No. 7181. Machine for Treading and Flanging Caps for Fruit Jars.

(Machine à fileter et rabattre les bouchons des pots à fruits.)

John A. Chadwick, Hamilton, Ont., 8th March, 1877, for 5 years.

Claim.—1st. The female die E constructed with a series of grooves having sharp edges *s*, and the male die D constructed to fit inside and correspond therewith, only making due allowance for the thickness of sheet metal to intervene between them, 2nd. The construction of the female die E in two parts *a* and *a*1, the upper part *a* being hinged to lug *b*; 3rd. The construction of the handle F secured to the projection *d* and made adjustable by means of the rod c and nut *f*, in combination with the pieces c c and upper half *a* of die E for operating said die and locking it; 4th. The construction and arrangement of a revolving finger G or a series of revolving fingers G, pivoted to the plate I and provided with projections *j*, notches K held in place by an elastic band *l*, or its equivalent, and operated back and forth by a cone and its handle *m* for turning a flange on metal rings for fruit jars. 5th. In combination with one finger G or a series of fingers G, the arrangement of a movable cone *i*, impinging upon the same and operated back and forth by a handle *m*, for pressing in and out the opposite ends of the fingers for flanging metal screw caps or rings for fruit jars; 6th. The combination of the finger or fingers G, cone *i*, band *l*, handle *m*, male and female dies E D, handle F, shaft H and pulleys, all combined for threading and flanging metal rings for glass fruit jars.

No. 7182. Improvements on Coal Stoves.

(Perfectionnements aux poêles à charbon.)

John W. Elliot, Toronto, Ont., 8th March, 1877, for 5 years.

Claim—1st. In a fire pot for a coal-burning heating stove, the combination with an upper stationary section A of a lower movable section B capable of revolving horizontally a complete circle; 2nd. The stationary section A provided with the circular lugs A1 and notches E E, in combination with the movable section B; 3rd. In combination with the movable fire pot section B, the grate C, arranged in such manner that the grate and movable section may be operated together or independently of each other, 4th. In combination with a grate supported at its circumference and provided with a central socket, the lever D provided with the tapering stud D1, 5th. In combination with the grate C and movable fire pot section B, the lever D provided with the stud D1 and upwardly projecting piece F, 6th The combination of the grate C with a fire pot provided with an annular grate support B2 with oppositely placed recesses G.

No. 7183. Rocking Horse, Carriage, Sled, High Chair and Step-Ladder.

(Cheval berçant, voiture, traîneau, chaise haute et marche-pied.)

David O. Parker, Liverpool, N. S., 10th March, 1877, (Extension of Patent No. 1372), for 5 years.

Claim.—The two horses A, the rockers K, the two wheels B, the two runners C, and the cross pieces D E F H J, the said parts A K B C D E F H J being constructed and arranged as shown.

No. 7184. Improvements on the Manufacture of Carbonates of Soda.

(Perfectionnements dans la fabrication des carbonates de soude.)

Ernest Solvay, Brussels, Belgium, 10th March, 1877, for 5 years.

Claim.—1st. With reference to the mode of using carbonic acid in the manufacture of carbonates of soda the process of preliminary carbonation of the ammoniacal brine combined with, and in addition to, the processes and means in use hitherto for effecting the reaction of carbonic acid in the said manufacture; 2nd. With reference to the decomposition of the bicarbonate of soda and the drying or calcination of the carbonate of soda produced, the process of dividing the operation into two distinct parts, so that the decomposition of the bicarbonate of soda into carbonate of soda is effected previously to the calcination of the said carbonate, the process of applying ordinary steam to the decomposition of bicarbonate of soda in such a manner that the bicarbonate will have numerous points of contact with the steam, and that the latent heat in the said steam may be utilized and the water of condensation may be used for effecting a first lixiviation of the bicarbonate of soda upon the filter, the process of applying industrially ammonia in the form of gas or liquid to the decomposition of bicarbonate of soda, also the combination of the rotatory cylinder A, tube B, chamber C, toothed gearing E *e*, fire grate F, hopper T, door O and rollers *r r*1, forming a continuous rotatory apparatus or furnace with open ends for the calcination of carbonate of soda,

No. 7185. Gas-Lighting Apparatus.

(Appareil à allumer le gaz.)

John Ruthven, Ottawa, Ont., 10th March, 1877, for 5 years.

Claim.—1st. In combination with a stationary friction striking needle, an intermittently moving endless band provided with a series of friction explosive charges; 2nd. The adjustable ferrule C with socket L, roller D, and adjustable needle L1, in combination with the band E having a series of explosive charges placed thereon, 3rd. The rod A provided with the fixed sleeve G and nut F, in combination with the ferrule C and band E; 4th. In combination with the roller H provided with the ratchet wheel I and the band E, the spring trigger piece J with pawl I1, 5th. The combination with an endless band provided with a series of regularly placed explosive charges and a friction striking needle of a spring trigger with pawl and ratchet wheel connection arranged to communicate an intermittent movement to the said band for the purpose of igniting a single charge at each stroke of the trigger; 6th. The rod A with bore *a* and chamber A1, in combination with the ferrule C and attachment bands E, and band operating mechanism, 7th. The detachable hollow handle B with turnkey attachment O, in combination with the rod A, 8th. In combination with the rod A provided with the chamber A1 and the chamber cover N arranged as a taper box.

No. 7186. Improvements on Saw Frames.

(Perfectionnements aux châssis de scies.)

Jesse Kinney and John W. Smyth, London, Ont., 10th March, 1877, for 5 years.

Claim—The saw frame composed of arched top A and handles B C in combination with thumb screws c *a*1 and blade D

No. 7187. Improvements in Church Benches.

(Perfectionnements aux bancs d'églises.)

Charles Potter, Toronto, Ont. 10th March, 1877, for 5 years.

Claim.—1st. The seat A having chamfered corners, in combination with the wings B and C with corners correspondingly chamfered and hinged at *a a* to the said seat A, 2nd. The slotted socket E and bracket F attached to the ends of the wings B and C, in combination with a hollow pillar D provided with one or more pins H and a spring roller carrying a curtain G; 3rd. The adjustable supports J pivoted to the ends of the seat A, in combination with the plates or pins K and L.

No. 7188. Improvements on Cross-cut Saws.

(Perfectionnements aux scies de travers.)

Jerome C. Dietrich, Galt, Ont., 10th March, 1877, for 5 years.

Claim.—The long narrow cutting teeth C having parallel sides, separated by long narrow spaces D, cut transversely in the saw plate with the bridge connections L being used in combination with, or without, the clearing teeth B, separated therefrom by the chip spaces F.

No. 7189. Improvements in Mowers and Reapers.

(Perfectionnements aux faucheuses-moissonneuses.)

Andrew G. Gray, St John, N. B., 10th March, 1877 for 5 years.

Claim.—1st. The combination of a double lever working in opposite directions in a cam groove, formed in the pheripery of a wheel mounted on the main axle and acting through suitable mechanism on the connecting rod of the knife bar; 2nd. The combination of the frame G rocked to and fro by levers H H1 carried in it and working in the groove I formed in the wheel K, the rocking motion being imparted through lever M and disc N to the lever S to which is attached the connecting rod T; 3rd. The combination of the disc N, block N1, sleeve Q and frame carrying pins Q, all mounted loosely on spindle O with lever R pivoted to the platform of the machine, and lever S formed in one with spindle O, 4th. In combination with the lever M the elastic pieces M1 M2.

No. 7190. Improvements in Sheet Metal Pipes.

(Perfectionnements dans les tuyaux en feuilles métalliques.)

Charles F. Hems, Philadelphia, Pa., U. S., 10th March, 1877, for 5 years.

Claim.—1st. The loop c in combination with the eccentric and eccentric plate, 2nd. The combination of the loop c, eccentric, eccentric plate and the sheet metal of which the coupling is composed, 3rd. The combination of the solid section *k* and the open section *l*, provided with clasps or their equivalents.

No. 7191. Improvements on Peach Parers.

(Perfectionnements aux peleurs de pêches.)

George Bergner, Washington, Mo., U. S., 10th March, 1877, for 10 years.

Claim.—1st. A revolving and longitudinally sliding fork shaft and fork, a simultaneously turning and spring acted paring knife and a movable or stationary slicing knife, 2nd. The combination of the revolving and longitudinally movable fork shaft with a longitudinal rack rod connected thereto, and a mutilated base pinion of the turning knife stock, 3rd. The combination of the fork shaft B, having locking spring catch device, with the connecting standard D1 of arch rod D, 4th. In peach and apple parers, the combination of the fork shaft having end screw with a detachable and interchangeable fork having a central screw socket, 5th. In peach parers, slicers and stoners, a spring fork provided with convex and recessed semi sections having front cutting edges, 6th. The combination of the revolving fork shaft, having projecting lug *e*, with the curved top extension *d*1 of the swinging and spring acted fork shaft holder F to throw the same out of gear with worm of fork shaft, 7th. The combination of the guided and movable fork shaft, having worm thread at one end with a swinging and spring acted fork shaft holder entering the worm to produce the backward motion of the fork shaft in the guide standard, 8th. The combination of the swinging and spring acted shaft holder F, having lug or arm *f* and sliding pivots *d*2 with the recess *d*3 of standard A1 to retain the holder securely, when in or out of gear, with worm, 9th. The combination of the sliding rack rod D, having hook shaped end *g*, with the swinging and spring acted shaft holder I, having sliding pivots to throw the holder into gear with worm by the forward motion of fork shaft, 10th. The combination of a peach or apple fork with a longitudinally sliding and guided sliding knife, 11th. The combination of base frame A, having guide supports *i*1, with slide rod H having adjustable screw nut *i*2 and knife standard G1, 12th. The combination of base frame A, having support *i*3 and guide rail *l*, with slide rod H, and flanged base frame of knife standard G, 13th. The combination of the slicing knife G, having base flange *h* and screw *h*1, with the slotted standard G and convex clamping knob G2, 14th. The combination of the detachably pivoted and spring acted clearing arm I of the rack rod D with a stationary pin *n* of frame A, to produce the throwing off of the fruit from the fork by the forward motion of clearing arm fork shaft and rack rod, 15th The fork shaft B, having spring catch *b* and lug *c*, with tapering ends, in combination with standard A2 and standard D1 of rack rod D, to automatically release or lock fork shaft to standard D1 for the slicing and coring motion.