

the templet, to open the holes in the nail-holder and to be moved in an opposite direction upon the reverse movement of the nail-holder to close the holes. 14th. The combination of the heel support of the boot or shoe, with the side guide plates *c*. 15th. Centering devices for controlling the position of the boot or shoe, consisting of the two yielding plates *c*, the guiding edges of which are adapted to enter the space between the out sole and upper leather of the boot or shoe. 16th. In an organized heel nailing machine, the combination of a jack for presenting the boot or shoe, a templet adapted to be moved horizontally into position and to be moved vertically upon the heel blank, and a gang or group of awls and a gang or group of drivers or either, and means for reciprocating them or it. 17th. The combination of a jack for presenting the boot or shoe, a templet and nail-holder having the movement indicated and adapted to be used in connection with a reciprocating gang of awls and drivers or either. 18th. The combination of a jack for holding and presenting the work, with devices for centering the boot or shoe thereon. 19th. The combination of a jack for presenting the work to the heel nailing mechanism with devices for locating or centering the heel blank upon the work. 20th. The combination of a reciprocating gang of drivers, a templet and nail-holder having the movement specified, a jack for presenting the work to the driving mechanism, and centering devices for locating the work and heel blank. 21st. The combination of the head supporting the awls, drivers and top lift-holder or either of them, and means for reciprocating it. 22nd. The combination of the head supporting the awls drivers and top lift holder, or either of them, and means for reciprocating the same, and automatic stop motion mechanism adapted to automatically stop the machine at the end of each revolution. 23rd. The shoe and blank centering devices or either of them, having the adjustments specified or either of them. 24th. The combination of the heel support, the vertically yielding work and heel blank guides or either of them, and the vertically movable compressing templet. 25th. The combination of the heel support, the templet and the interposed top lift holder.

No. 16,163. Improvements in Cork Drawers.

(*Perfectionnements aux tire-bouchons.*)

William Addison, Hamilton, Ont., 23rd January, 1883; for 5 years.

Claim.—1st. The cup A to rest on the neck of the bottle and in which the screw C works, the lever D working on the bearing E, by which the cork is drawn up out of the bottle on to the shank B, by the direct action of the screw C. 2nd. The rubber washer or cushion G around the bottom of the cup A.

No. 16,164. Improvements in Car Heaters.

(*Perfectionnements aux calorifères des chars.*)

William Martin, Tidionte, Penn., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. A tank or reservoir secured to, and partially surrounding the engine boiler for holding or collecting the steam supply by water pipes located in the top of the furnace. 2nd. The tank or reservoir A provided with extensions *a*, which partially surround the boiler of the locomotive, in combination with pipes B B located in the upper portion of the furnace connecting the said extensions *a* and forming a continuous conduit for the generation and passage of steam to the reservoir. 3rd. The combination of the tank or reservoir A mounted on, and made a part of the engine boiler, with the pipes B and D. 4th. The combination of the tank or reservoir A for collecting and holding the steam secured to, and made a part of the engine, with the pipes B D E and universal coupling F.

No. 16,165. Improvements in Car-Couplings.

(*Perfectionnements aux accouplements des chars.*)

Nathan M. Hale and Francis M. Samson, Grand View, Texas, U. S., 23rd January, 1883; for 5 years.

Claim.—1st. The combination of the crank *m* and latch *p* with the vertically adjustable draw bar *c*, of a pin-lifting lever *g* having a hook *q*, and an adjustable connecting chain. 3rd. The combination of the pin-lifting lever *g* and hook *q* with the coupling pin *e*. 4th. The hook *q* in combination with the pin-lifting lever *g* and coupling pin, and pivoted on a stud *t* arranged to form a stop to the lever. 5th. The combination, with the coupling pin *e*, of the arm *n*, the rod *u*, the clip *v*, the rod *l*, and the lever *a*. 6th. The coupling link made of two parts *h* pivoted together and sustained in position by a spring or springs *i*.

No. 16,166. Improvements on Electric Arc Lamps.

(*Perfectionnements aux lampes électriques en arc.*)

Norman McCarty, Brooklyn, N. Y., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. In protector for electric lamps composed of the lower, or globe section A and the upper close section B constructed to close the upper opening in and form a continuation of the lower section, combined with the upper and lower carbon holders, the said upper section inclosing the upper carbon holder. 2nd. In an electric lamp, the two carbon holders, one or both adjustable, and the mechanism for adjusting said holder or holders, all arranged in a portion of the lamp below the globe holder, said portion with the said carbon holders and mechanism made detachable from the globe holder, combined with mechanism, whereby the circuit is completely broken in the act of disengaging the said mechanism from the globe holder and the circuit closed in replacing the said mechanism. 3rd. The two carbon holders, one or both adjustable, and the mechanism in connection with the principal magnet or adjusting said holder or holders, all arranged in a portion of the lamp below the globe holder, said portion with said carbon holders and mechanism made detachable from the globe holder, combined with a shunt magnet, the armature of which is in magnetic connection with the armature of the principal magnet, so that the power of one tends to overcome the power of the other and

also arranged in the portion of the lamp below the globe holder. 4th. The combination of the bell crank lever L M, the one arm M hung to the armature and the two jaws *c* hung to the other arm of the lever, said jaws arranged to grasp the carbon upon opposite sides. 5th. The combination of the bell crank lever L M, the one arm M hung to the armature and the two jaws *c* hung to the other arm of the lever, said jaws arranged to grasp the carbon upon opposite sides, and said jaw *t* made adjustable relatively to the jaw *v*. 6th. The combination of the armature N arranged parallel with the axis of the magnet P hinged to one pole R at one end, and its meeting surface with the pole R at the other end on an angle to the axis of the magnet, and the bell crank lever L M carrying the clutch *a* with the rod *l* carrying the adjustable carbon of an electric lamp. 7th. The combination of the armature N arranged parallel with the axis of the magnet P hinged to one pole R at one end, its meeting surface with the pole R at the other end on an angle to the axis of the magnet, the bell crank lever L M carrying the clutch *a* with the rod *l* carrying the adjustable carbon of an electric lamp.

No. 16,167. Improvements in Automatic Harmonica.

(*Perfectionnements aux harmonicas mécaniques.*)

Robert W. Pain, New York, N. Y., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. An automatic harmonica consisting of air pump, or bellows secured over the air ducts of an ordinary harmonica, which is supported in a suitable frame carrying a perforated music sheet. 2nd. The combination, with a reed plate fixed in a suitable air chamber and carrying reeds rivetted thereto, said chamber and plates being permanently fixed in supporting standards, which latter also support drums carrying a perforated music sheet, of a removable bellows and pump set on or over said reed plate. 3rd. The combination, with the harmonica A, of the open frame F secured thereto by dowels *f* and having strips *g*, and the double bellows or pump H firmly secured to the top of said frame.

No. 16,168. Improvement on Distilling and Condensing Apparatus.

(*Perfectionnement des appareils de distillation et de condensation.*)

Michael D. Peterman and Mathew Taylor, Penn Tshp, Penn., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. An upright still suspended in an upright water chamber over a fire, in combination with a condenser and water pipe from the condenser to the water chamber. 2nd. The combination of upright still and water chamber, a condenser, a water pipe from the condenser to the water chamber, and an injector. 3rd. In combination with the condensing chamber of a still, a coiled worm pipe polygonal in cross section having one of its sides in contact with the wall of the condensing chamber.

No. 16,169. Mechanism for Preventing the Lapping of Belts on Shafting.

(*Machinerie pour empêcher de chevaucher les courroies sur les arbres de couche.*)

William Hayes, Jr., Fall River, Mass., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. The sleeve B composed of the two sections C D united by the screws *d* and provided with the chamber E for receiving the hub of the pulley K, in combination with the shaft A and a retaining collet. 2nd. The improved clutch collet described, the same consisting of the sections L M dovetailed together and adapted to be secured to a shaft by the screw N. 3rd. The collet J, a loose sleeve for receiving the unshipped belt, a shaft on which the sleeve and collet are mounted, and a pulley. 4th. The sleeve B consisting of the two sections C D united by the screws *d* and provided with the chamber E, the collet J consisting of the two sections L M dovetailed together and provided with the screw N, the shaft A and pulley K. 5th. The sleeve B provided with the chamber E whether cast whole or made in sections.

No. 16,170. Improvements on Electric Lamps.

(*Perfectionnements aux lampes électriques.*)

William S. Parker, Little Falls, N. Y., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. The combination, with the carbon-holder, of one or more repelling magnets and suitable connecting mechanism, whereby the carbon will be moved and governed by the repellant action of the magnet or magnets. 2nd. The combination of the magnets B C formed of soft iron bobbins wound respectively with coarse and fine wire and included in the main and branch circuit, the soft iron cores *b*, *c*, vibrating lever *d*, a clutch device and the carbon holding rod D, whereby increase of magnetism of coil B causes the core *b* and its surrounding bobbin to become polarized in the same direction so that said core is repelled. 3rd. The combination, with the electro-magnet B and its core *b* adapted to move freely, of the adjustable stop piece, or block K inserted in the lower end of said magnet.

No. 16,171. Improvements on Wire Barbs for Fences.

(*Perfectionnements aux barbes des clôtures en fil de fer.*)

Curtis B. Brainard, Joliet, Ill., U. S., 23rd January, 1883; for 15 years.

Claim.—The barb for fence wires, made of a single piece of wire having the crimps *a* *a* and loop *a*, in combination with the two strand wires *c*, *c*, said barb placed upon one of said strand wires loosely and held thereon within a single coil of said strand wires by its fellow strand wire lying in the crimps *a* *a*.