

No. 3922. ASHER S. BABBIT, Keesville, and HARRY L. ISHAM, Plattsburgh, N. Y., U. S., 9th October, 1874, for 5 years: "Washing Machine." (Machine à laver.)

*Claim.*—1st. The combination of the roller *r*, rollers *m*, and cloth *p*, all working together as described. 2nd. The combination of the roller *r*, rollers *m*, cloth *p*, and scraper-bar *k*, all working together as set forth. 3rd. The rollers *m*, and bearer *t*, in combination with cloth *p*, having hems as set forth.

No. 3923. JOSEPH SEARS, Chicago, Ill., U. S., 9th October, 1874, for 5 years: "Soldering Apparatus." (Appareil à souder.)

*Claim.*—An over gas soldering apparatus, consisting essentially of a gas pipe *L*, an air pipe *N*, a flexible mixing tube and conductor *J*, a tubular handle *B*, *C*, an internal coupling-plug or nipple *D*, and a tip *A*, having a cavity which encloses the flame and locates the same completely within the hollow tip; 2nd. An imperforate hollow tip *A*, having an internal screw-thread or its equivalent and longitudinal escape passages; 3rd. The imperforate hollow-tip having inward radial projections to form an internal coupling and longitudinal escape passages; 4th. A copper tip *A*, having a sheathing or coating *a*, applied to its rear end as described to protect the same temporarily against oxidation. 5th. A coupling plug or nipple *D*, consisting of a short section of "gas pipe" in combination with a small handle-tube *C*, and hollow tip *A*, having an internal screw thread or its equivalent; 6th. A coupling plug or nipple *D*, applied to the tip, in combination with a coupling collar *E*, applied to handle tube as described, for attaching the former to the handle tube so that the plug and tip may be readily removed and replaced together in the manner set forth. 7th. In combination with the hollow tip, having flame cavity and open rear end *u*, a shield or deflector *F* applied behind the tip, to protect the hand and throw back the products of combustion, so as to cause them to envelop the tip and to heat the work; 8th. The combination of a hollow tip *A*, a plug or nipple *D*, applied to the tip or handle tube *C*, a coupling collar *E*, and a shield or deflector *F*, the latter being formed on said collar, and supported thereby as described; 9th. A rest or holder *h*, constructed and operating as described in combination with a soldering tool having a hollow tip *A*, with a heating jet within the same and a shield or deflector *F* behind the tip, and 10th. The process described of condensing the points of copper tips for soldering apparatus by swaging or pressing them within suitable dies after they have been cast or otherwise formed in proper or approximately proper shape.

No. 3924. JOSEPH E. BILLINGS, Boston, Mass., U. S., 9th October, 1874, for 5 years: "Improvements on Bricks." (Perfectionnements de la brique.)

*Claim.*—A new article of manufacture in bricks for angles of walls, constructed as described.

No. 3925. ELIJAH WESTON, Buffalo, N. Y., U. S., 9th October, 1874, for 5 years: "Improvements on Steam Boilers." (Perfectionnements aux chaudières à vapeur.)

*Claim.*—1st. The novel combination of the shell *A*, *B*, the fire box *C*, door *E*, *F*, water bridge *G*, combustion chamber *H*, bridge *J*, flues *T*, *T*, and circular *N*, *O*, *P*, *Q*, all as described. 2nd. The combination of the combustion chamber *H*, drop-water-bridge *J*, and circulating plates *P*, as set forth; 3rd. The combination with the rear or end wall of the fire-box *C*, of the circulating plate *N*, as described; 4th. The combination with the drop water bridge *J*, of the circulating plates *P*, *P*, as described; 5th. The furnace door *D*, *E*, constructed as described with the graduated slots *a*, the wire gauze or perforated material *b*, and the segmental winged valve *c*, in combination with the fire-box *C*, water-bridge *G*, combustion chamber *H*, and drop water-bridge *J*, as specified, and 6th. The combination with the combustion chamber *H*, of the man-hole *M*, and its covering plate as set forth.

No. 3926. GEORGE M. ROBINSON, St. Armand, Que., (Assignee of J. Bacon & G. Bacon), 13th October, 1874, for 10 years: "Weather Strip." (Bourrelet de porte.)

*Claim.*—The triangular piece *A*, *B*, hinged together and having spring *D*, rubber *E*, *g* and hook *J*, combined and arranged on a door with the lug *I*, as described.

No. 3927. DAVID FRANCIS, Birkenhead, Eng., 13th October, 1874, for 5 years: "Apparatus Convertible into a Desk, a seat or a table." (Meuble pouvant servir de pupitre, chaise ou table.)

*Claim.*—Improved arrangements or apparatus convertible into a desk, a seat and a table as described. In which the use of wrought iron and the mode of formation are important points.

No. 3928. ADOLPH AUGST, Zurich, Switzerland, 13th October, 1874, for 5 years: "Improvements in Knitting Machines." (Perfectionnements aux machines à tricoter.)

*Claim.*—1st. The employment of tongue or spring needles *Z* with inclined needle beds *A*, *A*, and. The needle pressers *B*, *B*, and the apparatus *D*, *D*, for pressing down the tongues of the needles. 3rd. The lock *C*, *C*, moving between the two fixed rails *C*, *C*; 4th. The alternating or reciprocating change of the thread guide *E*, parallel with the position of the needles. 5th. The needle beds *A*, *A*, composed of separate stamped plates attached together as described.

No. 3929. EDWARD WASELL, London, Ont., 13th October, 1874, for 5 years: "Improvements in Bridge Building." (Perfectionnements dans la construction des ponts.)

*Claim.*—1st. The combination of the rigid arched tube *A*, as shown in figure 1, or the rigid arch, as shown in figure 1', with suspended chains *B*; 2nd. The combination of the rigid arched tube *A*, the suspended chains *B*, and the chord *E*, connected or hinged to a pin *O*, through the truck *G*, standing upon rollers *Q* in such a manner that the different forces or strains shall be balanced or in equilibrium and the floor of the bridge be perfectly level at all times, as set forth.

No. 3930. LYMAN D. HURD, and FRANCIS G. BUTLER, Bellows Falls, Vt., U. S., 13th October, 1874, for 5 years: "Clothes Pin." (Epinglé à linge.)

*Claim.*—The enlarged side slots *C*, *C*, central tongue *D*, and recess *B*, of a wooden clothes pin, all as described.

No. 3931. JOHN N. GAMEWELL, Hackensack, N. J., MOSES G. CRANE, Newton, and EDWIN RODGERS, Boston, Mass., U. S., 13th October, 1874, for 5 years: "Electro-telegraphic Non-interference Repeater." (Répétiteur électro-télégraphique à double action.)

*Claim.*—1st. The combination with the break circuit wheel of a telegraph repeater, upon which the lines of two or more circuits converge, of a governor, whereby, when a signal is being given over any one of the circuits and repeated over the other circuits, the armatures of the magnets in such other circuits are locked in position thereby preventing interference between several circuits, as specified; 2nd. The auxiliary escapement movement in combination with the governor *J* and the break circuit wheel, whereby the reverse movement of the governor is not permitted to take place during several successive revolutions of the said wheel. 3rd. The auxiliary escapement movement, the circuit wheel and its shaft and the lever *25*, combined and operating as described, whereby after the winding up of the escapement by the revolution of the circuit wheel shaft, the reverse motion of the said lever is prolonged and graduated as specified; 4th. The combination in an electro-telegraph repeater of two electro magnets in the same circuit one of which has a larger core than the other whereby there results an appreciable difference in the periods required for them to be charged and discharged respectively as specified. 5th. The devices described whereby the breaking of any one of several circuits connected with the repeater for the purpose of signalling occasions the break circuit wheel to be cut out from that circuit by closing the same over auxiliary fingers *x*, *x*, all combined and operating as specified. 6th. The auxiliary magnets with their armatures and hooked lever *M*, in combination with the armature lever *H*, and swinging lever *D*; 7th. The combination of the swinging lever *H*, with its two stop pins and the arm *L*, with its two fingers *s*, *s*, upon the break circuit wheel shaft as specified. 8th. The combination of the cam *28*, levers *22* and *23*, and sliding bar *18*; 9th. The combination of the governor *J*, bar *14*, lever *25*, and latch *37*. 10th. The lever *1*, with its short arm *19*, the armature, lever *H*, and lever *D*, combined and operating as specified. 11th. The auxiliary escapement *y*, *y*, with its train *31*, *32*, in an electro-telegraph repeater employed to graduate the movement of the mechanism by which said train is actuated relatively to the movement of another telegraphic repeating mechanism.

No. 3932. WILLIAM CAHILL, Syracuse, N. Y., U. S., 13th October, 1874, for 5 years: "Combined Reversible Kneeling and Foot Bench." (Un tabouret à bascule.)

*Claim.*—1st. The footstool described having a reversible top cushion, on one side and plain on the other, pivoted within a frame in such a manner that either side may be turned upward as may be desired; 2nd. A stool consisting of a series of swinging tops, constructed as described and pivoted in a long frame, so as to move independently of each other.

No. 3933. MARK ATTENBOROUGH, Sherbrooke, Que., 13th October, 1874, for 5 years: "Machine for Ventilating Rooms." (Appareil à ventiler les appartements.)

*Claim.*—The combination of the regulator *B*, nut *C*, and ears *D*, *D*, with the rope *F*, as described.

No. 3934. WILLIAM T. BUNNELL, and ANSON G. RONAN, Ottawa, Ont., 13th October, 1874, for 5 years: "Clothes Wringer." (Torseuse à linge.)