

as herein shown and described, whereby the water in the said tank and bucket is heated and kept hot, as set forth. 7th. In a dish-washing machine, the combination of the tank A, the lamps 2 and the lamp flues 5, with the hinged brackets 3 and the hangers 4, substantially as herein shown and described, whereby the said lamps can be readily swung beneath or away from the said flues, as set forth. 8th. In a dish-washing machine, the heating flues 5, 7, made substantially as herein shown and described, with shoulders 9, and with their upper parts spiral, whereby any water that may spatter into the said flues will be vaporized before it can reach the lamps, as set forth. 9th. In a dish washing machine, the combination of the vertical shafts having spiral grooves and their guard tubes, with the oil saturated wooden packing, substantially as herein shown and described, whereby the said shafts will be kept lubricated, as set forth. 10th. In a dish-washing machine, the combination of the main shaft L and the drive shaft Y, with the gear wheels 12, 13, the plate Q, the spirally bent pivoted bars 14, the plate 15 pivoted to the said bars, the vertical rods 16 attached to the said plate, the lazy tongs 18, the fulcrum bracket 19 and the stop 21, substantially as herein shown and described, whereby the shaft basket and bucket can be readily raised or lowered and the pumps thrown into and out of gear, as set forth.

No. 23,308. Suspending and Detaching Device. (*Machine à Accrocher et Décrocher.*)

Martin Kauth, Buffalo, N.Y., U.S., 2nd February, 1886; 5 years.

Claim.—1st. A suspending and detaching device, consisting of two sets of prongs *c*, *c*₁, *c*₂ and *c*₃, each provided at its end with the fork *e*, and having the spaces *d* and *d*₁ between the prongs, the whole mounted upon a pole or staff, substantially as shown and described. 2nd. A suspending and detaching device, having its two sets of prongs *c*, *c*₁ and *c*₂, each provided at its end with the fork *e*, and the arm *f* secured to the base *a* and having at its outer end an auxiliary set of prongs, substantially as and for the purpose stated. 3rd. A suspending and detaching device, having its two sets of forked prongs *c*, *c*₁ and *c*₂ arranged in an inclined plane, substantially as and for the purpose stated. 4th. A suspending and detaching device, consisting of the arm *f* secured at or near the upper end of a pole or staff, and provided at its outer end with two sets of forked prongs, substantially as and for the purpose stated. 5th. A suspending and detaching device, consisting of the two sets of forked prongs *c*₁ and *c*₂, such prongs being covered with leather or other suitable material, substantially as and for the purpose stated.

No. 23,309. Combined Car Wheel and Axle. (*Roue et Essieu de Char Combinés.*)

William Malam, Edgemoor, Del., U.S., 2nd February, 1886; 5 years.

Claim.—1st. The combination of an axle, having a wheel hub formed integral therewith, and presenting a projecting flange with one or more body plates bearing against the seat or seats formed by said flange, and with bolts, whereby the securing of said body plate or plates to the flange is effected, all substantially as set forth. 2nd. An axle having a wheel hub integral therewith, said hub having a projecting flange presenting two seats for the reception of the central portions of inner and outer plates constituting the body of a car wheel, all substantially as specified. 3rd. An axle having a wheel hub formed integral therewith, and presenting two outwardly facing seats for the reception of the inner portions of the plates of a wheel body, as specified. 4th. The combination of the axle having a wheel hub formed integral therewith, and presenting two outwardly facing seats, as described, with the wheel, the body of which consists of annular plates adapted to said outwardly facing seats, as specified.

No. 23,310. Starch Gloss for Laundry Use. (*Empoi Lustré pour le Linge.*)

Joseph Hébert and Mary Hébert, Port Arthur, Ont., 2nd February, 1886; 5 years.

Claim.—A starch gloss, consisting of starch, spermaceti, white wax, singlass, gum scacia, alcohol and water, compounded in the manner substantially as set forth and in about the proportions stated.

No. 23,311. Apparatus for Laying Submarine Tunnels and Tubes. (*Appareil pour Poser les Tunnels et Tubes Sous-Marins.*)

Haydon H. Hall, New Hamburg, N.Y., U.S., 2nd February, 1886; 5 years.

Claim.—1st. The herein described apparatus for constructing submarine tunnels, consisting of a caisson provided with a prow, and means for attaching a draft chain or cable at one end, and with a neck for receiving the end of the tunnel tube at the opposite end, substantially as set forth. 2nd. A caisson, provided with the clevis B having a series of notches *b*₁, substantially as herein shown and described. 3rd. The combination, with a caisson having a neck for receiving the end of the tunnel tube, of a packing placed between the neck and the end of the tunnel tube, and a packing placed on the outer surface of the neck and the outer surface of the tunnel tube, substantially as herein shown and described. 4th. The combination, with a caisson, of a neck for receiving the end of the tunnel tube, the outer and inner edges of which neck are arranged eccentrically, so that the neck will be thicker or wider at the top than at the bottom, substantially as herein shown and described. 5th. The combination, with a caisson having a neck adapted to receive the end of the tunnel tube, of an eccentric packing placed around the tunnel tube between the outer surface of tunnel tube and the inner surface of the neck, substantially as herein shown and described. 6th. The combination, with a movable caisson, of a plate hinged to the same, so that the free end of the plate will be towards the rear end of the caisson, and of means for raising or lowering the free end of the said hinged plate, substantially as herein shown and described. 7th. The combination, with a movable caisson, of a plate hinged to the same, so that the free end of the plate will be towards the rear end of the caisson, and of a screw shaft *m* for raising or lowering the free end of the said plate, substantially as herein shown and described.

No. 23,312. Apparatus and Method of Winding or Spooling Rolls of Paper Web. (*Méthode d'Enroulage du Papier de Tenture et Appareil pour cet objet.*)

John J. Manning, Great Barrington, Mass., U.S., 2nd February, 1886; 5 years.

Claim.—1st. In apparatus for winding or spooling rolls of paper, the combination, with the spool shafts, of an equalizing mechanism disposed between pairs of said shafts, in such a manner as to run and equalize the motion of two shafts simultaneously, substantially as set forth. 2nd. In an apparatus for winding or spooling rolls of paper, the spool drive shafts arranged in pairs, in combination with an equalizing mechanism, constructed substantially as described, and adapted to engage and operate the drive wheels of said shafts through power applied to shaft of the equalizing device. 3rd. In apparatus for winding or spooling rolls of paper, a device for equalizing the speed of the spools, consisting essentially of a hub fixed upon the drive shaft, a cone pinion with a counterpoise, means, substantially as described, for locking or fixing said cone pinion upon its journal, and the compound cog wheels engaging the cone pinion and adapted also to engage the drive wheels which impart rotary motion to the spool shafts, substantially as set forth. 4th. In apparatus for winding or spooling rolls of paper, the combination of the shafts which impart rotary motion to the spools, the equalizing mechanism, constructed and arranged substantially as described, and the friction or brake mechanism, whereby the speed of any one of the said shafts may be retarded when it is desired to "lock out" one or more of the spools, substantially as set forth. 5th. The hereinbefore-described method of automatically equalizing the tension upon the spools in an apparatus for winding webs of paper into rolls, which consists in running the spools by an equalizing device located between pairs of spools and adapted to equalize the tension upon said spools, so as to wind the web upon them with equal tightness, substantially as set forth. 6th. The hereinbefore-described method of automatically equalizing the tension upon the spools in an apparatus for winding webs of paper into rolls, which consists in equalizing the speed of the primary shafts which drive the spools from a common equalizing pulley upon the main drive-shaft, and equalizing automatically the tension upon the spool shafts by an equalizing device located between pairs of spools and adapted to equalize the tension upon said spools, so as to wind the web upon them with equal tightness, substantially as set forth.

No. 23,313. Nail-Holding Hammer. (*Marteau Perte-Clou.*)

Henry H. Warron, Coto St. Paul, Que., 2nd February, 1886; 5 years.

Claim.—The combination of the hammer head A projections B, B, having inclined plain surfaces C, C, the whole constructed and arranged substantially as shown and described.

No. 23,314. Broom Cover. (*Serre-Balai.*)

William Perry and James A. Prince, Indianapolis, Ind., U.S., 2nd February, 1886; 5 years.

Claim.—1st. A cover for brooms consisting of an open ended sack adapted to be slipped over said brooms, and provided with one or more draw-strings, whereby it may be drawn in around the broom straw and the brooms thus protected. 2nd. A cover for brooms consisting of an open-ended sack, its upper and lower edges being turned in or reinforced with perforations at one or both edges, and draw strings passing through said perforations, whereby said sack is adapted to be drawn in around the brooms at the bottom or bottom, and top, substantially as set forth. 3rd. A cover for brooms consisting of a sack open at both ends, and provided with draw-strings at each end, substantially as described and for the purposes specified.

No. 23,315. Overflow and Discharge Valve for Baths. (*Valve de Décharge pour Baignoires.*)

John Demarest, New York, N.Y., U.S., 2nd February, 1886; 5 years.

Claim.—1st. The combination, with the overflow pipe D having perforations and a lug *a* on one side, of a sustaining arm E and ring *f* having grooves or slots at 1, 2 and 3, substantially as and for the purposes set forth. 2nd. In combination, with the bath or basin and the discharge pipe thereof, a separate removable tubular overflow having perforations near the lower end to form a strainer, and a valve around such tube above the perforations for closing tightly the discharge pipe, when such overflow pipe is inserted therein, a stationary guide for the upper part of the overflow pipe, and means for suspending the overflow pipe with the valve above the discharge pipe and the strainer within such discharge pipe, substantially as set forth.

No. 23,316. Nut Lock. (*Arrête-Ecrou.*)

Frank G. Stark, New York, N.Y., U.S., 2nd February, 1886; 5 years.

Claim.—1st. The combination, with a nut having radial recesses upon its inner faces arranged at approximate right angles with the bore of the nut, and with a slotted bolt, a shown, of a spring key having an arm to engage one of said recesses upon one face of the nut, and an arm to engage the opposite or outer face of the nut and limit the inward movement of the key, as set forth. 2nd. The combination, with a nut having radial recesses *B*₁ upon one face, and corresponding marks or recesses *B*₂ upon the other face, of a slotted bolt and a key having a branch with opposing inclines as *D*₁, *D*₂ to engage opposite recesses upon both faces of the nut, as set forth. 3rd. The combination, with the nut B, having recesses *B*₁ arranged upon one face around the bore of the nut and with the bolt A, having slot *a* of the spring key having branches *D*₁, *D*₂, and the latter provided with arms or inclines *D*₁, *D*₂ arranged to engage the nut upon opposite faces simultaneously, as set forth.