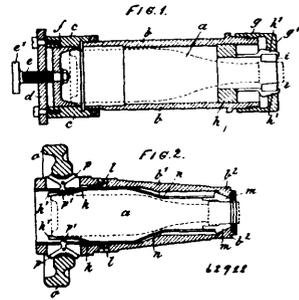
*Claim.*—1st. In a drill, the combination with the stock having a central orifice provided with a reduced upper end having an inclined shoulder between the major portion of the orifice and the reduced upper end, of a bit having the stem provided with a reduced upper end and a tapered portion extending between the major portion of the stem and the reduced upper end, a hole in the bit, corresponding holes diametrically opposite each other in the stock, and a pin extending through the holes in the stock and bit, as specified. 2nd. In a drill, the combination with the stock having a central orifice provided with a reduced upper end having an inclined shoulder between the major portion of the orifice and the reduced upper end, of a bit having the stem provided with a reduced upper end and a tapered portion extending between the major portion of the stem and the reduced upper end, a hole in the bit, corresponding holes diametrically opposite each other in the stock, a pin extending through the holes in the stock, and a hole in the stock opposite the tapered portion of the stem of the bit and designed for the insertion of an instrument, as and for the purpose specified.

**No. 62,922. Clamping Method. (Méthode d'emboiture.)**

Josef Fliegel, No. 8 Sprottauër Chaussée, Mallnitz, Silesia, 25th March, 1899; 6 years. (Filed 9th December, 1898.)

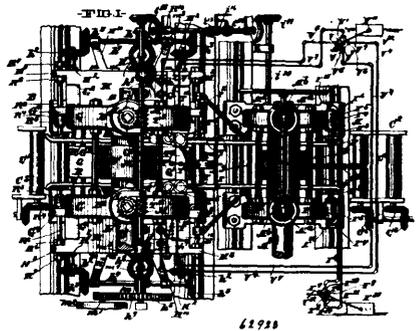
*Claim.*—1st. Improved process of clamping hollow bodies of glass ceramic products or the like to be treated in grinding machinery or the like characterized by clamping these hollow bodies  $a^1$  at the rear and front end with adjustable pressure by the action of conical surfaces in such a manner that after the adjustment a change in the position cannot take place, substantially as described and shown in the drawing. 2nd. A process for clamping and centering a hollow body at the rear end carried out by means of a ring  $f$  with conical surface  $g$ ,  $g^1$  acting against wedge-shaped clutches  $h^1$  of a ring  $b$ ,

substantially as described and shown in the drawing. 3rd. A process for centering and clamping the hollow body carried out by



means of spring arms  $k$ ,  $k^1$ , and a sleeve  $n$  operated by the screw-threaded ring  $o$  and the levers  $p$ ,  $p^1$ , the spring wedge-shaped jaws  $m$  of the sleeve  $n$  opening and closing on the longitudinal movement of the latter by their bearing against the rim  $b^2$  of the outer sleeve, substantially as described and shown in the drawing. 4th. A process for centering and clamping a hollow body carried out by means of a clamping body  $b^3$  with fixed conical surface  $q$  and clutch levers  $r$  movably pivoted on pins and operated by a ring  $v$ , substantially as described and shown in the drawing.

**No. 62,923. Apparatus for Rolling Metallic Articles. (Appareil à laminer des articles métalliques.)**



The American Universal Mill Company, New York City, New York, assignee of Henry Grey, Duluth, Minnesota, U.S.A., 25th March, 1899; 6 years. (Filed 25th August, 1898.)

*Claim.*—1st. In rolling apparatus of the character indicated, the combination of the positively rotated top and bottom roll, and one of said rolls being shiftable toward and from the other roll, the two positively rotated upright side rolls arranged at opposite ends, respectively, of the top and bottom rolls and shiftable toward and from each other, and means whereby the said adjustable rolls are shiftable simultaneously and whereby the space between the side rolls is decreased or increased more rapidly than the space between the top and bottom rolls, substantially as and for the purpose set forth. 2nd. In rolling apparatus of the character indicated, the combination of the positively rotated top and bottom web-reducing rolls, the positively rotated flange reducing side rolls, mechanism for shifting one of the web reducing rolls toward the other web-reducing roll, other mechanism for shifting the side rolls toward the web-reducing rolls, and means whereby the last-mentioned shifting-mechanism is caused to shift more rapidly than the first-mentioned shifting mechanism, substantially as and for the purpose set forth. 3rd. In a rolling apparatus of the character indicated, the combination of the positively rotated top and bottom rolls  $B^1$ ,  $B^2$ , the two positively rotated vertical or upright side rolls arranged at opposite ends, respectively, of the top and bottom rolls, means for vertically shifting the top rolls toward or from each other according as the top roll is lowered or elevated, substantially as and for the purpose set forth. 4th. In rolling apparatus of the character indicated, the combination of positively rotated top and bottom rolls, the positively rotated side rolls, mechanism for shifting the top roll toward the bottom roll, other mechanism for shifting the side rolls toward the top and bottom rolls, and means whereby the last-mentioned shifting mechanism is caused to shift more rapidly than the first-mentioned shifting mechanism, substantially as and for the purpose set forth. 5th. In rolling apparatus of the character indicated, the combination of the positively rotated vertically shiftable top roll  $B^1$ , the positively rotated bottom roll  $B^2$ , the two positively rotated vertical or upright side rolls arranged at opposite ends respectively, of the top and bottom rolls, and shiftable toward and from each other, and mechanism or apparatus whereby all of said shiftable rolls can be moved inwardly or outwardly simultaneously and whereby the

side rolls when the said adjustable rolls are shifted, are caused to travel about twenty-five per cent more rapidly than the top roll, substantially as and for the purpose set forth. 6th. In rolling apparatus of the character indicated, the combination of the positively rotated vertically shiftable roll B<sup>1</sup>, the positively rotated bottom roll B<sup>2</sup>, the positively rotated side rolls arranged at opposite ends, respectively, of the top and bottom rolls and shiftable toward and from each other, means acting to elevate the top roll, screws for lowering said top roll, stationary members having correspondingly threaded holes engaged by said screws, slides carrying the side rolls, screws connected with and arranged to shift said slides and having threads that have a greater pitch than the threads of the top roll adjusting screws, stationary nuts or members having correspondingly threaded holes engaged by said slide-shifting screws, and mechanism for rotating all of the said screws at the same speed, or approximately so, and in the direction required to simultaneously move the said adjustable rolls inwardly or outwardly, substantially as and for the purpose set forth. 7th. In rolling apparatus of the character indicated, the combination of a positively rotated and vertically-shiftable horizontal top roll, a positively rotated horizontal bottom roll, the two positively rotated upright side rolls arranged at opposite ends, respectively, of the top and bottom rolls and shiftable toward and from each other, screws instrumental in shifting the top roll, screws instrumental in shifting the side rolls and having threads that have considerably more pitch than the threads of the top roll adjusting screws, and mechanism for simultaneously rotating all of said screws at the same speed or approximately so, substantially as and for the purpose set forth. 8th. In rolling apparatus of the character indicated, the combination with the two flange-edge-rolling rolls arranged one above the other, of a gauge-forming collar formed upon one of said rolls between the rolling portions of said roll and arranged to engage the web of the work when the latter is passed between said rolls, substantially as and for the purpose set forth. 9th. In rolling apparatus of the character indicated, the combination with a roll A<sup>1</sup> arranged to operate upon the upwardly presented edges of the heads or flanges of the work, of an adjustable member arranged to afford bearing for the work's web as the work passes below the said roll, and mechanism for elevating the said member, substantially as and for the purpose set forth. 10th. In rolling apparatus of the character indicated, the combination with the upper and lower rolls arranged to operate upon the edges of the heads or flanges of the work, of a vertically adjustable member arranged to afford bearing for the work's web between the said rolls, and mechanism for vertically shifting said member, substantially as and for the purpose set forth. 2nd. In rolling apparatus of the character indicated, the combination with two rolls arranged one above the other and arranged furthermore to operate upon the edges of the work's heads or flanges, of a vertically-shiftable collar or cylinder upon one of said rolls between the rolling portions of the said roll, and mechanism for shifting the said cylinder or collar vertically, substantially as and for the purpose set forth. 12th. In rolling apparatus of the character indicated, the combination with the vertically adjustable and positively rotated upper horizontal roll A<sup>1</sup>, and the positively rotated lower horizontal roll A, of a vertically shiftable freely turning collar mounted upon the central portion of the lower roll, and mechanism for shifting said collar, substantially as and for the purpose set forth. 13th. In rolling apparatus of the character indicated, the combination with the upper and lower rolls arranged to operate upon the edges of the heads or flanges of the work, of a vertically adjustable rotatable collar mounted upon the central portion of the lower roll, a saddle below the collar, anti-friction rollers interposed between the saddle and collar, a screw supporting the saddle, a stationary nut engaging the screw, and mechanism for turning the screw, substantially as and for the purpose set forth. 14th. In rolling apparatus of the character indicated, the combination of a positively rotated vertically shiftable horizontal roll arranged to operate upon the web and flanges' inner sides, horizontal rolls arranged to operate upon the edges of the flanges, and a vertically adjustable member arranged to be engaged by the last-mentioned rolls, of mechanism or apparatus whereby the said last-mentioned adjustable member and the said adjustable roll can be moved simultaneously and in opposite directions, respectively, substantially as and for the purpose set forth. 15th. In rolling apparatus of the character indicated, the combination with the top and bottom web-reducing rolls, and one of said rolls being adjustable toward and from the other roll, and two rolls arranged at suitable distance from the said web-reducing rolls and in position to operate upon the edges of the work's heads or flanges, and a collar or cylinder upon one of the flange-edge rolling rolls and adjustable toward and from the other flange-edge rolling roll, of mechanism whereby the said cylinder or collar is shiftable toward and from the opposing roll simultaneously with the shifting of the adjustable web-reducing roll toward and from the companion web-reducing roll, and means for operatively disconnecting the said cylinder or collar from that portion of the said mechanism that is employed in the shifting of the adjustable web-reducing roll, substantially as set forth. 16th. In a rolling apparatus of the character indicated, the combination of the top and bottom web-reducing rolls, and one of said rolls being adjustable toward and from the other roll, mechanism for shifting the said adjustable roll toward the companion roll, two other rolls arranged to operate upon the edges of the work's heads or flanges and arranged one above the other, the vertically-shiftable collar or cylinder upon one of said flange-edge-rolling rolls between

the rolling portions of the said roll, mechanism for shifting the said cylinder or collar toward the opposing roll, a shaft operatively connected with both of said mechanisms and comprising two sections, and a clutch for establishing and interrupting operative connection between the said shaft sections, substantially as and for the purpose set forth. 17th. In rolling apparatus of the character indicated, the combination of two web-reducing rolls arranged one above the other in position to operate upon opposite sides respectively of the web and upon the inner sides of the flanges, and one of said rolls being adjustable toward and from the companion roll, two positively-rotated upright side rolls arranged at opposite ends respectively of the first-mentioned rolls and shiftable toward and from each other, two other rolls arranged one above the other in position to operate upon the edges of the work's flanges, a vertically-adjustable freely-turning collar or cylinder upon one of the flange-edge-rolling rolls between the rolling portions of said roll, and means or mechanism whereby all of the said adjustable members are simultaneously shiftable in the direction and to the extent required, substantially as set forth. 18th. In rolling apparatus of the character indicated, the combination with a roll system B having positively rotated horizontal rolls B<sup>1</sup> B<sup>2</sup> arranged one above the other in position to operate upon opposite sides respectively of the web and upon the inner sides of the flanges, and having the top roll adjustable vertically, two positively rotated vertical or upright side rolls arranged at opposite ends respectively of the first-mentioned rolls and adjustable toward and from each other, another roll A<sup>1</sup> arranged to operate upon the upwardly-presented edges of the work, and a vertically-adjustable, freely-turning collar or cylinder arranged to afford bearing for the work's web below the last-mentioned roll, of mechanism for shifting the top web-reducing roll toward the bottom web-reducing rolls, mechanism for shifting the side rolls toward each other simultaneously with and more rapidly than the lowering of the adjustable web-reducing roll, and mechanism for elevating the aforesaid bearing forming collar or cylinder simultaneously with and lower than the lowering of the adjustable web-reducing roll, substantially as and for the purpose set forth. 19th. In rolling apparatus of the character indicated, the combination with a roll system B having two positively rotated horizontal rolls B<sup>1</sup> B<sup>2</sup> arranged one above the other in position to operate upon opposite sides, respectively, of the web and upon the inner sides of the flanges and having the top roll adjustable vertically, and two positively rotated vertical, or upright side rolls arranged at opposite ends, respectively, of the first-mentioned rolls and adjustable toward and from each other, of another roll system A having two suitably driven horizontal rolls A<sup>1</sup> and A arranged one above the other in position to operate upon the edges of the flanges, and a vertically adjustable collar mounted upon the central portion of the lower flange-edge-rolling roll, and mechanism whereby said collar and the top roll of the first-mentioned roll system are shifted simultaneously in opposite directions, respectively, and the collar is shifted about one-half as rapidly as the said top roll, substantially as and for the purpose set forth. 20th. In rolling apparatus of the character indicated, the combination with the upper vertically shiftable web-reducing roll and the screws instrumental in shifting said roll, the rolls arranged to operate upon the edges of the flanges, and vertically adjustable member instrumental in gauging or controlling the width of flanges during the operation of said last-mentioned rolls, and the screw instrumental in shifting the said gauge and having threads that have less pitch than the thread of the aforesaid roll-adjusting screws, and mechanism whereby the said screws are rotated simultaneously at the same speed, or approximately so, and the arrangement of parts being such that the aforesaid gauge and the aforesaid adjustable roll are shifted in opposite directions, respectively, during the operation of the said screws, substantially as and for the purpose set forth. 21st. In a mill for rolling work of the character indicated, two rolls arranged to operate upon opposite sides, respectively, of the web and upon the inner sides of the flanges or heads and one of said rolls being adjustable toward and from the companion roll, two rolls arranged to operate upon the outer side of the different heads or flanges, respectively, and adjustable toward and from each other, a roll or rolls arranged to operate upon the edges of the flanges or heads, an adjustable member for gauging or controlling the width of heads or flanges during the operation of the flange-edge-rolling roll or rolls, and mechanism whereby all of the said adjustable rolls and the said gauge can be shifted simultaneously in the direction and to the extent required, substantially as shown, for the purpose specified. 22nd. In a rolling-mill of the character indicated, the combination with the two suitably driven horizontal and parallel rolls B<sup>1</sup> B<sup>2</sup>, arranged one above the other in the same vertical plane, and the upper roll being adjustable vertically, and two suitably driven vertical or upright side rolls D D<sup>1</sup> arranged at opposite ends, respectively, of the horizontal rolls, of a vertically-adjustable guide T, at the upper side of the work's path and in suitable proximity to the said upper roll, and means whereby the said guide and upper roll can be shifted up or down simultaneously, or practically so, substantially as set forth. 23rd. In a rolling-mill of the character indicated the combination with a vertically-adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of means whereby the said guide and the said roll are adjusted simultaneously, or practically so, an electrically operated device for controlling the operation of said adjusting means, substantially as and for the purpose set forth. 24th. In a

rolling mill of the character indicated, the combination with an adjustable roll arranged to operate upon the work, and an adjustable guide for the work, of means for shifting the said roll, an electrically operated device for controlling the operation of said means, means for correspondingly shifting the guide, and an electrically operated device for controlling the operation of said guide-shifting means, and both of said electrically operated devices being arranged in the same electric circuit so that they shall simultaneously, or practically simultaneously, commence or cease to operate according as the circuit is established or interrupted, substantially as and for the purpose set forth. 25th. In a rolling mill of the character indicated, the combination with a vertically adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of a piston T4 arranged to operate within a closed upright chamber above the guide and instrumental in supporting the guide, a fluid pressure line connected with the lower end of said chamber, another upright chamber arranged in suitable proximity to the aforesaid roll and closed at its lower end, a piston arranged to operate within said last-mentioned chamber and connected and movable with the said roll, a passage-way connecting the lower end of said last-mentioned chamber with and above the piston in the first-mentioned chamber, and the said passage-way and the connected portions of the chambers being supplied with water or other suitable fluid, and a valve for establishing and interrupting continuity in the said passage-way, substantially as and for the purpose set forth. 26th. In a rolling mill of the character indicated, the combination with a vertically adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of a piston T4 arranged to operate within a closed upright chamber above the guide and instrumental in supporting the guide, a fluid pressure line connected with the lower end of said chamber, another upright chamber arranged in suitable proximity to the aforesaid roll and closed at its lower end, a piston arranged to operate within said last-mentioned chamber and connected and movable with the said roll, a passage-way connecting the lower end of said last-mentioned chamber and above the piston in the first-mentioned chamber, and the said passage-way and the connected portions of the chambers being supplied with water or other suitable fluid, and an electrically operated valve arranged in the line of and controlling communication through the said passage-way, substantially as set forth. 27th. In a rolling mill of the character indicated, the combination with a vertically adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of two pairs of upright stationary chambered cylinders above the guide and the said pairs being arranged a suitable distance apart, one cylinder of each pair of cylinders being closed at the bottom and having a port in its lower portion and having a piston arranged to operate within and above the said port and said piston being operatively connected with a member movable with the said roll, and the other cylinder of each pair of cylinders having two ports arranged a suitable distance apart, and being closed top and bottom, and having a piston that is arranged to operate between the said ports and operatively connected with the guide and having its lower port connected with a pressure-line, a connection between the last-mentioned cylinder's upper port and the other cylinder's port, said connection and the adjacent portions of the cylinder's being supplied with water or other suitable fluid, and a valve arranged in the line of said connection, substantially as and for the purpose set forth. 28th. In a rolling-mill of the character indicated, the combination with a vertically adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of two pairs of upright stationary chambered cylinders above the guide and the said pairs being arranged a suitable distance apart, one cylinder T11 of each pair of cylinders being closed at the bottom and having a port in its lower portion and a piston arranged to operate within the cylinder and above the said port and connected and movable with the aforesaid roll, the other cylinder T5 of each pair of cylinders being closed top and bottom and having two ports arranged a suitable distance apart and a piston arranged to operate between the said ports and operatively connected with the guide, a pressure line connected with the lower port of said last-mentioned cylinder, a pipe connected between the upper port of said last-mentioned cylinder and the port of the other cylinder, a single valve and valve casing arranged and constructed to simultaneously establish or interrupt communication between the cylinders of both pairs of cylinders, and water or other suitable fluid in said pipe connections and connected portions of the cylinders, substantially as and for the purpose set forth. 29th. In a rolling mill of the character indicated, the combination with a vertically adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of two pairs of upright stationary chambered cylinders above the guide and the said pairs being arranged a suitable distance apart, one cylinder T11 of each pair of cylinders being closed at the bottom and having a port in its lower portion and a piston arranged to operate within the cylinder and above the said port and connected and movable with the aforesaid roll, the other cylinder T5 of each pair of cylinders being closed top and bottom and having two ports arranged a suitable distance apart and a piston arranged to operate between the said ports and operatively connected with the guide, a pressure line connected with the lower port of said last-mentioned cylinder, a pipe connection

between the upper port of said last-mentioned cylinder and the port of the other cylinder, a valve arranged to interrupt or establish communication through the said pipe connection, water or other suitable fluid in the said pipe connection and connected portions of the cylinders, an electrically operated device arranged to shift said valve in one direction, and means acting to shift the valve in the opposite direction, substantially as and for the purpose set forth. 30th. In a rolling-mill of the character indicated, the combination with a vertically-adjustable roll arranged to operate upon the work from above, screws instrumental in lowering the said roll, and a guide arranged at the upper side of the work's path, of two pairs of upright stationary chambered cylinders above the guide and the said pairs being arranged a suitable distance apart, one cylinder T11 of each pair of cylinders being closed at the bottom and having a port in the lower portion and a piston that is arranged to operate within the cylinder and above the said port and connected and movable with the aforesaid roll, the other cylinder T5 of each pair of cylinders being closed top and bottom and having two ports arranged a suitable distance apart and a piston arranged to operate between the said ports and operatively connected with the guide, a pressure line connected with the lower port of said last-mentioned cylinder, a pipe connection between the upper port of said last-mentioned cylinder and the port of the other cylinder, a valve arranged to interrupt and establish communication through the said pipe connection and connected portions of the cylinders, a solenoid arranged in series with the aforesaid motor, an operative connection between the valve and core or cored of the solenoid and arranged and actuated to shift the valve in the one direction when an electric current traverses the solenoid, and means acting to shift the valve in the opposite direction, substantially as and for the purpose set forth. 31st. In a rolling mill of the character indicated, the combination of a suitably operated vertically movable slide arranged a suitable distance above the work's path, a lever fulcrumed to a member supported from said slide, a guide arranged at the upper side of the work's path, and suspended from one arm of said lever, and a counterbalance attached to the lever's other arm, substantially as set forth. 32nd. In a rolling mill of the character indicated, the combination of a suitably operating vertically movable slide arranged a suitable distance above the work's path, a guide arranged at the upper side of the work's path and suspended at one side of and supported from, and abutting the under side of, the aforesaid slide and means counterbalancing the said guide and the means instrumental in the suspension of the guide, substantially as set forth. 33rd. In a rolling mill of the character indicated, the combination with a vertically-adjustable roll arranged to operate upon the work from above, and a guide arranged at the upper side of the work's path, of a vertically movable slide or member arranged above the guide means for shifting the said slide simultaneously with the shifting of the aforesaid roll, and a connection between the guide and the said slide, substantially as set forth. 34th. In a rolling mill of the character indicated, the combination with two guides arranged at opposite sides respectively of the work's path of a valve pressure-line, cylinders, pistons, and connections between the pressure-line and the pistons and between the pistons and guides, whereby the guides are moved toward each other upon establishing communication between the pressure-line and the cylinders, substantially as set forth. 23rd. In a rolling mill of the character indicated, the combination, with two guides arranged at opposite sides, respectively of the work's path, of a pressure-line, cylinders pistons and connections between the pistons and guides and between the pistons and the pressure-line whereby the guides are moved toward each other upon establishing communication between the pressure-line and the cylinders, and an electrically operated valve for controlling the supply of pressure to the cylinders, substantially as and for the purpose set forth. 36th. In a rolling mill of the character indicated, the combination with two guides arranged at opposite sides, respectively, of the work's path, cylinders arranged endwise to the outer sides of the guides, pistons arranged to operate within the said cylinders and having extensions or members engaging the outer sides, means for supplying fluid under pressure to said cylinders' outer ends, and mechanism for releasing the pressure in the cylinders, substantially as set forth. 37th. In a rolling mill of the character indicated, the combination with two side-rolls D and D', arranged at opposite sides, respectively, of the work's path, in position to operate upon the outer sides of the work's flanges, and two slides arranged at opposite sides, respectively, of said path, and one of the said slides carrying one of said rolls and the other slide bearing the other roll, of laterally movable and suitably supported guides arranged at each side of the work's path and extending beyond the slides alongside the said path, devices at suitable points for exerting a pressure upon the outer sides of the said guides, and means for operating said pressure exerting devices, substantially as and for the purpose set forth. 38th. In a rolling mill of the character indicated, the combination with a roll-system arranged to operate upon the web and flanges' sides and comprising two rolls arranged to operate upon the work from opposite sides, respectively, of the work's path, two suitably supported slides arranged at opposite sides, respectively, of the said path, and movable toward and from each other, one of the slides carrying one of the aforesaid rolls and the other slide bearing the other roll, another roll system located a suitable distance from the first-mentioned roll system and comprising a roll or rolls arranged to operate upon the flanges' edges, of two suitably supported guides arranged between the two roll systems and at opposite sides, respec-

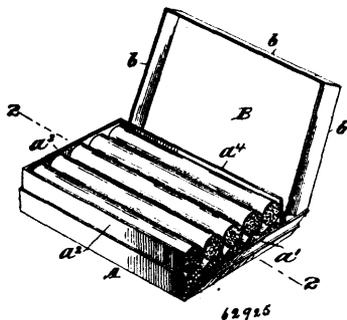
tively of the work's path and extending beyond the flange-edge rolling roll or rolls, and suitably operated means for simultaneously exerting a pressure upon the outer side of said guides at a point beyond the last-mentioned roll or rolls, substantially as set forth. 39th. In a rolling mill of the character indicated, two laterally adjustable guides arranged at opposite sides, respectively, of the work's path at the work-finishing end of the mill, of suitably operated means for exerting a pressure upon the outer sides of said guides at a point beyond the rolls during the finishing pass of the work, substantially as and for the purpose set forth. 40th. In a rolling mill of the character indicated, two laterally adjustable guides arranged at opposite sides respectively of the work's path at the work-finishing end of the mill, of a suitable valved pressure-line, cylinders, pistons, and connections between the pistons and guides and between the cylinders and pressure-line whereby a pressure upon the outer sides of said guides simultaneously can be exerted to restrict the passage-way between the said guides at the points at which pressure is applied, substantially as and for the purpose set forth. 41st. In a rolling mill of the character indicated, the combination with two laterally-movable guides R, R arranged at opposite sides respectively of the work's path at the work-finishing end of the mill, of a closed chambered cylinder arranged at the outer side of each guide, a piston within the said cylinder, a connection between the said piston and the adjacent guide, and means for supplying fluid under pressure simultaneously to both cylinders, substantially as and for the purpose set forth. 42nd. In a rolling mill of the character indicated, the combination with two laterally-movable guides arranged at opposite sides respectively of the work's path, and means for moving said guides laterally toward and from each other, of two suitably supported and suitably operated pressure-exerting bars arranged in line at the outer sides of the guides in position to exert a pressure inwardly upon the guides, said bars being movable with the guides and being movable inwardly independently of the aforesaid guide-shifting means, substantially as and for the purpose set forth. 43rd. In a rolling-mill of the character indicated, the combination with two rolls arranged to operate upon the work from opposite sides respectively of the work's path, and two suitably supported slides arranged at opposite sides respectively of the said path and movable toward and from each other, one of the slides carrying one of said rolls and the other slide bearing the other roll, of two suitably supported guides arranged at opposite sides respectively of the work's path, and two pressure-exerting bars arranged to press the guides toward each other, said bars being movable with the different slides respectively, and movably inwardly independently of the slides, substantially as and for the purpose set forth. 44th. In a rolling mill of the character indicated, the combination with two rolls arranged to operate upon the work from opposite sides respectively of the work's path, and two suitably supported slides arranged at opposite sides respectively of the said path and adjustable apart, one of the slides carrying one of the aforesaid rolls and the other slide bearing the other roll, and each of the slides having a lug H3, of two guides arranged at opposite sides respectively of the work's path, a suitably operated pressure-exerting bar at the outer side of each guide and arranged to press inwardly upon the said guides, said bar extending loosely through the lug of the adjacent slide and provided with two stop-forming members arranged at opposite ends respectively of the said lug and further apart than the said opposite ends of the lug, substantially as and for the purpose set forth.

**No. 62,924. Medicinal Compound.** (*Composé médical.*)

Azarie Mireault, Ste. Marie Salomé, Québec, Canada, 25 mar.<sup>h</sup> 1899; 6 ans. (Déposé 27 décembre 1898.)

*Resumé.*—Une composition de matières telle que le sirop ordinaire la morphine et du chloroforme dans les proportions et pour les fins indiquées.

**No. 62,925. Cigarette Box.** (*Boîte à cigarette.*)



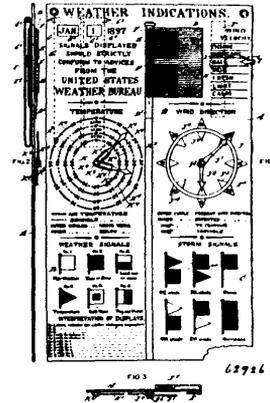
The American Tobacco Company, assignee of Daniel Jay Campbell, all of New York City, New York, U.S.A., 25th March, 1899; 6 years. (Filed 3rd November, 1898.)

*Claim.*—1st. A cigarette box having one side of the body portion of the box hinged at the bottom of the box to swing outward and

downward, and having a hinged cover hinged on a line extending at right angles to the hinge line of the hinged side and having a flange extending outside the hinged side when the box is closed to lock the hinged side in position. 2nd. A cigarette box having one side of the body portion of the box hinged at the bottom of the box to swing outward and downward and of such length transversely to said hinged side as to receive the cigarettes packed endwise to said hinged side, and having a hinged cover hinged on a line extending at right angles to the hinge line of the hinged side and having a flange extending outside the hinged side when the box is closed to lock the hinged side in position.

**No. 62,926. Weather Signal Indicator.**

(*Signal indicateur du temps.*)



Judson Gustin Wall, New York City, New York, U.S.A., 27th March, 1899; 6 years. (Filed 28th January, 1899.)

*Claim.*—1st. A weather-signal indicator, comprising a board provided with explanatory means for reading weather signals, a series of weather and storm-signal flags provided with fastening devices, a piece secured to the face of said board and on which the flags are adapted to be displayed, the said piece being provided with an extension forming a fastening strip to which the said flags are adapted to be detachably secured, substantially as shown and described. 2nd. A weather signal indicator, comprising a board provided with explanatory means for reading weather signals, a series of weather and storm-signal flags provided with fastening devices, a display-piece secured to the face of the said board, and on which the said flags are displayed, the said piece being provided with an extension forming a fastening strip to which the said flags are adapted to be detachably secured, and a graduation and adjustable pointer arranged on the said board adjacent to the said display-piece, for reading the velocity of the wind, substantially as set forth. 3rd. A weather-signal indicator, comprising a board provided with explanatory means for reading weather signals, a series of weather and storm-signal flags adapted to be removably secured to the said board in the order of advice to permit of reading the prevalent weather indications according to the said explanatory means, and an indicator held on the said board and consisting of a series of graduations spaced apart and arranged in the form of a circle and representing the points of the compass and indicating present wind direction, a similar series of graduations arranged within the first series and indicating expected wind direction, and two pointers mounted to turn on a central pivot and adapted to indicate on the said graduations the present and expected wind directions, substantially as shown and described.

**No. 62,927. Electrical Signal.** (*Signal électrique.*)

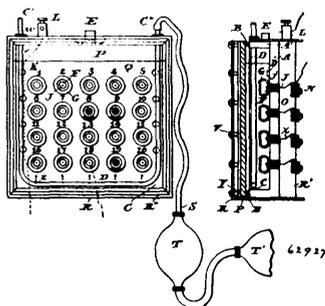
Felix Benedict Herzog, New York City, New York, 27th March, 1899; 6 years. (Filed 4th January, 1899.)

*Claim.*—1st. An annunciator, comprising a receptacle containing a transparent electrolyte and a series of electrodes located therein, visible therethrough and corresponding to a series of sub-stations, separate lines connecting these electrodes to the various sub-stations, a circuit controlling device located at each sub-station and adapted to control the flow of current through its own line and electrode, the said electrode and electrolyte being relatively so constituted that variations in the current passing through any one or several of the electrodes will produce in the annunciator, electro-chemical reactions of a character adapted to vary the appearance of each of these electrodes and thereby locate the operated sub-stations, substantially as described. 2nd. An annunciator, comprising the receptacle containing a transparent electrolyte and a series of electrodes located therein, visible therethrough, and corresponding to a series of sub-stations, separate lines connecting these electrodes to the various sub-stations, a circuit controlling device located at each sub-station and adapted to control the flow of current through its own line and electrode, the said electrodes and electrolyte being relatively so constituted that variations in the

current passing through one or several of the electrodes will produce, in the annunciator, electro-chemical reactions of a character

Fig. 1.

Fig. 2

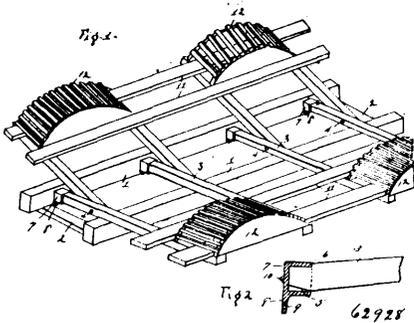


adapted to vary the appearance of each of those electrodes and thereby locate the operated sub-stations, together with a device, located at the annunciator station and adapted, when operated, to restore the original appearance of those electrodes, substantially as described. 3rd An annunciator, comprising a receptacle containing a transparent electrolyte and a series of electrodes located therein and visible therethrough, means adapted to control the flow of current through the several electrodes, the said electrodes and electrolyte being relatively so constituted that variations in the current passed through any electrodes will produce, in the annunciator, electro-chemical reactions adapted to change the appearance of those electrodes, together with means for agitating the electrolyte and thereby restoring the normal appearance of the electrodes, substantially as described. 4th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through one or more electrodes, materials entering to the relative composition of electrodes and electrolyte adapted when a current is passed through them to produce and locate at the corresponding electrode a substance acting to change the appearance thereof, together with means, controlled at the annunciator and adapted to remove the said substance at will, and restore the normal appearance, substantially as described. 5th. The combination in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through any electrode, and a solution comprising materials which co-operate with the electrode to produce and locate at the electrode upon the passage of a current through it, a substance which changes the appearance of the electrode, together with means for agitating the solution without moving the annunciator, and thereby hastening the dissipation of said visible substance, substantially as described. 6th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through an electrode, and a solution comprising materials which co-operate with the electrode to produce and locate at the electrode upon the passage of a current through it, a substance which changes the appearance of the electrode, together with means for agitating the solution through air-pressure and thereby hastening the restoration of the normal conditions substantially as described. 7th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through any electrode, and a solution comprising materials which co-operate with the electrode to produce and locate at the electrode upon the passage of a current through it, a substance which changes the appearance of the electrode, together with means for agitating the solution by the passage of air through a duct leading from without the annunciator to a point within the solution, substantially as described. 8th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through one or more electrodes, materials entering into the relative composition of electrodes and electrolyte adapted when a current is passed through them to produce and locate at the corresponding electrode a substance acting to change the appearance thereof, together with means added for the purpose of retarding the time of dissipation which is characteristic of the relative composition of electrodes and electrolyte selected to produce said coloring substance, substantially as described. 9th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through one or more electrodes, materials entering into the relative composition of electrodes and electrolyte adapted when a current is passed through them to produce and locate at the corresponding electrode a substance acting to change the appearance thereof, together with an additional substance in solution to the electrolyte and adapted to increase its viscosity and thereby to retard the time of dissipation characteristic of the coloring substance and co-operating elements, substantially as

described. 10th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through one or more electrodes, materials entering into the relative composition of electrodes and electrolyte and adapted when a current is passed through them to produce and locate at the corresponding electrode a substance acting to change the appearance thereof, together with a mechanical obstruction placed between adjacent electrodes and adapted to limit the free circulation of the electrolytic solution, substantially as described. 11th. The combination, in an annunciator, of a receptacle containing a transparent electrolyte, a series of electrodes located therein and visible therethrough, means for sending a current through one or more electrodes, materials entering into the relative composition of electrodes and electrolyte adapted when a current is passed through them to produce and locate at the corresponding electrode a substance acting to change the appearance thereof, said substance being deposited upon the electrode and having a tendency to leave it, together with a mechanical projection or irregularity in the annunciator placed where it will catch the deposits as they leave the several electrodes and detain them in recognizable proximity to their respective electrodes, substantially as described. 12th. An annunciator, comprising a receptacle containing a transparent electrolyte and a series of electrodes located therein, visible therethrough and corresponding to a series of sub-stations, separate lines connecting these electrodes to the various sub-stations and by way of these to one pole of a generator, a circuit-closer located at each sub-station and operating to send a current of one polarity through its own line and electrode, the said electrodes and electrolyte being relatively so constituted that current passed through any electrode will produce, in the annunciator, chemical reactions of a character adapted to vary the appearance of that electrode, and a common return from the battery connected with an additional electrode, whereby the operation of several of the circuit closers at the same time will cause a current of one polarity to pass through the several electrodes and thence through the common electrolyte to the common return, substantially as described. 13th. In combination with the containing vessel and fluid electrolyte, the visible electrodes surrounded by the open bulbs immersed therein, substantially as described. 14th. The combination of a base plate supporting a number of electrodes, a transparent front plate, an elastic packing as a gasket between said front plate and a suitable backing, means for fastening the plate and backing with the gasket between them so as to make a water-tight cell adapted to contain an electrolyte and means for removing the front plate whereby access is given to the electrodes for the purposes of repair or inspection without removing the wires connecting the same to external circuits, substantially as described. 15th. In combination with an annunciator, comprising a receptacle adapted to contain a fluid electrolyte and a series of electrodes located therein and visible therethrough, an electrolyte comprising a solution of iodid of potassium, and a fluid of greater density than water added to the dissolving fluid so as to retard the dissipation of the iodid liberated during the operation of the annunciator, substantially as described. 16th. In combination with an annunciator, comprising a receptacle adapted to contain a fluid electrolyte and a series of electrodes located therein and visible therethrough, an electrolyte adapted when decomposed by a current through one of the electrodes to indicate said electrode by changing its appearance, said electrolyte being less viscous than glycerine and having added to it glycerine or its equivalent so as to retard the dissipation of the products of electrolysis which have changed the appearance of the electrode, substantially as described. 17th. The combination of a suitable receptacle and an electrolyte therein and co-operating therewith, a support of insulating material normally submerged and bearing a series of electrodes, each of which comprises a conductor, one end of which extends into the solution and the other end of which is protected from the solution by the support, and in contact with the ends, which extends into the solution, a metallic plate, substantially as described. 18th. In an electrolytic annunciator, the base plate consisting of insulating material perforated, a plug for each perforation, conductors passing through the plugs, fastening pieces adapted to attach the outer ends of the conductors to the supporting plate and a mass of insulating material over this. 19th. An annunciator, comprising a receptacle containing a transparent electrolyte and a series of electrodes located therein, visible therethrough and corresponding to a series of sub-stations, separate lines connecting these electrodes to the various sub-stations, means at these sub-stations for sending a current through the corresponding electrodes, the said electrodes and electrolyte being relatively so constituted that on the passage of current electro-chemical reactions will be produced and vary the appearance of that electrode, together with means controlled at the annunciator station and adapted to restore the original appearance by the re-actions following a reversal of the current from the direction of flow which produced the original change, substantially as described. 20th. In combination, in an annunciator comprising a receptacle adapted to contain a fluid electrolyte, a series of electrodes located therein and visible therethrough and the electrolyte comprising a solution containing, first, a comparatively colourless ingredient, adapted and acting to co-operate with other ingredients to produce and locate at an electrode suitably connected with a distant current-controlling device, a comparatively coloured substance, as the result of the electro-chemical action of a current passing through the

circuit, the electrode and the solution, second, an ingredient co-operating chemically with the resultants of the said electro-chemical action to maintain the normal condition and appearance of the solution, substantially as described. 21st. In combination, in an annunciator comprising a receptacle adapted to contain a fluid electrolyte, a series of electrodes located therein and visible therethrough and the electrolyte comprising a solution containing, first, a comparatively colourless ingredient, such as iodine of potassium, adapted and acting to co-operate with other ingredients to produce and locate at an electrode suitably connected with a distant current-controlling device a comparatively coloured substance such as iodine, as the result of the electro-chemical action of a current passing through the circuit, the electrode and the solution, second, an ingredient such as glycerin for increasing the viscosity of the solution so as to retard the dissipation of the colouring substance, and third, an ingredient such as hyposulfite of sodium, co-operating chemically with the resultants of the said electro-chemical action to maintain the normal condition and appearance of the solution, substantially as described.

**No. 62,928. Hay Rack. (Ratlier à foin.)**

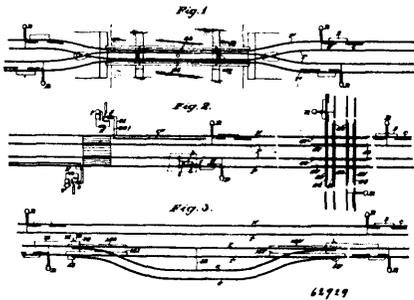


Samuel B. Hurd, Earlville, Illinois, U.S.A., 27th March, 1899; 6 years. (Filed 21st November, 1898.)

*Claim.*—The combination with the longitudinal supporting beams, of tenon-sockets having a bolt-hole, and having on their rear edges embedding prongs or stads, bolts passing through said holes, the rack-bars having their inner ends crossing one another and pivoted together, and having at their extremities a beveled portion and a recessed portion, the bevelling being on the lower edge of the bars and the recessing on the upper edge of said bars, rack-boards secured to said rack-bars, and wheel-guards secured to said rack-bars, substantially as set forth.

**No. 62,929. Electric Block Signal for Railways.**

(Signal de blocs électriques pour chemins de fer.)



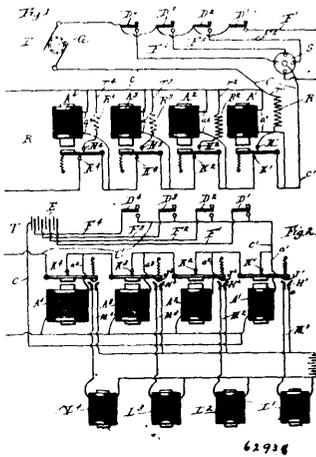
Louis C. Werner, Louisville, Kentucky, U.S.A., 27th March, 1899; 6 years. (Filed 18th July, 1898.)

*Claim.*—1st. In an automatic electric block-signal system, the combination, with a track having a sectional conductor forming insulated blocks, of a vehicle movable along said track, a primary electrical register controlled by a block-circuit, and a separately operative secondary electrical register controlled conjointly by the primary register and a block-circuit. 2nd. In an automatic electric block-signal system, the combination, with a track having a sectional conductor forming insulated blocks, of vehicles movable along said track, a primary electrical register for each block and controlled by the block-circuit, and a separately-operative secondary electrical register for each block and controlled conjointly by the primary register and the block-circuit. 3rd. In an automatic electric block-signal system, the combination, with a track having a sectional conductor forming insulated blocks, of vehicles movable along said

track, a primary electrical recorder for each block and controlled by the block-circuit, and a separately-operative secondary electrical recorder for each block and controlled conjointly by the primary recorder and the block-circuit. 4th. In an automatic electric block-signal system, the combination, with a track having a sectional conductor forming insulated blocks, of vehicles movable along said track, and electrical recorders, one for each block, and each embodying separately-operative primary and secondary recording devices controlled by the block-circuit, each secondary recording device being controlled also by its respective primary recording device. 5th. In an automatic electric block-signal system, the combination, with a track having a sectional conductor forming insulated blocks, of vehicles movable along said track, and electrical recorders, one for each block, and each embodying a primary recording device in a circuit controlled by said block, and a separately-operative secondary recording device in another circuit controlled conjointly by the primary recording device and by said block. 6th. In an automatic electric block-signal system, the combination, with a track having a sectional rail forming insulated blocks, of sectional conductors, one at the beginning of each block, vehicles movable along said track, contact-makers carried by said vehicles and adapted to make travelling contact with said sectional conductors, and electrical recorders, one for each block, and each embodying a primary recording device in circuit with the track-rails, an auxiliary recording device in circuit with the sectional conductor and with one of said rails, and an automatic circuit-closer controlling the circuit of the auxiliary recording device and controlled by the primary recording device. 7th. In an automatic electric block-signal system, the combination, with a track having a sectional rail forming insulated blocks, of pairs of sectional conductors at the beginning of each block, one connected with the block-rail and the other with an auxiliary recording device, vehicles movable along said track, contact-makers carried by said vehicles and adapted to make travelling contact with said sectional conductors, a signalling device on each vehicle and in circuit with its contact-maker and with the track-rails, and electrical recorders, one for each block, and each embodying a primary recording device in a circuit with the track rails, an auxiliary recording device in circuit with one of the sectional conductors and with one of said rails, and an automatic circuit closer controlling the circuit of the auxiliary recording device and controlled by the primary device. 8th. In an automatic electric block signal system, the combination, with a track having a sectional conductor forming insulated blocks, of vehicles movable along said track, and electrical recorders, one for each block, and each embodying a primary recording device in a circuit controlled by said block, a separately operative secondary recording device in another circuit controlled conjointly by the primary recording device and by such block, a recording tape, and tape feeding means controlled by one of said recording devices. 9th. In an automatic electric block signal system, the combination with a track having a sectional conductor forming insulated blocks, of vehicles movable along said track, and electrical recorders, one for each block, and each embodying a primary and a secondary puncturing recording device disposed in fixed positions longitudinally of the tape to puncture said tape in corresponding positions, the primary recording device being located in a circuit controlled by such block, and the secondary recording device in another circuit controlled conjointly by the primary recording device and by such block, a recording tape, and tape feeding means controlled by one of said recording devices. 10th. In an automatic electric block signal system, the combination, with a pair of tracks running in the same direction, side by side, and crossing each other, one having a sectional rail forming insulated blocks and the other having an interfering track section electrically connected with a section of the first track to form therewith a common block, of sectional conductors connected with the block rails of the first track, one at the beginning of each block, vehicles movable along said tracks, contact makers carried by said vehicles, respectively, and adapted to make travelling contact with said sectional conductors, and signalling devices on said vehicles, respectively, and in circuit with said respective contact makers and with the track rails. 11th. In an automatic electric block system, the combination, with a pair of tracks running in the same direction, side by side, and crossing each other, each having a sectional rail forming insulated blocks and both having interfering track sections electrically connected to form at such a point a common block, of sectional conductors connected with the block rails of such tracks, one at the beginning of each block, vehicles movable along said tracks, contact makers carried by said vehicles, respectively, and adapted to make travelling contact with said sectional conductors, and signalling devices on said vehicles, respectively, and in circuit with said respective contact makers and with the track rails. 12th. In an automatic electric block signal system, the combination with a track having a sectional rail forming insulated blocks, of sectional conductors at opposite sides of the centre of the track and connected with said sectional rail alternately at the beginning and at the end of each block, a vehicle movable along said track, a pair of contact makers carried by said vehicle and adapted to make travelling contact, respectively, with said respective sectional conductors, a pair of automatic circuit closers carried and controlled, respectively, by said respective contact makers and operative alternately in opposite directions from their respective open positions to close their respective circuits in accordance with the directions of movement of the vehicle, and a pair of signalling devices on said vehicle and in circuit with the track rails and controlled by said circuit closers.

**No. 62,930. Electrical Selective Apparatus.**

(Appareil électrique à sélection.)



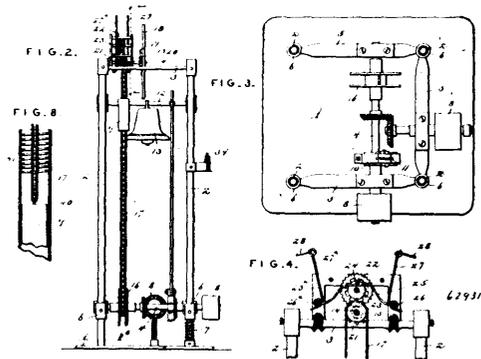
John S. Thompson, Chicago, Illinois, U.S.A., 27th March, 1899; 6 years. (Filed 30th December, 1898.)

*Claim.*—1st. An electrical selective apparatus, comprising a series of electrical devices which are constructed so as to be actuated by successively smaller currents and also so as to require successively greater periods of time for actuation, and which are arranged and connected so as to cause their action to be controlled entirely by their respective characteristics, and means whereby, upon the actuation of any one of said devices, the relatively slower ones are in effect rendered inoperative. 2nd. An electrical selective apparatus, comprising a series of electro-magnetic devices which are constructed so as to be actuated by successively smaller currents and also so as to require successively greater periods of time for actuation, and which are connected in parallel with one another, and means whereby, upon the actuation of any one of said devices, the relatively slower ones are in effect disconnected. 3rd. The combination with an electrical selective system comprising a series of electro-magnetic devices which are so constructed as to be actuated by successively smaller currents, and also so as to require successively greater periods of time for actuation, and which are connected in parallel with one another, and means whereby, upon the actuation of any one of said devices, the relatively slower ones are in effect disconnected, of a series of devices to be selectively operated, respectively allotted to said electro-magnetic devices, and associated therewith in such manner as to be operated by their actuation. 4th. The combination with a transmitting circuit, and with means for developing therein currents of different predetermined sizes or strengths, of a series of electro-magnetic devices which are constructed so as to be actuated by successively smaller currents, and also so as to require successively greater periods of time for actuation, and which are connected in parallel in the transmitting circuit, and means whereby, upon the actuation of any one of such devices, the relatively slower ones are in effect cut out of circuit. 5th. The combination with a series of electro-magnetic devices which are constructed so to be actuated by successively smaller currents and also as to require successively greater periods of time for actuation, and which are connected in parallel with one another, of means whereby, upon the actuation of any one of said devices, the connections to relatively slower ones are broken or opened, and means whereby, upon such actuation, the current shunted from the devices so disconnected, is prevented from actuating one or more of the relatively quicker ones. 6th. The combination with the transmitting circuit, and with means for developing therein currents of predetermined different sizes or strengths, of a series of electro-magnetic devices which are constructed so as to be actuated by successively smaller currents and also so as to require successively greater periods of time for actuation, and which are connected in parallel in the transmitting circuit, and means whereby, upon the actuation of any one of said devices, the relatively slower ones are in effect cut out of circuit, and a series of resistances allotted to said devices, and each provided with means whereby it is thrown into circuit upon the actuation of its allotted device. 7th. The combination with the transmitting circuit and with means for developing therein currents of different predetermined sizes or strengths, of a series of electro-magnetic devices which are constructed to be actuated by successively smaller currents in successively greater periods of time, and also so as to have the same power when actuated, and which are connected in parallel in the transmitting circuit, and means whereby, upon the actuation of any one of such devices, the relatively weaker ones are in effect cut out of circuit. 8th. The combination with the transmitting circuit, and with means for developing therein different sized currents, of a series of electro-magnetic devices which are constructed so as to be actuated by successively smaller currents in successively greater periods of time, and which are connected in parallel in the

transmitting circuit, means whereby, upon the actuation of any one of such devices, the relatively weaker ones are in effect cut out of circuit, and a series of normally open local self-exciting circuits respectively allotted to said devices and each provided with means whereby it is closed upon the actuation of its allotted device, and also with an electro-magnet or other translating device. 9th. The combination with the transmitting circuit, and with means for developing different sized currents therein, of a series of electro-magnets constructed so as to be energized by successively smaller currents in successively greater periods of time, and connected in parallel in the transmitting circuit, a series of resistances respectively allotted to such magnets and made equal in amount to the combined resistances of all the magnets relatively slower than the one to which it is allotted, and means whereby, upon the energization of any magnet, the relatively slower magnets are thrown out of circuit, and its allotted resistance thrown into the same.

**No. 62,931. Signal for Railway Crossings.**

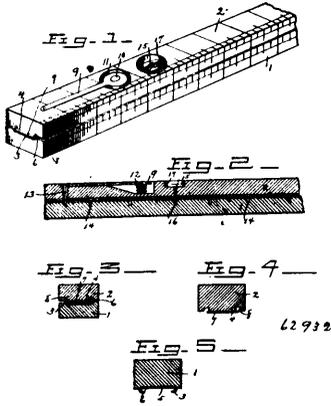
(Signal pour traverses de chemin de fer.)



Robert M. Payne, Winchester, Tennessee, U.S.A., 27th March, 1899; 6 years. (Filed 6th December, 1898.)

*Claim.*—1st. A railway crossing signal, involving the combination of a central tower, a motor shaft supported in bearings in said tower, a winding roller or pulley connected with the extremity of said shaft, a windlass drum connected with said shaft, a counter shaft having a pulley keyed thereto, a flexible connection leading from the drum around the pulley, a weight at the extremity of the flexible connection, an eccentric or crank on the motor shaft, a bell, and a pitman extending from the crank to the bell. 2nd. A railway crossing signal, involving the combination of a motor shaft, a winding roller or pulley at the extremity of said shaft, a windlass drum also connected with said shaft, a counter shaft, a weight or motor power operatively connected with the counter shaft, connections between the motor shaft and counter shaft for winding or storing up the motor power, a parti-coloured disc loosely mounted on the counter shaft, and means for tripping or releasing the motor power into operation, substantially as described. 3rd. A railway crossing signal, involving the combination of a motor shaft, a winding roller or pulley connected with one extremity of said shaft, a drum or windlass also connected with said shaft, a counter shaft, a weight or motor power connected with said counter shaft, connections between the motor shaft and counter shaft for winding or storing up the motor power, a parti-coloured disc loosely mounted on the counter shaft, pawl or clutch mechanism for engaging the disc and shaft, when moving in one direction, an eccentric on the motor shaft, a bell suitably mounted near the top of the tower, and a pitman or connecting rod extending from eccentric to bell, substantially as described. 4th. In a railway crossing signal, the combination of a tower at the crossing, a vertically adjustable disc or cam surface connected with said tower, a pillar alongside the track at a distance from the tower, a movable obstruction connected with said pillar, and a whistle operating lever connected with the cab or a train whereby the whistle is automatically opened as the train approaches the crossing and closed when it reaches the crossing, substantially as described. 5th. In a crossing signal, the combination of a motor, means for winding or throwing the motor power into operative position, and means for tripping or releasing the motor, consisting of a pinion connected with the counter shaft, a spur wheel inter-gearing with said pinion, a cam disc provided with a shoulder, a pawl or detent connected with the rock-shaft, an arm also connected with the rock-shaft, a trip lever arranged at a distance from the arm, and connection between the trip lever and arm, substantially as described. 6th. In a railway crossing, the combination of a motor, a shaft operated by said motor, and means for holding said motor in adjusted or operative position, consisting of mechanism, as sprocket pinion 15, pinion 21, gear-wheel 22 and disc having shoulder 24, of such relative dimensions that the motor will run down or expand itself while the shouldered disc is making one complete revolution, substantially as described.

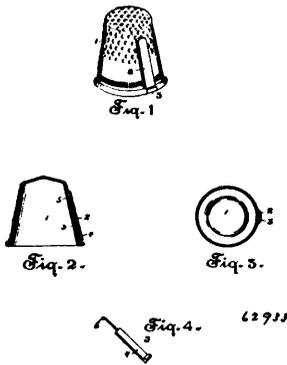
No. 62,932. Measuring Pole. (*Bâton d'arpenteur.*)



Reuben Hegarty, Madiera, Pennsylvania, U.S.A., 27th March, 1899; 6 years. (Filed 10th December, 1898.)

*Claim.*—A measuring pole, consisting of the longitudinally sliding members secured together and provided with a detent for holding the same immovable at intervals, and a thumb-screw passing through one of said members and adapted to engage the other of said members, the head of said thumb-screw being situated within a recess in the member to which it is secured.

No. 62,933. Needle Threader. (*Enfleur d'aiguille.*)



Alexander Lumsden McLaren, Sarnia, Ontario, Canada, 29th March, 1899; 6 years. (Filed 11th January, 1899.)

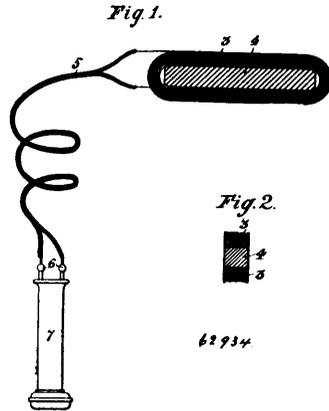
*Claim.*—1st. A device of the class described, comprising a thimble provided on its exterior with a longitudinally-disposed socket, closed at its sides and outer end and having its mouth or opening arranged adjacent to the open end of the thimble, and a needle-threader arranged within the socket and adapted to be entirely removed therefrom when it is desired to use it, said needle-threader comprising a hook, and a handle carrying the hook and having a portion arranged at the mouth or opening of the socket in convenient position to be engaged by the finger, substantially as and for the purpose described. 2nd. A device of the class described, comprising a thimble provided at one side with a longitudinal socket and having its rim recessed at the mouth of the socket, and a needle-threader arranged within the socket and comprising a hook, and a handle, provided at its outer end with a rib or plate, fitting in the recess of the rim, completing the latter, and arranged to be engaged by the finger to enable the needle-threader to be readily withdrawn from the socket, substantially as described.

No. 62,934. Apparatus for Locating Concealed Live Electric Wires. (*Appareil pour localiser les fils électriques cachés.*)

Francis Alexandre Coté, Ottawa, Canada, 29th March, 1899; 6 years. (Filed 31st May, 1898.)

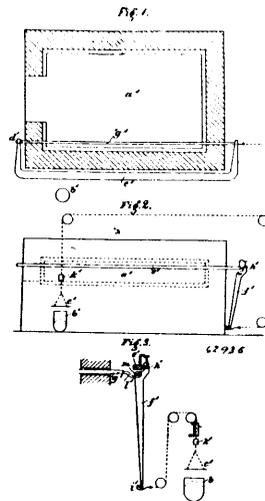
*Claim.*—1st. The herein described mode of detecting the presence and running direction of concealed electric live wires, consisting in causing currents from the said wires to be induced in a coil of insulated wire, when brought in close proximity therewith, over the surface of a wall, ceiling or floor, said induced currents vibrating the diaphragm of a receiver, so as to be audible to the operator, as set forth. 2nd. In an apparatus for detecting concealed electric wires, the combination, with a coil of fine insulated wire, of flexible wires connecting the ends of the said coil to an ordinary telephone receiver, substantially as set forth. 3rd. In an apparatus

for detecting concealed electric wires, the combination with the coil 3, the core 4 and flexible wires 5 connected to the ends of the



wires forming the said coil, of the telephone receiver 7, and binding posts 6 of the said receiver, to which the ends of the flexible wires 5 are connected, substantially as set forth.

No. 62,935. Thermostat. (*Thermostate.*)

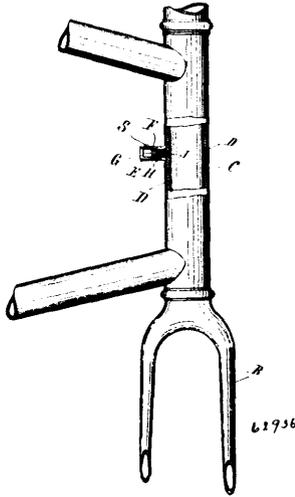


Wolf F. E. Casse, 16 Hortensiaavey, Copenhagen, Denmark, 29th March, 1899; 6 years. (Filed 12th November, 1898.)

*Claim.*—1st. A thermostat or heat regulator characterized by the combination of a tube or rod and a frame in which it is so mounted that its one end is supported in the frame while its other end acts on one of three knife edges on a lever of a weighing mechanism supported by the said frame whereby is attained that a prolongation of the tube or rod of the frame by heat causes the free end of the weighing mechanism to move in proportion to the greatness of the said prolongation, substantially as set forth. 2nd. A construction of thermostat or heat regulator specially applicable to bakers ovens or the like characterized by a metal tube or rod  $g^1$  in the oven the ends of said rod extending through the oven walls, one end  $d^1$  fixed to a strong metal staple  $e^1$  outside the heat sphere of the oven, and its other end provided with a fork  $l^1$  of hard material bearing on the intermediate knife edge  $m^1$  of a lever  $f^1$  with unequal arms, one knife edge  $h^1$  of which very near the knife edge  $m^1$  and bears on a flat plane on the staple  $e$ , and to the other end knife edge  $i^1$  of which very far from the intermediate knife edge  $m^1$  is connected a cord of the like from a damper  $c^1$  that regulates the heat supply for the purpose of automatically opening or closing said supply when the oven temperature drops below or rise above a pre-determined temperature, substantially as set forth. 3rd. A construction of thermostat or heat regulator applicable to the regulation of the heating of a liquid by means of steam characterized by the combination of a strong frame A of wood or metal and a tube B through which the said liquid is suitably passed, one end of said tube resting on the frame A while its other end bears on a knife edge E on the first of a series of levers F, G, H and M, the short arm of this last lever regulating the opening and closing of the valve for admitting steam to the liquid, substantially as set forth. 4th. A construction of thermostat or heat regulator applicable to the regulation of the cooling of a space by means of ammonia characterized by the combination

of a strong frame A<sup>1</sup> of wood or metal and a tube B<sup>1</sup> resting at one end on the frame A<sup>1</sup> while its other end bears on a knife edge E<sup>1</sup> of a lever system E<sup>1</sup> H<sup>1</sup> supported on the frame A<sup>1</sup> and whose one end actuates a valve for admitting ammonia to the space to be regulated, substantially as set forth.

**No. 62,936. Velocipede. (Velocipede.)**

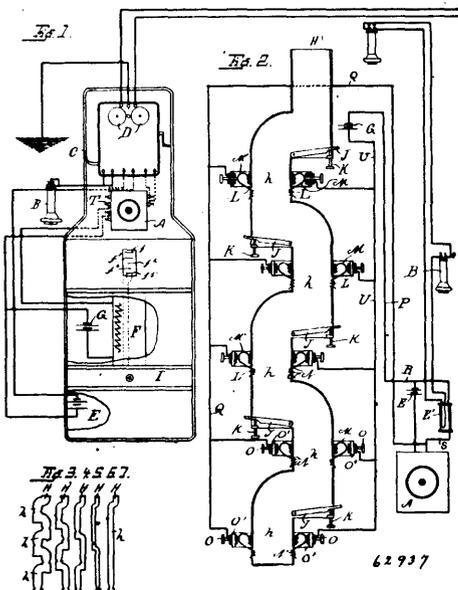


Albert Schäfer, No. 4 Ludwigstrasse, Geestermünde, Empire of Germany, 29th March, 1899; 6 years. (Filed 22nd August, 1898.)

*Claim.*—1st. In a safety locking device for velocipedes, the combination with a socket E, upon the steering head D, the locking screw H, threaded into the socket E, and formed with a reduced inner end J, which engages the steering post C, and a suitable operating head or outer end upon the screw G, enclosed by the socket E, substantially as set forth. 2nd. A safety locking device for velocipedes, consisting of a screw H, working in and enclosed in a socket E, said screw being provided with a head G, of suitable angular form and having a collar F, said collar in the event of the screw H, working loose coming in contact with a screw S, in the socket E, projecting into the interior of the socket and thus preventing the set screw H, from being lost, constructed and arranged, substantially as hereinbefore described.

**No. 62,937. Coin Actuated Signal Apparatus.**

(Appareil de signal actionné par une pièce de monnaie.)



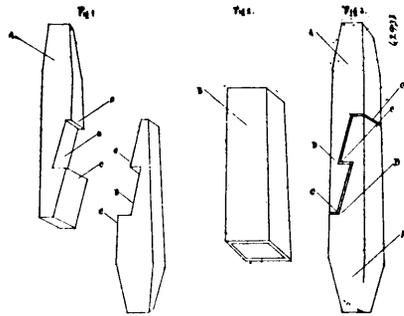
Heber R. Mason and Emery D. Weimer, both of Ludington, Michigan, U.S.A., 30th March, 1899; 6 years. (Filed 19th January, 1899.)

*Claim.*—1st. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading

thereto, a battery, conductors therefor in normally open circuit, with terminal electrodes disposed along said chute or chutes and arranged for simultaneous contact of a coin passing through each chute with opposing terminals of said battery circuit, together with an induction coil included in said circuit and in the secondary telephone circuit. 2nd. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, a battery, conductors therefor in normally open circuit, with terminal electrodes disposed along said chute or chutes and arranged for the simultaneous contact of a coin passing through each chute with the opposing terminals of said battery circuit, said electrodes being provided with a plurality of contact points, whereby the circuit is closed and opened successively by the successive contacts of the coin in passing a single pair of electrodes, together with an induction coil included in said circuit and in the secondary telephone circuit. 3rd. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections, communicating with each other through lateral discharge openings, a battery, conductors therefor in normally open circuit, with terminal electrodes exposed along said sections, and arranged for the simultaneous contact of a coin passing through each section with the opposing terminals of said battery circuit, together with an induction coil included in said circuit, and in the secondary telephone circuit. 4th. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections closed at their lower ends by an inclined bar of non-resonant material, and communicating with each other through lateral discharge openings, a battery, conductors therefor in normally open circuit, with terminal electrodes disposed along said chute or chutes and arranged for the simultaneous contact of a coin passing through each chute with the opposing terminals of said battery circuit, together with an induction coil included in said circuit and in the secondary telephone circuit. 5th. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections, closed at their lower ends with an inclined bar of non-resonant material, and communicating with each other through lateral discharge openings, means for adjusting said bar, a battery, conductor therefor in normally open circuit, with terminal electrodes disposed along said chute or chutes and arranged for the simultaneous contact of a coin passing through each chute with the opposing terminal of said battery circuit, together with an induction coil included in said circuit and in the secondary telephone circuit. 6th. The combination with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections communicating laterally with each other, yielding contacts arranged in pairs at the sides of the respective sections, and adapted to be struck or grazed by a coin of proper size passing therethrough, a normally open circuit of which said contacts constitute the polar extremities, and an induction coil included in said battery circuit and the secondary telephone circuit. 7th. The combination with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections communicating laterally with each other, with apparatus apertures in the sides thereof, two or more elastic bars attached to each chute section, but insulated therefrom, and with their free ends projecting into the path of a coin of proper size passing through the sections, a battery having a normally open circuit, of which said bars constitute the polar extremities, and an induction coil included in the battery circuit and the secondary telephone circuit. 8th. The combination, with ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections communicating laterally with each other, with apertures in the sides thereof, two or more elastic bars attached to each chute section, but insulated therefrom, and with their free ends projecting into the path of a coin of proper size passing through the sections, said bars being bent at their free ends to form a plurality of contact points, a battery having a normally open circuit of which said bars constitute the polar extremities, and an induction coil included in the battery circuit and the secondary telephone circuit. 9th. The combination, with the ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, and arranged in sections communicating laterally with each other, with apertures in the sides thereof, two or more elastic bars attached to each chute section, but insulated therefrom, and with their free ends projecting into the path of a coin of proper size passing through the sections, said bars being bent at their free ends to form a plurality of contact points, a battery having a normally open circuit of which said bars constitute the polar extremities, and an induction coil included in the battery circuit and the secondary telephone circuit. 10th. The combination, with the ordinary telephone apparatus, of a cash receptacle, one or more coin conveying chutes leading thereto, electrodes disposed in pairs along said chute or chutes, with each pair arranged for simultaneous contact with a coin passing therethrough, and a signalling battery having a normally open circuit of which said electrodes constitute the polar extremities, said battery having its conductors connected with the conductors of the primary telephone circuit, at opposite extremities of the induction coil of the telephone, whereby the induction coil is also included in the circuit of the signalling battery.

**No. 62,938. Pump Rod Coupling.**

(*Joint de tige de pompe.*)

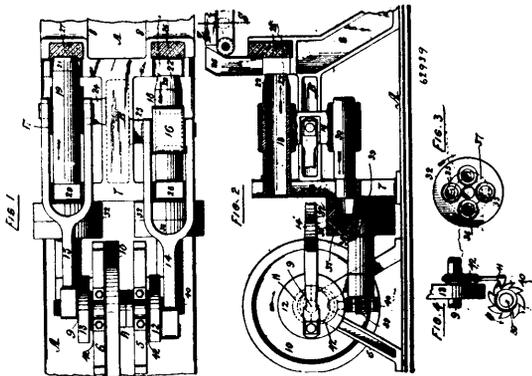


George Robbins and George Musgrove, both of Stonewall, Manitoba, Canada, 30th March, 1899; 6 years. (Filed 15th March, 1898.)

*Claim.*—In a coupling for pump rods, the combination of two rod ends provided with recesses and projections, the recesses and projections being adapted to mutually fit one another, the two rod ends when fitted together forming a continuously tapering section, and an internally tapered sleeve or ferrule adapted to fit over such tapering section and to bind the two rod ends together, substantially as described.

**No. 62,939. Bung-Cutting and Forming Machines.**

(*Machine à découper et former les boudes.*)



George Stagg and John Noble, both of Toronto, Ontario, Canada, 30th March, 1899; 6 years. (Filed 31st December, 1898.)

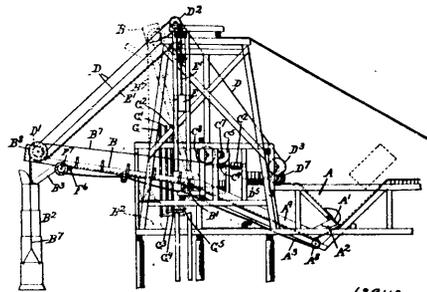
*Claim.*—1st. The combination, in a bung-cutting and forming machine, of means for cutting the bung-blank at the forward stroke and forming the finished bung at the return stroke, such means being operated from the same source of power, substantially in the manner and for the purpose set forth. 2nd. In a machine for cutting and forming bungs, the combination of means for cutting the blanks, conveyers for said blanks, and means for compressing said blanks into taper form, the first operation being performed at the forward stroke, and the final operation being performed at the return stroke, such means being coupled and driven from the same source of power, substantially as and for the purpose set forth. 3rd. In a bung-cutting and forming machine, the combination of the following instrumentalities, viz., a hollow-cutter stock and cutter for forming the blanks, a chute or conveyer for receiving a succession of such blanks, a former, or punch-dies, in which said blanks may receive a tapered form due to the operation of said former or punch toward said dies, and means for automatically ejecting the finished bungs, substantially as and for the purpose set forth.

**No. 62,940. Coal Moving Device.** (*Transport à charbon.*)

The Link-Belt Machinery Company, assignee of Edward Arthur Turner, all of Chicago, Illinois, U.S.A., 13th March, 1899; 6 years. (Filed 26th April, 1897.)

*Claim.*—1st. A device for handling coal or other material comprising a receptacle adapted to contain the material to be handled, a conveying mechanism for conveying a continuous column of coal from the containing receptacle to the device in which the material is to be placed, said conveying mechanism comprising a movable carrier which gives motion to the material carried. 2nd. A device for moving coal or other material comprising a carrier, a movable boom, a connection between said boom and a portion of said carrier, a controlling mechanism operatively connected with said boom, and a receiving pipe or tube connected with said boom so as to receive

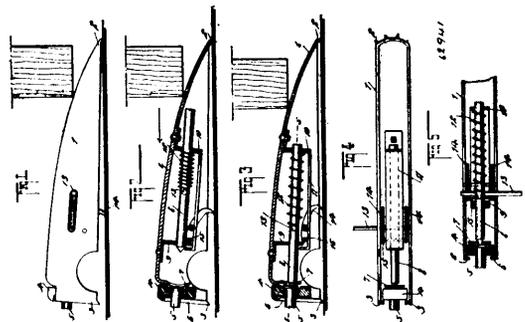
the coal from the carrier. 3rd. A device for handling coal or other material comprising a receptacle containing the coal to be handled,



62940

a chute leading from said receptacle to a movable carrier, a tube which receives the coal located at the end of said carrier, said tube having its discharge end in the receptacle into which the coal is to be placed. 4th. A device for handling coal or other material comprising a receptacle adapted to contain the material to be handled, a substantially continuous conveying device connecting said receptacle with the coal receiving device and comprising a movable boom connected with the discharge end of said carrier, mechanism for controlling the position of said boom and carrier, and a receiving tube connected with said boom, the coal being discharged from the carrier into said tube. 5th. A device for handling coal or the like comprising a hopper or other receptacle for containing the coal, a carrier in proximity to said receptacle upon which the coal is discharged, the end of said carrier being connected with a movable boom provided with mechanism for controlling its position so that the position of the discharge end of said carrier may be varied and a tube connected with said boom and in proximity to said carrier so that the coal is discharged therein, said tube having its discharge end in the vessel to which the coal is to be conveyed, said tube being made in collapsible sections, one of said sections being operatively connected with controlling mechanism so that the tube may be collapsed. 6th. A device for handling coal or the like comprising a hopper or vessel containing the coal, provided with a discharge opening in proximity to a carrier or conveyer, mechanism for operating said carrier or conveyer, the end of said carrier or conveyer being connected with a movable boom provided with operating mechanism by which its position may be varied, a collapsible tube connected with the end of said boom and in proximity to the discharge end of said carrier so that the coal is discharged in said tube, the discharge end of said tube adapted to be placed in the vessel to which the coal is to be conveyed, an operating mechanism connected with one of the sections of said tube so that the tube may be collapsed, the mechanism for said tube, boom and conveyer being so constructed that the parts may be controlled independently, substantially as described.

**No. 62,941. Burglar Alarms.** (*Avertisseur de volcur.*)



Francis J. Schnugg, assignee of Charles Theophiles Kunz, all of New York City, New York, U.S.A., 30th March, 1899; 6 years. (Filed 12th January, 1899.)

*Claim.*—1st. A burglar alarm, comprising a casing longitudinally inclined on its upper side, flanges on the end of the casing, a spring plate extended from the casing, rearward of the flanges, a breech block for removably engaging between said spring plate and flanges, a spring actuated plunger in the casing, a latch for holding the plunger and means for releasing the latch when pressure is brought to bear upon the casing, substantially as specified. 2nd. A burglar alarm, comprising a casing, means for holding a breech block in the forward end of the casing, hangers arranged in the casing, a plunger supported by and movable through said hangers, a spring for forcing the plunger forward, a spring latch extended from the rear hanger and having its free end turned upward to engage the forward end of the plunger, and a trigger for releasing the latch from the plunger when pressure is applied to the casing, substantially as specified.



## TRADE-MARKS

Registered during the month of March, 1899, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

6787. KATTINI MALOUF FRÈRES, Montréal, Qué. Parfums, 4 mars, 1899.
6788. EVANS & SONS, LIMITED, Montreal, Que. Medicinal Preparations, 6th March, 1899.
6789. LOUIS RICHARD BARIDON, Montreal, Que. Medicinal Preparations, 6th March, 1899.
6790. WALKER, PARKER & COMPANY, Toronto, Ont. Boots and Shoes, 6th March, 1899.
6791. WILLIAM HOUNSELL & COMPANY, Bridport, Dorset, England. Twines, Lines, Cordage, Nets, Netting, Yarns and Threads, 7th March, 1899.
6792. THE GUTTA PERCHA AND RUBBER MANUFACTURING COMPANY OF TORONTO, LIMITED, Toronto, Ont. Certain named articles in which India Rubber or Gutta Percha is a component part, 7th March, 1899.
6793. }  
6794. } EMPIRE TOBACCO COMPANY, LIMITED, Granby, Que. Plug  
6795. } Tobacco, 10th March, 1899.
6796. THE ROCK CITY TOBACCO COMPANY, LIMITED, Quebec, Que. Tabac, 13 mars, 1899.
6797. EBEN DOWIE AND JAMES MACDONALD OXLEY, Montreal, Que. Vermin and Insect Exterminator, 13th March, 1899.
6798. RESINOL CHEMICAL COMPANY, Baltimore, Maryland, U.S.A. Medical Compounds, such as Elixirs, Laxatives, Alteratives and Tonics, 13th March, 1899.
6799. RESINOL CHEMICAL COMPANY, Baltimore, Maryland, U.S.A. Medical Ointments, 13th March, 1899.
6800. THE GUMBO CEMENT COMPANY, Chicago, Illinois, U.S.A. Cement for hermetically sealing pipe-joints and the like, 15th March, 1899.
6801. THE J. HUNGERFORD SMITH COMPANY, LIMITED, Toronto, Ont. General Trade Mark, 15th March, 1899.
6802. EBEN DOWIE AND JAMES MACDONALD OXLEY, Montreal, Que. Mixed Foods of a Cereal nature for Horses, Cattle and other Farm Stock, 15th March, 1899.
6803. JOHN CARSLY, Montreal, Que. Teas, Coffees, Spices, Chocolate and Cocoa, 15th March, 1899.
6804. FREDERICK R. DEARBORN, Saint John, N.B. Baking Powder, Tea, Coffee, Spices, and Flavouring Extracts, 17th March, 1899.
6805. }  
6806. } A. MOYER & COMPANY, Listowel, Ont. Flour, 17th March, 1899.
6807. STRAUSS, SACHS & COMPANY, New York, N.Y., U.S.A. Mouth Harmonicas, 17th March, 1899.
6808. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Pastilles Vichy État, 18 mars, 1899.
6809. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Pastilles Vichy État, 18 mars, 1899.
6810. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Sels Vichy État, 18 mars, 1899.
6811. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Eaux Minérales, 18 mars, 1899.
6812. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Eaux Minérales, 18 mars, 1899.
6813. LA COMPAGNIE FERMIÈRE DE L'ÉTABLISSEMENT THERMAL DE VICHY, Paris, France. Eaux Minérales, 18 mars, 1899.
6814. THE NATIONAL STARCH MANUFACTURING COMPANY, New York, N.Y., U.S.A. Starch, 20th March, 1899.

6815. THE MURALO COMPANY, New York, N.Y., U.S.A. Paint or Coating Material for finishing Walls and Ceilings, 22nd March, 1899.
6816. THE MURALO COMPANY, New York, N.Y., U.S.A. Surface finishing materials for Walls, Cornices, Mouldings, &c., 22nd March, 1899.
6817. CLEMENT & CLEMENT, Montreal, Que. Typewriters and Typewriter Supplies, 22nd March, 1899.
6818. A. WALKER & COMPANY, Montreal, Que. Chocolates, 22nd March, 1899.
6819. ANDRÉ BÉLANGER, Montréal, Qué. Racine Moulue, Remède Infaillible pour guérir les Ecouelles et les Scrofules, 22 mars, 1899.
6820. PEEK, FREAN & COMPANY, London, England. Tea, Coffee, Cocoa and Chocolate. 23rd March, 1899.
6821. THE ROCK CITY TOBACCO COMPANY, LIMITED, Québec, Qué. Tabac a Fumer et a Chiquer (en tablettes) 23 mars, 1899.
6822. McFARLAND, GRAY & SOUTHGATE, Toronto, Ont. Men's Trousers, 23rd March, 1899.
6823. JOHN CALABRESE, London, England. Powder for destroying Insects, 24th March, 1899.
6824. WILLIAM HAYSTEAD, Woodstock, Ont. A Medical Compound for growing Hoofs on Horses, 24th March, 1899.
6825. ISAAC BRIGGS & SON, Rutland Mills, Wakefield, Yorkshire, England. Hosiery, 27th March, 1899.
6826. THE AMERICAN WRINGER COMPANY, New York, N.Y., U.S.A. Wringers, 27th March, 1899.
6827. SANFORD HAWLEY MOTT, Deloraine, Man. Roof Paint, 27th March, 1899.
6828. } WILLIAM SMITH, Coaticook, Que. Medical Compounds, 27th March,  
6829. f 1899.
6830. JOSEPH E. SEAGRAM, Waterloo, Ont. Whiskey, 27th March, 1899.
6831. LEITCH BROTHERS, Oak Lake, Man. Flour, Rolled Oats, Meals and Cereal Foods, 28th March, 1899.
6832. H. WALTER DORKEN, Montreal, Que. Scissors, Pocket and Pen Knives, and Table Cutlery, 29th March, 1899.
6833. MINNIE MUELLER TOLKE, Covington, Kentucky, U.S.A. A Chemical Compound for the Removal of Hair, 29th March, 1899.
6834. WILMER INGALLS GORDON, Toronto, Ont. Remedies, 30th March, 1899.

## COPYRIGHTS

Entered during the month of March, 1899, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

10462. HISTORY AND ORIGIN OF THE UNION JACK. (Card.) Thomas Alexander Newman, Hamilton, Ont., 1st March, 1899.
10463. SELF-REGISTERING CITY ORDER FORM. The Montreal Rolling Mills Co., Montreal, Que., 1st March, 1899.
10464. SELF-REGISTERING COUNTRY ORDER FORM. The Montreal Rolling Mills Co., Montreal, Que., 1st March, 1899.
10465. THE MIDNIGHT GALOP. By G. C. Pettit. Arranged by Paul Keller. (No. 13. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10466. CLEOPATRA WALTZES. By C. Multner. Arranged by Paul Keller. (No. 14. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10467. THE OLD PINKEY WOODS. By R. B. Arranged by Paul Keller. (No. 15. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10468. THE ENCORE TWO-STEP. By A. Nordheimer. Arranged by Paul Keller. (No. 16. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10469. WENONAH VALSE. By J. d'E. Smith. Arranged by Paul Keller. (No. 17. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10470. L'ABSENCE. (Polka.) By A. Nordheimer. Arranged by Paul Keller. (No. 18. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10471. THE MILITARY TWO-STEP. By A. Nordheimer. Arranged by Paul Keller. (No. 19. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10472. A STARRY NIGHT. (Valse.) By E. F. Blackstock. Arranged by Paul Keller. (No. 20. Golden Moments.) The Nordheimer Piano and Music Co. (Ltd.), Toronto, Ont., 2nd March, 1899.
10473. SKETCH OF KLONDIKE RIVER AND VICINITY (map). By Medorem William Greer, Dawson, Yukon Territory, 2nd March, 1899.
10474. THE BRITISH GUARDS. (March.) By Charles A. E. Harriss. Whaley, Royce & Co., Toronto, Ont., 2nd March, 1899.
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10477. THE UNRIVALLED REPORT CARD. (School Card.) Ezra Hamilton, Treherne, Manitoba, 4th March, 1899.
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10479. THE BOMBARDMENT OF PEKIN BY THE BRITISH AND FRENCH. Time, 1860. (Pyro-spectacular Drama.) Thomas William Hand and Walter Teale, Hamilton, Ont., 9th March, 1899.
10480. THE BRIGGS PETTY LEDGER. F. W. Briggs, Montreal, Que., 9th March, 1899.
10481. JAKE STANWOOD'S GAL. By Anna Fuller and T. C. Dean. (Temporary Copyright.) Published in "The Evening Mail and Empire," Toronto, Ont. T. C. Dean, Drayton, Ont., 9th March, 1899.
10482. ADVENTURES OF CAPTAIN KETTLE. By Cutcliffe Hyne. George F. Morang and Company, Limited, Toronto, Ont., 11th March, 1899.
10483. THE CANADIAN MAGAZINE. March, 1899. The Ontario Publishing Co. (Ltd.), Toronto, Ont., 11th March, 1899.

10484. **THE DELINEATOR.** (A Journal of Fashion, Culture and Fine Arts.) April, 1899. The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 13th March, 1899.
10485. **THE GLASS OF FASHION UP TO DATE.** April, 1899. The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 13th March, 1899.
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10487. **JOHN BURNET OF BARNS.** (A Romance.) By John Buchan. The Copp, Clark Co., (Ltd.) Toronto, Ont., 13th March, 1899.
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10489. **QUEBEC: THE SPORTSMAN'S LAND OF PLENTY FOR SALMON, TROUT, AND OUANANICHE, MOOSE, CARIBOO AND DEER.** By G. W. Fairchild, jr. Frank Carrel, Quebec, Que., 13th March, 1899.
10490. **LES URSULINES DES TROIS-RIVIÈRES.** Depuis leur établissement jusqu'à nos jours. Tome Troisième. Ursulines des Trois-Rivières, Qué., 15 mars 1899.
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10496. **INVENTORY BOOK FOR LISTING HOUSEHOLD FURNITURE** Henry Lester Putnam, Montreal, Que., 17th March, 1899.
10497. **BONHOMME.** French-Canadian Stories and Sketches. By Henry Cecil Walsh. With Twelve Illustrations by William Brymner, R. C. A., William Briggs, Toronto, Ont., 18th March, 1899.
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10499. **CAMIOLA.** (Southern Song.) By Retta Longstreet Long, Hamilton, Ont., 18th March, 1899.
10500. **PILKEY'S STREET AND STREET RAILWAY GUIDE, TORONTO, 1899.** Charles J. Pilkey, Toronto, Ont., 20th March, 1899.
10501. **GOD SAVE OUR FAIR DOMINION.** Words and Music by Major F. E. Dixon, Toronto, Ont., 21st March, 1899.
10502. **MON DÉSIR.** (My Desire.) English words by Jacques Ahrem. Music by Ethelbert Nevin, Op. 28. No. 3. The John Church Co., Cincinnati, Ohio, U.S.A., 22nd March, 1899.
10503. **UN TOUR DE PATINS.** (Valse Élégante.) Par Amintha Plouf. Mlle Amintha Plouf, Montréal, Qué., 23 mars 1899.
10504. **AGENCE MERCANTILE DE QUÉBÉC.** (Livret de lettres.) David Falardeau, Québec, Qué., 23 mars 1899.)
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10508. **PURITY AND INNOCENCE.** (Photo.) William Albert Couse, Petrolia, Ont., 27th March, 1899.

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10509. THE LIGHT OF THE WORLD. (Photo.) William Albert Couse, Petrolia, Ont., 27th March, 1899.
10510. THE QUEBEC LEGAL CHART, 1899. Edited by H. Cartwright. Toronto, Ont., 28th March, 1899.
10511. THE TRIBUNE WHEAT MAP OF MANITOBA, 1898. The Tribune Publishing Co., Winnipeg, Man., 28th March, 1899.
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10514. THE CANADIAN ANNUAL DIGEST. (1898.) By Charles H. Masters and Charles Morse, LL.B., Ottawa, Ont., 29th March, 1899.
10515. INSURANCE PLAN OF THE CITY OF HAMILTON, ONTARIO. Volumes II and III. Charles Edward Goad, Montreal, Que., 30th March, 1899.
10516. ACCIDENT INSURANCE COUPON BOOK FOR INSURANCE COMPANIES. Samuel Featherson Kilgore, Toronto, Ont., 30th March, 1899.