

arranged for the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick, 8th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw blanks, the combination of the following elements, viz.: a drilling device, a punching device, a combined milling and shaving device, a screw threading device, and an apparatus arranged for transferring the screw blanks from the first named device to the others in rotation, such combination of devices being arranged for the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick, 9th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a shaving device, a drilling device, a slotting device, a re-shaving device, a screw-threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of devices being arranged for the manufacture of screws, the heads of which are provided centrally with a round hole, in addition to the usual slot or nick; 10th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw blanks, the combination of the following elements, viz.: a shaving device, a drilling device, a slotting device, a re-shaving device, a screw threading device, and an apparatus for transferring the screw blanks from one device to the others in rotation, such combination of devices being arranged for the manufacture of screws, the heads of which are provided centrally with a round hole, in addition to the usual slot or nick, 11th. In an organized machine arranged for the manufacture of wood screws, provided in the centre of their heads with a round or angular cavity, in addition to or without the usual slot or nick, the combination of the following devices: a rotating spindle provided with clamping jaws for grasping the screw blanks, a longitudinal reciprocating rotating spindle, carrying a drill, the two spindles revolving in contrary directions, and a feeding device for delivering the screw blanks to such devices, 12th. In an organized machine arranged for the manufacture of wood screws, provided in the centre of their heads with a round or angular cavity, in addition to or without the usual slot or nick, the combination of the following devices, viz.: a rotating spindle provided with clamping jaws for grasping the screw blanks, a longitudinal reciprocating rotating spindle, carrying a drill, the two spindles rotating in contrary directions, a shaving cutter or cutters, and a feeding mechanism for delivering the screw blanks to such devices; 13th. In an organized machine for the manufacture of wood screws, in combination with the shaving, slotting and screw-threading devices embodied therein, a transferring apparatus provided with a series of clamping jaws, arranged to automatically adjust their grasp to various gauges of wire, and having the following stated movements: a movement to the right, and upward movement to grasp and remove the series of blanks from the various devices operating thereon, and a movement to the left, and a downward movement to deliver such blanks to the next succeeding operation; 14th. The combination of an apparatus or device for punching an angular cavity in the head of a screw blank, previously drilled, a device for slotting or nicking the same, and a transferring apparatus for delivering the screw blanks to, and removing them from, such punching and slotting devices, 15th. The combination of a re-shaving apparatus consisting of a reciprocating rotating shaft, carrying a milling and a shaving tool, such shaving tool being adjusted to its work by the advance of such shaft, and returned therefrom by its retrograde movement, a device for clamping and holding the screw blank while it is being operated upon, and an apparatus for delivering the screw blanks to, and removing them from the action of the milling and shaving apparatus; 16th. The combination of a carrying trough arranged to convey a column of screw blanks from a heading apparatus or a hopper, a device for separating or selecting a single blank from the column of blanks so conveyed, a device for shaving the heads of such blanks, a stationary guide rest, a reciprocating guide rest, and an apparatus for transferring the blanks after drilling and shaving, therefrom to the succeeding operations in the formation of a screw; 17th. The combination of a carrying trough arranged to convey a column of screw blanks from a heading apparatus or a hopper, a device for separating or selecting a single blank from the column of blanks so conveyed, a device for shaving the heads of such blanks, a stationary guide rest, a reciprocating guide rest, and an apparatus for transferring the blanks after being shaved, therefrom to the succeeding operations in the formation of a screw; 18th. The combination of a device for punching an angular cavity in the head of a screw blank, a device for slotting or nicking the blank head, and an apparatus for delivering the screw blank to, and removing it from, such devices, 19th. The combination of a screw-threading apparatus having two sets of threading devices operating in unison, and an apparatus for delivering the screw blanks alternately to such threading devices, such delivering apparatus having the following stated movements: a movement to the right beneath the line of screw blanks, supported in seats, a rising movement to grasp the blanks, a movement to the left carrying the blanks, and a falling movement to deliver the blanks to the threading devices; 20th. The stationary guide rest and reciprocating guide rest, arranged to support the screw blanks prior to, during the process of drilling and shaving and for delivery to the transferring apparatus.

No. 8066. Improvements in the Manufacture of Soap. (*Perfectionnements dans la fabrication du savon.*)

Camillo Maggio, Montreal, Que., 2nd November, 1877, for 5 years.
Résumé.—Un mélange de huile de graines de lin crue, d'ammoniaque liquide, d'esprit de térébenthine et de carbonate de soude.

No. 8067. Improvements on Car Trucks.

(*Perfectionnements aux trains des wagons.*)

Austin Berry, Waterloo, Que., 2nd November, 1877, for 5 years.
Claim.—1st. The journal boxes D rigidly secured to the underside of the truck frame, and bearing the ends of the divided axles C. 2nd. The divided axles C formed with a journal F and collar G, and bearing in boxes D secured to the underside of the truck frame A, to prevent enwise motion of the sections; 3rd. The oil reservoirs V above the truck frame bars B, in combination with the journal boxes D for supplying lubrication thereto; 4th. The journal boxes D having a packing chamber J, in combination with the abutting ends of a sectional axle for holding a lubricant; 5th. The boxes D secured to central bars B B of the truck, by struts c c and by braces d d, bolted to the frame A and nuts I, 6th. The swinging bolsters L, springs M

and bar N, suspended by hangers O, bearing on springs Q imposed on top of the truck frame, and yielding with the compression of the springs M for supporting the car.

No. 8068. Improvements on Seams for Leather Work.

(*Perfectionnements aux coutures pour les objets en cuir.*)

William W. Whitcomb and Samuel A. Brackett, Boston, Mass., U. S., 2nd November, 1877, for 5 years.

Claim.—Stitching together two pieces or parts of leather, and then turning the flaps or edges of one part over, and stitching it down to the main body of the other part beyond its edge, each of either of said lines of stitching being run in a channel cut in the leather.

No. 8069. Process of Making Illuminating Gas. (*Procédé de fabrication du gaz d'éclairage.*)

Henry Aitken, Falkirk, Scotland, 2nd November, 1877, (Re-issue of Patent No. 4616), for 2 years 5 months and 8 days.

Claim.—1st. Treating the gases obtained by the destructive distillation of coal and other substances, so that they are maintained at a temperature whereby they are prevented from depositing the volatile hydro-carbons and rich gases in the tar, or so that by revolatilizing the said hydro-carbons and rich gases which have been absorbed in the tars, these gases may become saturated therewith, and their illuminating power be improved, 2nd. The several arrangements of apparatus for treating crude gases obtained by the destructive distillation of coal and other substances, so that they are enabled to return or be saturated with volatile hydro-carbon vapours and rich gases, 3rd. Removing aqueous vapours from gases, and thereafter passing the gases in or through volatile hydro-carbons, thereby increasing the illuminating power, 4th. The employment of oil or tar saturated with paraffine spirit or other light spirit, as a liquid for wet meters, also for covering the water in gas holders with.

No. 8070. Construction of Vessels to Carry Inflammable Matters.

(*Construction des vaisseaux pour transporter les matières inflammables.*)

William G. Warden, Philadelphia, Pa., U.S., 2nd November 1877, (Extension of Patent No. 1736), for 5 years.

No. 8071. Washing Machine. (*Machine à laver.*)

James Grover and Thomas Grover, Toronto, Ont., (Assignees of Nathaniel T. Wortley,) 7th November, 1877, (Extension of Patent No. 1733.) for 5 years.

No. 8072. Turbine Water Wheel.

(*Turbine hydraulique.*)

Charles Barber, Meaford, Ont., 7th November, 1877, (Extension of Patent No. 1743), for 5 years.

No. 8073. Improvements on Faucets.

(*Perfectionnements aux robinets.*)

Frank C. Lillis, (Assignee of L. A. Rebasz,) Lockport, N. Y., U. S., 7th November, 1877, for 5 years.

Claim.—1st. The combination of the barrel A having the straight way C and enlarged bore H, with the fixed nut F, screw stem E and plug D. 2nd. The combination of the thumb J and rubber washer K, with the barrel A, screw stem E and nut F.

No. 8074. Improvement in Lamps.

(*Perfectionnement dans les lampes.*)

Charles F. A. Heinrichs, (Co-inventor with, and Assignee of, Charles Reistle,) Brooklyn, N. Y., U. S., 7th November, 1877, for 5 years.

Claim.—1st. In an Argand burner, the metallic holder for the mineral wick, composed of two tubes, the outer one of which is perforated, in combination with the mineral wick, at the upper end, and the filling of fibrous material between the tubes, 2nd. In an Argand burner a permanent mineral wick, in combination with the metallic wick holder, and the screw for raising and lowering the wick; 3rd. The non-combustible lamp-wick made of mineral wool with plaster, asbestos and sugar, or their equivalent, 4th. An Argand lamp-wick formed of the non-combustible porous ring b, between the metallic tubes a and c, in combination with the fibrous packing, also between said tubes a and c, 5th. The combination with the Argand lamp-wick, wick tube W and air tube g, of the packing l surrounding the wick tube a; 6th. The combination with an Argand burner having a cylindrical ring b, of the chimney holder provided with a short sleeve k, at the upper end, connecting with the tube c of the Argand wick and the perforated ring guide v, at the lower end of the chimney holder, around the wick tube W, to steady the chimney holder; 7th. The stationary air tube c having side openings, in combination with the mineral Argand wick a, and the flexible wicks g and their metallic wick tubes or holders, and the piston and rack, for raising and lowering the wick tubes and wicks; 8th. The plates W upon the movable Argand wick a, in combination with the central air-tube c and its lateral openings v for regulating the air passing to the inside of the flame, 9th. The mineral wick, whether cylindrical or flat, within a metal wick-tube or case, and having fibrous material, to conduct the oil to the same, in combination with a metal tube or case, adjacent to the top of the mineral wick, by which the height of the flame can be raised, by exposing more or less of the mineral-wick.

No. 8075. Washboard Leg Planing and Grooving Machine.

(*Machine à raboter et canneler les pieds des planches à savonnet.*)

Charles T. Brandon, Toronto, Ont., 8th November, 1877, for 5 years.

Claim.—1st. In combination with the horizontally-moving carriage E from E, the pivoted frame C provided with the rounding and tapering cutters D, 2nd. In combination with a horizontally-moving carriage provided with form