branch B, of the figure head *terminating* in an under lip *a*, and having a bevelled and corrugated surface *b*; 2nd. The combination with the vertical branch B, of the figure-head A, of the vertically-hinged jaw C, socket-bearings C C, finger-piece *c*, beckey-visored guards E, *f*, and the spring D.

No. 4798. EDWARD E. GOLD, New-York, U. S., (Assignee of S. F. Gold), 5th June, 1875, for 5 years: "Improvements on Hot Air Furnaces." (Perfectionnements aux calorifères.)

Claim.—1st. The combination with the shell of the furnace and cast therewith and forming part thereof of the flanges *c*, *c* and the projections *d*, *d*. 2nd. The construction of the *heating*-chamber in sections, adapted to form together a chamber for the products of combustion and having thereon flanges *c*, studded with projections *d*, whereby the capacity of the furnace may be increased or diminished by the addition or removal of internal sections; 3rd. The arrangement of the smoke pipe or aperture H, below the centre of the smoke-chamber, *in combination* with the disc I.

No. 4799. JEAN B. ROBERT, Montreal, Que., 5th June, 1875, for 5 years: "Improvements on a lime Kiln." (Perfectionnements à un four à chaux.)

Résumé.— 1o. La combinaison de plusieurs fours à chaux chauffés au charbon maigre: 2o. La combinaison ayant pour but de conserver la chaleur des fours, *tel que l'indiquent* les lettres I I.

Claim.—1st The combination of several lime kilns, heated by coke (*charbon maigre*). 2nd. The combination for the purpose of preserving heat in the kiln, as shown at I I.

No. 4800. AMBROSE J. B. BERGER, Easton, Pa., U. S., 5th June, 1875, for 5 years: "Improvements in Door Locks." (Perfectionnements aux serrures de portes.)

Claim.—1st. The tumbler *c*, constructed so that the bolt may be thrown by the key worked from the upper or lower key-hole, *also* the arm *e* and spring *d*. 2nd. The lever F, and spring *a*, in combination with the guard G, and stop *h*; 3rd The key-hole guard G, on the cylinder for spring also the *spring* K, stop *h*, pin *j*, and *spring i*; 4th. The combination of the parts *m*, and *n*, and the pin *o*; 5th. The spring *s*, and pins *t*, *u*, *v*, in combination with the latch; 6th The latch-fastener *r*, screw *x*, *pin y*, and groove *z*.

No. 4801. DANIEL B. POND, Woonsocket, HENRY A. STEARNS and LYSANDER FLAGG, Lincoln, R. I., U. S., 5th June, 1875, for 5 years: "Washing Machine." (Machine à laver.)

Claim.—1st. An open-cylinder G, formed preferably of detachable spaced cylindrical rods allowing the suds to pass between the same and secured to metal-discs N, in combination with yielding wooden-rubber or rubber lined-rollers D, secured to the segmental end-plates C; 2nd. The locking pin *p*, in combination with the continuous-shaft I, and disc N, having a diametrically notched-flanger *r*, and detachable cylindrical-rods *h*; 3rd. The open ended re tically arranged guide-plates F, and yielding and detachable pressure-rollers D D, secured in said guide-plates and the *journals f*.

No. 4802. WILLIAM ABERCROMBIE, Hamilton, Ont., (Assignee of A. Philipp and F. L. Blakely) 5th June 1875, for 5 years: "Relishing machine" (Machine d'assemblage à mi-bois.)

Claim.—1st. The cutting-head A, in combination with boring-tool C, placed at right angles to it, and the vertically and horizontally adjustable-table O.

No. 4803. FRANKLIN E. TOWN, Boston, Mass., U. S., 5th June, 1875, for 5 years: "Gang Saw Mill." (Moulin à scies multiples.)

Claim.—1st A gang saw-mill having its various parts constructed, combined and arranged as described; 2nd. The frame composed of beams A and A^1, the fender-beams B and B^1, vertical-post C and C_1, provided with guides *i*, and lugs to which bolted the steam-cylinder E, and the connecting-caps D; 3rd. The mechanism for feeding logs to the saw consisting of a pair of cone-pulleys, or their equivalents, connecting shafting and gear, and rotating screw-gearing with a worm-wheel upon the roll-shaft; 4th. The feeding-rolls O, O^1, and the worm-gear for driving the same, in combination with the sprocket-wheels R, and pitch-chain P; 5th. The slide-blocks Y, constructed as described and provided with the adjusting-screw *v*, in combination with the recessed saw-frames, 6th. The suspending-brackets I, provided with the journal-boxes c, in combination with the beams A, A^1, and crank-shaft H, H^1.

No 4804. LEMUEL BRADFORD, 2d., Plymouth, Mass., U. S., 5th June, 1875, for 5 years: "Machine for Making the Shanks of Boots and Shoes." (Machine à faire les creux des pieds de chaussures.)

Claim.—1st. The slides K, and Q, eccentric-shaft J, standard U, and springs *m*, *n*, constructed to operate in punching, cutting and moulding metallic-shank-*pieces* for boots and shoes, 2nd. The combination of the lever c, slide *e*, and cam M; 3rd. The slide Q, provided with the spring-dowel l; 4th. The frame C, provided with the ways F, F, pulley H, and cam-lever G, in combination with the slide K, guides T, T, and standard U; 5th The cam K, provided with spline 5.

No. 4805. GEORGE E. DAYTON, New-York, U. S., 5th June, 1875, for 5 years: "Improvements in metallic Sky-Lights." (Perfectionnements aux lucarnes métalliques.)

Claim.—1st. The glass support bar B, made flat on top as described to avoid the necessity of a rabbet: 2nd. The glass support bar B_3, made flat on top with *gutters b*, *b*, of a single piece of metal, 3rd. The fastening-wires applied to cap F; 4th. The ridge-bar G, constructed without a rabbet and adapted to different pitches of the roof; 5th. The flashing I, turned up on edge to form a gutter *i*, and applied to the wooden-curb *R*. 6th The opening sash-bar J, constructed and applied in connection with the glass supporting bars; 7th. The cross-bar K, constructed, arranged and applied between the bars B_2, B_3, and the two lengths of glass. 8th. Side-clasp D, covering-joint made where outer bar re-ts on curb I, necessary to do away with frame; 9th. The casing L, constructed and arranged to form the flanges.

No. 4806. JAMES B. SMITH, Amable, Ont., 5th June, 1875, for 5 years: "Car-Coupler." (Attelage de wagons.)

Claim.—The peculiarly arranged lever marked C, with its handle marked D.

No. 4807. WILLIAM RANDALL, Salem, Mass., U. S., 5th June, 1875, for 5 years: "Improvements on Injectors for Boilers." (Perfectionnements aux injecteurs des chaudières à vapeur.)

Claim.—The internal and external nozzles C, D, provided with the passages *b*, *c*, of connection with the steam induct E, in combination with the cock F, arranged in the induct and provided with the passage *a*, to engage with either or both the said passages *b*, *c*, in the larger nozzle C, open at its rear and provided with the cap or cover B, in combination with the body A, provided with the chamber G, the steam-induct E, and the water induct H, in the front-nozzle I, arranged to extend across its chamber K, and within the mouth R of the educt N.

No. 4808. WILLIAM HARDY, Ancaster, Ont., 5th June, 1875, for 5 years: "Improvements on Horse Collars." (Perfectionnements aux colliers de cheval.)

Claim —The use of the matting in making the rim A, the body C, and the cap D.

No. 4809. DUNCAN MACKINNON, Stratford, Ont., 5th June, 1875, for 5 years: "Combined Pen and Ink-Holder." (Plume-fontaine.)

Claim.—1st The writing-point E, constructed of glass, a non-corrosive metal or other suitable non-corrosive material, and consisting of the tubular portion or valve-chamber E^1, and tapering-point E^2, with ink, bore or duct *e*, in combination with the valve F, and spindle F_1; 2nd The detachable-holder C, with writing-point E and valve F, in combination with the ink-reservoir B; 3rd. The air-tube G, leading a column of air to or near the foot of the ink-reservoir B, for the purpose of assisting and regulating the flow of ink therefrom; 4th. The perforated-cap H, and rod G^2, in combination with the ink-valve F, and ink reservoir B.

No. 4810. WILLIAM BUCK, and JUDSON W. BUCK, Brantford, Ont., 5th June, 1875, for 5 years: "Improvements on Heating Stoves." (Perfectionnements aux poeles de chauffage.)

Claim.—1st. The application of cast-iron lining H, having the upper edges in close contact with lining of stove and forming the flues I, near the upper edges by which the smoke and heat pass down both sides of stove: 2nd. The application of grate-bars K, in front of damper C, to raise the wood from the bottom: 3rd. The application of damper E, in end flue to regulate the draft in stove, also circular-damper F, set in end flue to check combustion and also door G, in end flue in connection with flue I. 4th The application of diaphragm M, by which the draft is slightly checked, and the heat sent forward.

No. 4811. BENJAMIN ATWOOD, Stanstead, Que., 5th June, 1875, for 5 years: "Mowing Machine." (Faucheuse.)

Claim —1st. The combination of the lever N, suspension-bar Q, and brace-bar D, with the frame A, and driving-pitman M: 2nd. Constructing the finger-bar S, of two plates firmly bound together by bolts or rivets *d*, and holding between them the guard-plates *i*; 3rd. The mode of constructing the cutter-bar R of two plates firmly bound together by bolts or rivets *h*, and holding between them the