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## INVENTIONS PATENTED.

### No. 7170. Improvements on Horse Rakes. (*Perfectionnements aux râteaux à cheval.*)

Thomas Galloway and John Larsen, Oshawa, Ont., 1st March, 1877, for 5 years.

*Claim.*—1st. Eccentric dog J, or its equivalent, pivoted upon the bracket E, in combination with the shoe K fitting into the groove L cut in the hub of the wheel A; 2nd. The clutch M bolted to the bracket P, in combination with the groove L cut in the hub of a wheel A revolving upon the axlestud B; 3rd. The shoe K wedged into the groove L by the eccentric dog J in combination with the clutch or stop M; 4th. The foot lever Q working within the elongated staple R and provided with the double crank O, in combination with the chain or rope P connected to the cranked rod N, for the purpose of operating the dog K; 5th. The brackets E E bolted to the axlestud C and supporting the staple bar D, in combination with the brackets F F pivoted upon the axlestud B B and supporting the shaft G; 6th. The teeth H having hooked ends, in combination with the brackets I bolted to the back of the axlestud C.

### No. 7171. Folding Washstand.

(*Lavoir à brise.*)

Sidney Kinder, Amherst, N. S., (Assignee of David O. Parker,) 3rd March, 1877, (Extension of Patent No. 1357), for 5 years.

*Claim.*—The three detachable hinged pieces A a' and the shunt B b', said parts A a' B b' being constructed and arranged, as described.

### No. 7172. Improvements in Sparks Arresters. (*Perfectionnements aux arrêts-flammèches.*)

Frank M. Stevens, Concord, N. H., Henry G. Holmes, New York, and John A. White, Concord, N. H., U. S., 5th March, 1877, for 5 years.

*Claim.*—1st. The combination of the elbow pipe G, its partition I, the two branch ducts K K and the conduit E to be used with a chimney and spark receiver; 2nd. The steam jet tube h in two sections coupled and provided with a stop cock K, in combination with the holder A and the spark receiver C hinged together and provided with the outlet f; 3rd. The spark receiver C provided with a receiving mouth l (separate from the conduit E, for the discharge of sparks into such receiver), and hinged or applied to the open end of the smoke-box B so as to be removable therefrom and the conduit E, such open end of the smoke-box being provided or not with a head; 4th. The combination of the spark receiver C and its discharge chimney or chimney D with the smoke-box B, the chimney H, the elbow pipe G and its three educts E K K.

### No. 7173. Combination of Processes for Making Syrups.

(*Combinaison de procédés pour faire des sirops.*)

Hugh W. Walker and Thomas L. Patterson, Greenock, Scot., 6th March, 1877, for 5 years.

*Claim.*—1st. The clear, bright fruit flavoured syrups made from the residual sweet liquids of syrups obtained in manufacturing or refining sugar the sweet liquids or syrups being treated with a solution of a suitable substance such as an alkaline bicarbonate or a soluble phosphate or a salt of alumina, which substance is subsequently precipitated and with impurities removed by filtration whilst the syrups are cooled rapidly after concentration and have fruit like essences combined with them; 2nd. Clear bright syrup made from the residual sweet liquids or syrups obtained in manufacturing or

refining sugar, the sweet liquid or syrups being treated with a solution of a suitable substance, which is subsequently precipitated and with impurities removed by filtration, whilst the syrups are cooled rapidly after concentration; 3rd. Clear, bright syrups made from suitable sweet liquids or syrups, and prevented from becoming dim or turbid by being rapidly cooled after concentration; 4th. Fruit flavoured syrups made from suitable sweet liquids or syrups by combining therewith natural or artificial fruit essence or fruit-like essences.

### No. 7174. Improvements in the Manufacture of Porcelain.

(*Perfectionnements dans la fabrication de la porcelaine.*)

Abel d'Estampes, New Orleans, La., U. S., 6th March, 1877, for 5 years.

*Claim.*—Artificial kaolin when formed of shells, white sand and feldspath.

### No. 7175. Improvement on Collars for Garments.

(*Perfectionnement des collets d'habits.*)

George Farewell, Salem, Mass., U. S., (Assignee of Alberta Boley,) 6th March, 1877, for 5 years.

*Claim.*—The detachable collar A consisting of parts a b and having holes i for coats, sacques, capes and similar other garments.

### No. 7176. Improvements on the Manufacture of Steel.

(*Perfectionnements dans la fabrication de l'acier.*)

Alfred B. Mullent, Washington, D. C., U. S., (Assignee of Julius Baur,) 6th March, 1877, for 5 years.

*Claim.*—The combination with the steel-making iron, in suitable proportions, of an alloy of chromium, manganese and iron, or of the requisite proportions of ferro-chromium and ferro-manganese.

### No. 7177. Improvements on Semaphore Signals.

(*Perfectionnements aux signaux semaphores.*)

Francis Culham, Beverly, Ont., 8th March, 1877, for 5 years.

*Claim.*—The combination of the endless wire H H, signal arm A, shaft B, pulleys C C and pulley G.

### No. 7178. Process for Making Oakum.

(*Procédé pour faire de l'étoffe.*)

William E. Geer, Chicago, Ill., U. S., (Assignee of Charles M. Winter,) 8th March, 1877, for 5 years.

*Claim.*—The process of making oakum by using a solvent made of salt soda or sun tan alkali and lime dissolved in water for cutting and holding in solution the tar and asphaltum with which the fibre is saturated, and cleansing of the said fibre with the acid solution.

### No. 7179. Improvements on Nail Machines.

(*Perfectionnements aux machines à clou.*)

Isaac Briggs, Middleborough, Mass., U. S., 8th March, 1877, for 5 years.

*Claim.*—1st. In a feeding device for a nail machine the cam C, bar I2 and lever C'; 2nd. In a feeding mechanism for a nail machine the plate L, levers M M, shafts 15 K, rod K, lever q and cam K'; 3rd. In a feeding mechanism for a nail machine the barrel Dz, plate Dz, plate H, cords E, rod Hz, levers Hz Hz, and rod G'.

### No. 7180. Improvements on Trusses.

(*Perfectionnements aux bandages hermatiques.*)

Philip Werner, Stryker, Ohio, U. S., 8th March, 1877, for 5 years.

*Claim.*—1st. A truss pad composed of interlocking sections hinged together to form a safe receptacle for valubles; 2nd. The slotted back section having the button secured theron between the slots; 3rd. The combination of the pad, its slotted back, the button mounted thereon between the slots and the strap provided with a button hole and adjustable buckle whereby the pad is rendered adjustable and adaptable to either side of the body or to persons of different size, and one button fastens both ends of the strap.

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

(*Machine à filer 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 e, 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<sub>1</sub>, 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 e and nut f, in combination with the pieces e 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 an 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, hand 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 A<sub>1</sub> 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 D<sub>1</sub>; 5th. In combination with the grate C and movable fire pot section B, the lever D provided with the stud D<sub>1</sub> and upwardly projecting piece F; 6th. The combination of the grate C with a fire pot provided with an annular grate support B<sub>2</sub> 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 ammonical 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 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 fixation 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, fire grate F, hopper T, door O and rollers r r, 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 L, 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 K; 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 A<sub>1</sub>, 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 A<sub>1</sub> 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 e d 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 tanged at 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 tracés.*)

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 E.

### No. 7189. Improvements in Mowers and Reapers.

(*Perfectionnements aux faucheuses-moussonnaises.*)

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 periphery 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 H 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 M, 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 M<sub>1</sub> M<sub>2</sub>.

### 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 e in combination with the eccentric and eccentric plate; 2nd. The combination of the loop e, eccentric, eccentric plate and the solid metal of which the coupling is composed; 3rd. The combination of the solid section L and the open section I, provided with clasps or their equivalents.

### No. 7191. Improvements on Peach Parers.

(*Perfectionnements aux poliers 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 D 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 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 f or arm f and sliding pivot d with the recess d of standard A 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 F, having sliding pivot 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, with slide rod H having adjustable screw nut k and knife standard G; 12th. The combination of base frame A, having support n 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, with the slotted standard G and convex clamping knot G<sub>2</sub>; 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 A<sub>2</sub> and standard D<sub>2</sub> of rack rod D, to automatically release or lock fork shaft to standard D<sub>2</sub> for the slicing and coring motion.

**No. 7192. Improvements on Car Wheels.***(Perfectionnements aux roues de wagons.)*

John K. Sax, Pittston, Pa., U. S., 10th March, 1877, for 5 years.

*Claim.*—1st. A car wheel produced by introducing the metal from below near the periphery of the mould in several streams flowing spirally from the centre and issuing upwards; 2nd. The mode of casting car wheels, that is by introducing the metal from below near the periphery of the mould in several streams flowing spirally from the centre and issuing upwards nearly parallel to the periphery; 3rd. The mode of casting car wheels by introducing the entire body of metal in the periphery in a series of streams at regular intervals, each at such an angle as will impart a rotary motion to the entire body of metal until the mould is filled; 4th. The regularly curved sprue rods constructed to form curved channels leading spirally from the centre sprue to the rim of the mould; 5th. The pattern block E adapted to form below the sprue D an enlarged central receiving basin communicating with the sprue channels; 6th. The combination of the central hollow core having an enlarged bottom portion with a mould having the basin below the core and the sprue holes C radiating spirally from the basin to the lowest part of the rim; 7th. A chill provided with a vertical re-enforcing flange A permanently attached to and forming part of the chill and extending upwards to enclose the cope; 8th. The combination of the flanged chill and the cope L enclosed by the flange.

**No. 7193. Improvements on Screw Fastenings.***(Perfectionnements dans le posage des vis.)*

John McCarthy, Syracuse, N. Y., U. S., 10th March, 1877 for 5 years.

*Claim.*—The screw A fitted loosely in the body B, and a movable catch or sectional nut h in channel e transverse in said body and held engaged with the thread of the screw by a spring.

**No. 7194. Improvements on Hat Machines.***(Perfectionnements aux machines à chapeaux.)*

Ambrose Hill, Yonkers, N. Y., U. S., 10th March, 1877, for 5 years.

*Claim.*—1st. The combination of the hinged frame B, spring C, shaft F, pulley G, fly wheel H, turning wheel I, connecting rod D, treadle E, with each other and with the frame A, for turning hat brims; 2nd. The combination of the adjustable bar K, adjustable rest bar L and detachable rest M with each other and with the frame A for supporting hat brims while being turned.

**No. 7195. Improvements on Gang Plough Frames.***(Perfectionnements aux bâts de charrues à socs multiples.)*

David W. Vary, Stratford, Ont., 10th March, 1877, for 5 years.

*Claim.*—Two or more holes D in gang plough frame A, in connection with movable centre pin C for the purpose of equalizing the draft of the plough, so that the plough will accommodate itself to hard or soft soil.

**No. 7196. Improvements on Work Tables.***(Perfectionnements aux tables à ourrages.)*

Mary F. Scott, South Bend, Ind., U. S., 10th March, 1877, for 5 years.

*Claim.*—1st. The construction of the rotating top, comprising the two octagonal boards A and the cylinder or socket B, in combination with the triangular drawers C C C C C C C; 2nd. The combination with the rotating top and triangular drawers of the spiral springs (or rubber bands) E E E E E E; 3rd. The combination of the complete rotating top with the stem A and feet H.

**No. 7197. Improvements on Boot and Shoe Tips.***(Perfectionnements aux carres de chaussures.)*

William Green, Montreal, Que., 12th March, 1877, for 5 years.

*Claim.*—1st. The tip B made of sole leather, trimmed and compressed to shape to prevent the wearing out of the vamps in the toe part of the shoe or boot in combination with the turn-shoe or the turn-boot; 2nd. The peculiar manner of securing the tip B made from the tip blank C, to turn shoes or to turn boots by sewing the tip blank in the same manner as and simultaneously with the vamps to the sole while the shoe or boot is being made.

**No. 7198. Improvements on Panning Mills.***(Perfectionnements aux farines.)*

William McKenzie, Morrisburgh, Ont., 10th March, 1877, for 5 years.

*Claim.*—1st. The combination of the parts A and B by the pivot d or its equivalent and hanging the combined shoe at the outer end by one set of hangings and hanging the parts separately at the inner ends; 2nd. The combination of the shaker C with the shoe A, B, so that the same shaker at the same time shall make A and B shake equally, or either more or less than the other.

**No. 7199. Improvements on Washing Machines.***(Perfectionnements aux machines à laver.)*

Garret Seger and William Stanton, Humberstone, Ont., 13th March, 1877 for 5 years.

*Claim.*—The combination of the ribbed roller B and the washboard C.

**No. 7200. Improvement on Horse Car Pole Attachments.***(Perfectionnements dans l'assemblage des tiges de portes de tramways.)*

Samuel A. Otis, Boston, Mass., U. S., 13th March, 1877, for 5 years.

*Claim.*—1st. The combination of the pin B, hook D and lifting chain or strap H with the draw bar A; 2nd. The combination of the pin B, start M, swivel C and hook D.

**No. 7201. Art of Drying Fish.***(Art de sécher le poisson.)*

Norman Durkee, Yarmouth, N. S., 13th March, 1877, for 5 years.

*Claim.*—1st. The combination of railways with a fish store, so as to allow flakes to be rolled or slid upon them; 2nd. The construction of the flake or flakes with rollers attached to the sides to roll upon the rails, so that the flake A may be pushed easily over them out of, or into, the fish store when spread full of fish.

**No. 7202. Improvements in the Process of Preserving Meat.***(Perfectionnements dans les procédés de conservation de la viande.)*

John Harvey, London, Eng., 10th March, 1877, for 5 years.

*Claim.*—Subjecting the substances to the action of sulphurous acid gas obtained from the combustion of bisulphide of carbon.

**No. 7203. Improvements in Sap Spouts.***(Perfectionnements aux tuyaux de sucrerie.)*

Hubert R. Ives, (Assignee of Noah P. Leach), Montreal, Que., 13th March, 1877, for 5 years.

*Claim.*—1st. In any screwed sap spout, the combination therewith of a recessed or cut away portion, having aperture therem, and being formed immediately in rear of a projecting ridge fitting the lower part of the bit hole; 2nd. In combination with the trough of any sap spout, the projections H H formed on its sides.

**No. 7204. Improvement on Fences.***(Perfectionnement des clôtures.)*

Cyrus L. Topliff, Brooklyn, N. Y., U. S., 13th March, 1877, for 5 years.

*Claim.*—1st. A barbed sheet metal plate having two rows of barbs formed by serrating its edges and turning them up at right angles to the body of the plate and parallel to each other.

**No. 7205. Improvements on Wash-boards.***(Perfectionnements aux planches à seconner.)*

George Groom, Hamilton, Ont., 13th March, 1877, for 5 years.

*Claim.*—A wash board having two rubbing corrugated sides B, one side corrugated finer than the other.

**No. 7206. Improvements in Plane Guides.***(Perfectionnements aux guides rabots.)*

Andrew J. Peamer, Evansville, Ind., U. S., 13th March, 1877, for 5 years.

*Claim.*—1st. The combination of the hinging and clamping bolts d with the plane A and plate F having ears e, e, and with the guide B and plates D having projection b; 2nd. The plate D, having slots g with enlarged openings i, in combination with the guide B and its set screw a; 3rd. The combination of the guide B and the plates D, having a graduated segmental projection b, with the plane A and the plate F having ears e e.

**No. 7207. Improvements on Stove-pipe Elbow Blanks.***(Perfectionnements aux ébauches de coude de tuyaux de poêles.)*

Green Choate, East Saginaw, Mich., U. S., 13th March, 1877, for 5 years.

*Claim.*—A blank for a four piece elbow cut on three similar, but oppositely arranged, reversed curves from a rectangular sheet of metal and punched for receiving rivets.

**No. 7208. Improvements on Match Splints.***(Perfectionnements aux bois d'allumettes.)*

George Hargreaves, Detroit, Mich., U. S., 13th March, 1877, for 5 years.

*Claim.*—1st. A match splint having a reduced blunt end adapted to receive the dip; 2nd. A match splint provided with a reduced blunt piece or block at its dipping end, and with a tapering part which connects said block to the main body of said splint; 3rd. A match splint having a top a, which is similar in cross section to the main part of said splint, and an intermediate tapering part a; 4th. A match splint having a curved tapering portion extending from the body of said splint to a diminished blunt dip end.

**No. 7209. Improvements on Spring Bed Bottoms.***(Perfectionnements aux tapis de lits à ressorts.)*

Porter Williams, London, Ont., 13th March, 1877, for 5 years.

*Claim.*—Rods F F and springs G G, caps H H and nuts I I contained in arbors E L in the blocks C D, in combination with the bed bottom constructed of longitudinal slats A A and cross pieces B B.

**No. 7210. Improvements on Inhalers.***(Perfectionnements aux inhalateurs.)*

Jeremiah S. Letts, Ripon, Wis., U. S., 13th March, 1877, for 5 years.

*Claim.*—The bottle C connected with the bottle B, by means of the tube S, so arranged that one end shall be above the surface of the liquid in the bottle C and the other end below the surface of the liquid in the bottle B, in combination with a bottle A, valve O and tube X connecting the bottles A and B arranged to contain cotton or other porous substance, said bottles A B and C being fitted with stoppers perforated to receive the tubes S and X, the mouth piece e and the vent f, and supplied with rubber and metal caps.

## No. 7211. Improvements on Oil Tanks. (*Perfectionnements aux réservoirs à huile.*)

Charles A. Munger, New York, U. S., 13th March, 1877, for 5 years.

*Claim.*—1st. A flat or nearly flat horizontal cover for tank cans composed of a fixed rear portion and a pivoted front portion or lid, the latter turning on a vertical pivot; 2nd. A horizontal partition or sunk floor having a hinged front portion adapted to be lifted at will to give access to the reservoir beneath the same; 3rd. A pump for tank cans adapted to be adjusted so that the head or nozzle can be raised or lowered vertically at will; 4th. A tank can having a flat or nearly flat horizontal cover and provided with a parallel or nearly parallel partition below this cover to form the sink or pump chamber; 5th. A tank can having a flat or nearly flat horizontal cover and a parallel or nearly parallel partition below the same which can be opened at will, and a removable pump which can be used within the tank can for drawing the liquid into the measures or in the barrel for pumping the liquid into the reservoir of the tank can at will; 6th. A tank can having a horizontal or nearly horizontal partition below the cover, provided with a vertical wall flange and forming therewith a sink and a separated storage space beneath the cover; 7th. A tank can having a pump which can be adjusted or extended at will, and which can also be removed for use in filling the reservoir of the tank can from the barrel.

## No. 7212. Improvement in Gate Pivots.

(*Perfectionnement dans les pivots de barrières.*)

Lewis Baldwin and Judson R. Baldwin, Barford, Que., 13th March, 1877, for 5 years.

*Claim.*—1st. The combination of the pivot *c* upon the shank *B*, with the body *A*; 2nd. The body *A* having the six upwardly projecting guard *a*, in combination with the rollers *b* and hold *d*.

## No. 7213. Improvement on Plug Tobacco.

(*Perfectionnement du tabac en tablettes.*)

Adolph Pearl, Brooklyn, N. Y., U. S., 13th March, 1877, for 5 years.

*Claim.*—Plug tobacco cut up or shredded without destroying the original form of the plug *A* and enclosed by an envelope *B*, band or case which preserves the original form of the plug and exposes to view the original grain thereof.

## No. 7214. Improvements on Freezers and Refrigerators.

(*Perfectionnements aux réfrigérants-congélateurs.*)

Anthony Adams, North Esk, N. B., 13th March, 1877, for 5 years.

*Claim.*—1st. The freezer *A* having a sliding door *B* and fitted with sliding drawers *D E*, the former having a dished bottom with lips *J* entering a pipe *C* to carry off waste water; 2nd. The refrigerator *K* divided centrally by a vertical ice chamber *F*, and having store chamber fitted with drawers *L* and racks *M*.

## No. 7215. Improvement in Loose Pulleys.

(*Perfectionnement dans les poulies jolles.*)

William H. Essery, Toronto, Ont., and Stephen Webster, Hamilton, Ont., 14th March, 1877, for 5 years.

*Claim.*—In combination with the pulley *C* of the bevelled loose pulley *E*, constructed so that the belt *F* may be easily moved from one to the other.

## No. 7216. Locomotive Feed Water Heaters.

(*Chaufer à l'eau d'alimentation des locomotives.*)

Hoatio N. Waters, West Meriden, Ct., U. S., 14th March, 1877, for 5 years.

*Claim.*—1st. A feed water heater connected with the exhaust pipes of a locomotive by pipes having a spoon shaped extension *J* into the exhaust pipes; 2nd. The corrugated water pipe *A* composed of metal discs *a*, riveted together in pairs at the outer edge *b* and connected together, around the centre opening, by bolts *d* extending through the tubes and nuts *c* to the pair; 3rd. The combination of the spiral deflecting core *H* with the corrugated water pipe; 4th. The combination of the spiral deflecting core and corrugated water pipe with blow out pipes and cocks at top and bottom of heater; 5th. The combination of heated and branch pipes *E* with a pipe connecting with safety valve of boiler to take up any escape steam for utilization; 6th. A feed water heater composed of an outer steam jacket, an interior corrugated water pipe, a deflecting core within the water pipe, and of suitable pipes for supplying exhaust steam and water respectively to the jacket and interior water pipe.

## No. 7217. Improvements on Funnels.

(*Perfectionnements aux entonnoirs.*)

James Findlay, Thos. McDonald, William Dunspaugh and George A. Burns, Toronto, Ont., 14th March, 1877, for 5 years.

*Claim.*—1st. The funnel *A* as constructed with a stem *a*, triangular or square in section; 2nd. The funnel *A* constructed with a stem, in which three or four points only shall bear in the circular orifice of a vessel constructed with air spaces *g* or provided for by means of ridges *h*.

## No. 7218. Machine for Flanging Boiler Heads.

(*Machine à rabatter les bords des chaudières.*)

Richard C. Nugent, Dayton, Ohio, U. S., 14th March, 1877, for 15 years.

*Claim.*—1st. The combination of the forming tool *n*, shaft *P* and *S* with their bearings, and collars and the bevel gearing; 2nd. The removable disk *V* in combination with the clamp *b* and *e*, screw *X* forming tool *n* shafts *P* and *S*, bearings *R* and *D*, wheels *E* and *F* and their connecting gearing, whereby a nozzle can be formed upon a boiler head or plate of metal.

## No. 7219. Improvements in Steam Boilers.

(*Perfectionnements aux chaudières à vapeur.*)

Ifram Purdy, Burlington, Iowa, U. S., 14th March, 1877, for 5 years.

*Claim.*—1st. A boiler having inverted conical flues placed vertically or nearly so to its axis across it; 2nd. The fire bridge of a boiler furnace constructed with inverted conical air supplying tubes *E* placed vertically; 3rd. The combination with a fire box and smoke tube, or gas chamber, of a fire bridge having a perforated rear slope or distributor *D*, and a fresh air supply passage *g* formed by the plate *D* and shell *g*; 4th. In a boiler furnace, the bridge *D*, the slope or distributor *D*, the chamber *F*, the plate and conical air supply tubes *E* placed vertically; 5th. In a boiler furnace the combination of the slope or distributor *D*, the bottom *g* of the fire or chamber *G*, and conical air supply tubes *E*, constructed and arranged to admit fresh air into the smoke tube or gas chamber below the slope or distributor; 6th. In a boiler stack or chimney provided with inverted conical tubes *J* and side openings; 7th. The combination with a steam boiler having the inverted conical flues *B*, and the cover *H* having a stack or chimney *I* with the inverted conical flues *J*; 8th. The combination of the fire box *G*, the fire bridge *D*, having the inverted conical air tubes *E* placed vertically, the boiler having the inverted conical flues *B*, and the stack or chimney *I* having the inverted conical flues *J*; 9th. The combination of the fire box *G* and bridge wall *D* with its smoke tube or chamber *G* *H* and stack or chimney *I*, and the boiler having flues *B* vertically or nearly so to its axis across it.

## No. 7220. Improvements in Sad Iron Heaters.

(*Perfectionnements aux chauffeuses des fers à repasser.*)

Mathew Little and Marion J. Clark, East Saginaw, Mich., U. S., 14th March 1877, for 5 years.

*Claim.*—The box *C* having the lateral pockets *E*, in combination with the suspending flange *G* and collar *F*.

## No. 7221. Horse Shoe Nail Machine.

(*Machine à clou à cheval.*)

William Keys, Montreal, Que., 14th March, 1877, for 5 years.

*Claim.*—1st. The combination of the die rollers *d e*, spout *h*, die *k*, stop bar *n* and die *e*; 2nd. The combination of the die rollers *d e*, spout *h*, dies *l m* and punch die *f*; 3rd. The combination of the spout *h*, guides *b*, and *g*; 4th. The combination of the die *k* with ends *e t* and *ct*, for adjusting the nail thereon; 5th. The combination of the dies *l m* with ends *dt* and *ft*; 6th. The combination of the spout *h*, stop bar *n* and die *k*; 7th. The combination of the spout *h*, projection *r* and dies *l m*; 8th. The combination of the guides *g* with the guide *b*; 9th. The combination of the cam *V*, lever *W*, bars *a* and guides *b* and *g*.

## No. 7222. Improvements in the Manufacture of Butter and Cheese.

(*Perfectionnements dans la fabrication du beurre et du fromage.*)

Lauren B. Arnold, Rochester, N. Y., U. S., 14th March, 1877, for 5 years.

*Claim.*—1st. The process of treating milk for cheese making, first heating and then quickly cooling the milk by artificial means; 2nd. The addition of the butter milk from the cream of the scalded milk to the skim milk in cheese making; 3rd. The process of treating milk, for cheese making, by churning or agitating the milk before adding the rennet; 4th. The process of treating milk, for making butter and cheese, by first heating and then quickly cooling the new milk, churning the cream while sweet and adding the sweet butter milk from the scalded milk to the skim milk for making cheese, churning or agitating the skim milk, or a part of it, with or without mixing with it some of the sweet butter milk before warming the whole for adding rennet to produce curd.

## No. 7223. Improvements on Horse Shoe Nail Machines.

(*Perfectionnements aux machines à clou à cheval.*)

George P. Clapp, John A. Pillow and Randolph Hersey, Montreal, Que., 14th March, 1877, for 5 years.

*Claim.*—1st. The vibrating die *h* having groove *m n*, in combination with the roller *p*; 2nd. The vibrating die *h*, roller *p* and guide *a t*; 3rd. The combination of the vibrating die *h*, roller *p*, guide *a t* and spout *g i*; 4th. The combination of the die *h*, spring fork *V* and guide *a t*; 5th. The combination of the die *h*, roller *p* with spout *k t* having spring *m l* provided with fork *m* and spring arm *a z* having projection *b z*; 6th. The combination of the spout *k t*, spring *m l* having spring arm *a z*, and fork *m l* with lever *r t* at operated by projection *t* of the shaft *b*.

## No. 7224. Machine for Manufacturing Twisted Taper Lights.

(*Machine à fabriquer les bougies enroulées.*)

Jonathan Scollick, Mathew W. Manville and Alfred G. Brown, London, Ont., 14th March, 1877, for 5 years.

*Claim.*—1st. The knife *D*, attached angularly on the bed *A* above groove *e*; 2nd. In combination with the knife *D* and bed *A*, provided with groove *e* and orifice *f*, the gauge strip *C*, adjusting screws *a a* and outer ledge *B*.

## No. 7225. Improvements in Plaiters for Dress Making.

(*Perfectionnements aux plisseurs d'habillement.*)

Samuel J. Seymour and Joseph Milligan, Toronto, Ont., 14th March 1877, for 5 years.

*Claim.*—1st. In combination with a series of metal bars arranged at an equal distance apart, the hollow side bars *B B* provided with the slots *c c* and core filing *F*, or cast solidly around the ends of the plaiting bars; 2nd. In combination with the plaiting bars *E* and bars *B B*, the end cross bars *D D* either made adjustable or non adjustable; 3rd. The combination and arrangement of the plaiting bars *E*, side bars *B B* and cross bars *D D* mounted on the legs *C C*.

**No. 7226. Improvements on Wind Mills.***(Perfectionnements aux moulins à vent.)*

Ellis Stata and William Burrows, Kingston, Ont., 14th March, 1877, for 5 years.

*Claim.*—1st. In combination with a horizontal wind wheel, a vertically moving hoop or shield for controlling the supply of wind to the wheel, 2nd. The combination of the governor *H*, lever *I*, winding drum *G*, wheel *L*, ropes *O* and shield *C*, 3rd. The combination of the rope *L*, pulleys *V* and *Z* and winding drum *G*, 4th. The combination of the weights *J*, rope *D*, tube *E*, pulley *I* and shield *C*.

**No. 7227. Process and Apparatus for the Manufacture of Illuminating Gas.***(Procédé et appareil de fabrication du gaz d'éclairage.)*

Frederick H. Date (Assignee of John Redhead), Woodstock, Ont., 14th March, 1877, for 5 years.

*Claim.*—1st. Passing steam through a superheater and thence through an injector discharging liquid hydrocarbon into a retort, to vapourize the emulsified superheated steam and hydrocarbon, and then converting the vapour into a fixed or inflammable gas by passage through a heated retort, 2nd. In a gas-making apparatus, the combination of a retort *A*, lid *b*, injector *C*, superheated steam pipes *g*, superheater *D* and oil pipes *h* with a steam boiler whereby live steam is superheated and injected with the oil fed to the injector into a pipe or retort *B*, within the retort *A* for the production of illuminating gas from hydrocarbon and hydrogen, first by vapourization and then converting the same into a fixed gas in its passage through the retort *A*, 3rd. The employment, in combination with a gas-making retort, of an injector *C*.

**No. 7228. Improvement on the Art of Forging Hammers.***(Perfectionnements dans l'art de forger les marteaux.)*

David Maydole, Norwalk, N. Y., U. S., 14th March, 1877, for 5 years.

*Claim.*—1st. The method of forging the adze-eye consisting in the preliminary punching of a taper hole in a bar of proper size followed by the cutting down and setting down of the metal from each side of the smaller end of such hole, and the final drawing down and completing of the eye with punch and female die, 2nd. The mode of drawing down the eye into shape, by the use of punch and female die, after the necessary material has been provided therefor by the preliminary operations, 3rd. The gauges *C* secured adjustably in the die *D* and employed to separate the metal on either side of the eye, 4th. The dies *B* *B*, consisting of a cutting base *B* and a forming upper part *B*, secured thereto and employed in combination with a punch *P*, 5th. The dies *L* *L* for thinning the back and indenting the pene of the hammer, 6th. The centering jaws *Y* connected by teeth *g* and pressed together by a spring *y*, 7th. The concave bed die *A* for bringing out the back of the hammer, thereby counteracting the tendency of the punch to make the hammer hollow-backed, 8th. The dies *A* *A*, constructed with projections *L* for thinning the blank at the eye in the act of pressing the bar flatwise to correct the bulging produced in the punching of the preliminary taper hole.

**No. 7229. Improvements on Ploughs.***(Perfectionnements aux bâtonnets.)*

Ebenezer G. Whiting, Northfield, Mich., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The plough frame *c* *f* *h* made of one piece of metal, cut in the shape described and bent by suitable means into a support or seat for the mould board, share and land side and beam of the plough; 2nd. The auxiliary piece *B* in combination with the frame *c* *f* *h*, and welded or otherwise secured thereto, 3rd. The combination and arrangement of the curved beam *A*, frame *c* *f* *h* and handles *G* *G*, 4th. The curved shield and brace *E*, in combination with the mould board *c* and land side frame *f*.

**No. 7230. Improvements on Wheel Harrows.***(Perfectionnements aux herses à roues.)*

Frank Branner, (Co-inventor with Orrin W. Badger,) Little Falls, N.Y., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The wheel gang frames or planks hinged by their inner ends to the intermediate pole or tongue or a rigid extension thereof, 2nd. The gang wheel frames hinged to the intermediate pole or pole frame, in combination with the seat support extending transversely over said pole or frame and connected with the gang frames at points outside of the centers of their transverse length, 3rd. The transverse seat support or bar connected with the gang frames by means of the swinging compensating links or stirrups; 4th. The combination with the hinged wheel gang frames of the swivelling supports *E*, stirrups *J*, and transverse seat support or bar *G*; 5th. The combination of the hinged gang frames *A*, intermediate pole or pole frame *B*, swivelling standards *E*, swinging stirrups *J* and seat spring or bar *G*.

**No. 7231. Improvements on Clothes' Dryers.***(Perfectionnements aux séchoirs à linge.)*

Frank M. Earle, Edwards, N. Y., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The jointed post *A*, rotary head *B*, collar *C*, and articulated arms *D* and *E*, the latter having a free end to bear on the collar *C*, 2nd. The post *A* jointed and having the clamp *H* and wedge *I*.

**No. 7232. Improvements in Railroad Gates.***(Perfectionnements aux barrières de railroads.)*

Joseph S. Winsor, Providence, R. I., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The combination with the standards *A* *A* and connecting tubes or boxes *B* of the inlet *C* *C* and outlets *D* *D* arranged to ventilate the standards and connections, 2nd. The method by which a current of air is made to pass through the interior of the standards and connections, to prevent the accumulation of moisture and the freezing of the same.

**No. 7233. Improvements on Safety Envelopes.***(Perfectionnements aux enveloppes de sûreté.)*

Arthur Christey, Buffalo, N.Y., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The envelope constructed with the extended elongated corners, ends or edges 1 2 3 4 so that with the gumming and folding four double corners are given, making a safety envelope, 2nd. In combination with the flaps *b* *c* and the double corners 1 2 3 4 the flap having the removable perforated portion *A* *A*, the inside part spaced off for dates, names, &c., and the outside spaced off for post office or express marks, 3rd. In combination with the face of the envelope the perforated removable portion *B* on which the post office and date can be stamped and having incised on its inner face so as to adhere to the letter when removed.

**No. 7234. Improvements on Spring-bed Bottoms.***(Perfectionnements aux fonds de lits à ressorts.)*

Elijah N. Forsyth, Ridgeview, Ont., 15th March, 1877, for 5 years.

*Claim.*—1st. The slats *C* made of bendable wood and bent at each end in U shape, 2nd. The combination with the slats *C*, of the supporting wood springs *D* bent in U shape and exactly fitting inside each end bend of the slats *C*, 3d. The wood bent slats *C* and the wood bent springs *D* in combination with the frame *A* to which they are fastened and bolted.

**No. 7235. Improvements in Clothes Dryers.***(Perfectionnements aux séchoirs à linge.)*

Joseph P. Hill, Barre, Vt., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. A clothes dryer that is self-fastening by means of toggle joints; 2nd. The arched stops *G* *G* of head *D*, 3rd. The projection *E* and shoulder *F* of hub *C*, in combination with head *D*; 4th. The raised rim *O* of spindle cap *B*.

**No. 7236. Improvements in Combined Wheel Harrows and Seed Sowers.***(Perfectionnements aux herses-semeurs à araire-trou.)*

Edwin R. Powell, Winooski, and Frederick C. Kennedy, Burlington, Vt., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. The combination with a seed box of an adjustable bottom and a vibrating bottom or slide, the perforations in both being counter-sunk upwards or so placed in the seed box that the larger diameters of the perforations are on the upper side of the bottoms, 2nd. The combination with a seed box of an adjustable and vibrating bottom having a series of agitating arms; 3rd. The gears *T* and *T'*, eccentric sleeve *S*, shaft *T*, lever *S*, wave-shaped groove *S* and oscillating lever *U* operating the vibrating bottom or slide of the seed box, and operated by the rotating of the wheel *B*; 4th. The adjusting lever *X* working at its upper end along a slotted dial plate *X*, and connected to a rigid arm *X* on the adjusting bottom *V*, 5th. The broad flat stay *Z*, which is secured to the pole *C* being bent under at one end, and having a pulley *Y* at the other end.

**No. 7237. Method of, and Moulds for, Manufacturing Artificial Marble Coffins.***(Mode de fabrication des cercueils en marbre artificiel et moules pour cet objet.)*

Taylor E. Daniels, Detroit, Mich., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. Casting coffin in an inverted position in a sectional mould having removable walls; 2nd. The combination of the removable or side walls *B* having recesses or depressions in their inner faces, and the sectional collapsible core *C* having its sides provided with corresponding convexities or protuberances, 3rd. A base board provided with a central core and removable surrounding walls; 4th. The combination of the side and end pieces *A*, corner pieces *B*, plates *C*, screws *d* and removable top *e* provided with buttons *d*, 5th. The mould provided with internal point studs *f*; 6th. In combination of the plate *I* applied as described, 7th. In combination with the side and end walls *B*, the pivoted swinging rods *D* provided with the nuts *E*.

**No. 7238. Improvements on Button Fasteners.***(Perfectionnements aux agrafe-boutons.)*

Milton M. Shur, Denver, Col., U. S., 15th March, 1877, for 5 years.

*Claim.*—The plates *B* and *C* eccentrically pivoted by means of pin *b* and said plates having elongated slots *C* *C*, stud *d* and eccentric slot *d*.

**No. 7239. Improvements on Hoisting Apparatus.***(Perfectionnements aux élévateurs.)*

Mathias Pennypacker, Philadelphia, Pa., U. S., 15th March, 1877, for 5 years.

*Claim.*—1st. A screw-hoisting machine operating with a double chain; 2nd. A tight case enclosing an operating screw and worm wheel, 3rd. A case or box *L*, and sheaves *C* *C* projecting on both sides of the said case or box and receiving the hoisting chains, 4th. The worm wheel and sheaves secured together by clutch connections; 5th. The combination with the box *L* of a suspension device for securing the apparatus in line with the hoisting chain; 6th. The check plates *P* *P* for clamping the box together and suspending the hoisting machine, 7th. The combination of the worm wheel *A*, case *L* having top lug *t*, and check plates *P* *P* having projections *t*, 8th. The differential pulleys, 9th. A tight case or box *L* for the central wheel *A* and with sheaves *C* *C* projecting on both sides thereof and receiving the hoisting chains *D*, 10th. The combination of the sheaves *C* *C* and sheave *C* of larger diameter and a hoisting chain *D*, 11th. The sheaves of different diameters, in combination with a hoisting chain passed diagonally from a smaller to a larger sheave, 12th. The combination with differential sheaves or pulleys *C* *C*, a hoisting chain *D*, and a travelling hook or support *M* for the application of the load; 13th. The combination of a pulley block *N* and hook *M* to rise and fall with the load.

## No. 7240. Improvements on Stove-pipe Cleaners.

(*Perfectionnement aux nettoyeurs de tuyaux de poêles.*)

Hiram Welbanks, Gananoque, Ont., 19th March, 1877, for 5 years.

*Claim.*—1st. The stock A, wings B B hinged thereto, sliding retaining rods C C and extension springs E E. 2nd. The stock A having rods G to extend.

## No. 7241. Instrument for Indicating the Number of Spectacle Glasses.

(*Appareil pour indiquer le numéro des verres de lunettes.*)

Ambrose Kent and Benjamin Kent, Toronto, Ont., 19th March, 1877, for 5 years.

*Claim.*—1st. A ball or disc C carried upon the spindle D within the tube B, and having letters painted or otherwise upon its periphery, in combination with the numbered disc E and pointer plate G. 2nd. The pierced partition L and slide M, provided with a hole N and fitting into the tube B, in combination with the ball or disc C having on its periphery letters or figures graduated from small to large; 3rd. The tube B provided with holes K, in combination with the lettered disc (or ball) C. 4th. The spindle D, carrying the discs C E and F and fitting into a slot on one end of the tube B, in combination with the collar I and screwed cap H.

## No. 7242. Art of Manufacturing Artificial Marble Coffins.

(*Art de fabriquer les cercueils en marbre artificiel.*)

Taylor E. Daniels, Detroit, Mich. U. S., 19th March, 1877, for 5 years.

*Claim.*—1st. An artificial marble coffin; 2nd. A metal strengthening frame C adapted to receive the strain of the handle; 3rd. A metal strengthening frame C and wooden blocks to receive the handle fastening screws; 4th. The exterior surface of the coffin grained in imitation of wood; 5th. The leaden thumbs D seated in the lid of the coffin; 6th. The leaden blocks E seated in the coffin walls; 7th. The combination of the body A provided with the leaden blocks E, the lid B and pointed wood screws inserted through the lid into the blocks; 8th. The metallic edging c provided with the lips or spurs f.

## No. 7243. Improvements on a Baking Side-board.

(*Perfectionnements à un buffet de boulangerie.*)

Robert K. M. McCulloch and John McCulloch, Port Elgin, Ont., 19th March, 1877, for 5 years.

*Claim.*—1st. The cover B sliding into the grooves C and resting when drawn forward on the open doors L L, the cover B to be used as the dough board, in combination with a baking chest A having casters to move it about; 2nd. The chamber or space H, in combination with an immovable bread tray F to heat the dough and assist its fermentation; 3rd. The pin board I, in combination with the bread tray F to provide a space J to set the sponge in; 4th. The combination of the under compartment or coowler K with the bread tray F in which to put a vessel filled with hot water to assist the raising of the dough.

## No. 7244. Improvement on Smoke Consuming Furnaces.

(*Perfectionnement des fourneaux fumigènes.*)

Charles B. Bryant, Stoneham, Henry Young, Jr., Woburn, and Theophilus King, Jr., Quincy, Mass., U. S., 19th March, 1877, for 5 years.

*Claim.*—The bridge wall C provided with one or more flues or interior passages in communication with the external air, and with a series of inclined discharge orifices at or near the top of the wall, in combination with the combustion chamber D having its bottom elevated nearly to a level with the upper edge of the bridge wall.

## No. 7245. Improvement in Window Blind Fixtures.

(*Perfectionnement des dispositifs de rebroussements de rideaux de fenêtres.*)

William N. Miller, (Assignee of John P. Lash), Toronto, Ont., 19th March, 1877, for 5 years.

*Claim.*—1st. The use of the weight G to counterbalance the blind B when at rest; 2nd. The use of the movable guide J to regulate the ending of the cord F; 3rd. The use of the friction wheel K.

## No. 7246. Improvement on a Butter Package.

(*Perfectionnement d'une tinette.*)

Andrew J. Finnegan, Minneapolis, Minn., U. S., 21st March, 1877, for 5 years.

*Claim.*—1st. The annular rubber H formed with interior and exterior ribs e d in combination with the grooved cover E G and package A having head b; 2nd. The combination with a butter package A having head b, of the wooden grooved disks E G, the rubber H with ribs e d. 3rd. A butter package A with bottom B, auxiliary bottom C and inclined flange D.

## No. 7247. Device for Preventing Pipes from Bursting from Frost.

(*Appareil pour empêcher les tuyaux de crever par la gelée.*)

Alfred Bujae, Washington, D. C., U. S., 21st March, 1877, for 5 years.

*Claim.*—In combination with a water pipe A having two openings in its side, a rubber tube B with both of its ends passing through said openings and fastened water-tight.

## No. 7248. Improvements in Step-Ladders.

(*Perfectionnements aux échelles à quatre.*)

Silas C. Blauvelt, Blauveltville, N. Y., U. S., 23rd March, 1877, for 5 years.

*Claim.*—The blocks or plates C provided with the semicircular rear ends and the notches Cr, the pin bz and the slot br, when used in connection with the pivot D and the parts A B of a step-ladder.

## No. 7249. Machine for Making Paper Bags.

(*Machine à faire des sacs de papier.*)

James Donnelly and Thomas C. Taylor, Hamilton, Ont., 23rd March, 1877, for 5 years.

*Claim.*—1st. The combination with the wheels B B, the formers E (any number) attached thereto; 2nd. In combination of the endless belt C consisting of the moulds D, plate Z, hinged together and at such space apart as to fit around the formers E, in the wheel B, and press the paper between them in the required shape; 3rd. In combination of the side folders I I hinged to the moulds D; 4th. In combination of the end folders X O, right and left, hinged to the moulds D and constructed with loop e in side foot shaped rod u, 5th. The combination of the side folders I I, end folders X O, and the arrangement of operating them consisting of the pin e, rod f, plate g, slot d, twisted rods P passing through said slot d, loop e and rod u all constructed for turning the sides and side ends of a paper bag at the same time; 6th. In combination of the bottom end folder L and the top end folder M, for finishing and folding the top and bottom ends respectively of a paper bag; 7th. In combination of a band cam R with slot g for operating the folders at each end; 8th. In combination with the folders D of the slots o in each for the pins a, &c., to pass through; 9th. In combination of the egg wheels B, pinions G H and cutter K; 10th. In combination of the bottom paste pot T with roller U, paste h attached to shaft i, and pastier J attached to shaft j; 11th. The device for discharging a bag when finished consisting of the rod W in formers, sliding in the opening V, a pin X (attached to said rod W) made to slide in a groove p, and operated back and forth by the ear V attached to the machine.

## No. 7250. Improvements in Bag-Holders.

(*Perfectionnements aux accroche-sacs.*)

Edward Collins, Dundas, Ont., 23rd March, 1877, (Extension of Patent No. 1408), for 5 years.

*Claim.*—The expanding frame A, consisting of a bent or coiled spring B and curved arms or bows C, connecting with bent holders D, provided with horizontal prongs E.

## No. 7251. Machine for Rocking Cradles.

(*Machine à remuer les berceaux.*)

John W. Miller, Charles Barlow and Charles Pennoyer, Cookshire, Que., 23rd March, 1877, for 5 years.

*Claim.*—The combination of the case a, bulge b, and shaft support c, the combination of the spring A, drum B, fusee or equalizer C, rod C, wheels D and E, handle F, pinion and ratchet G, dog g, and the train of gear wheels H I J, the combination of the weight shaft K, weight arm L, sliding weight M and spiral spring governor N; the combination of the brake O and the set screw P, the combination of the rollers Q, bearings R, and collars or flanges S on the rollers.

## No. 7252. Improvement in Window Blinds.

(*Perfectionnement dans les persiennes.*)

Jacob Behel, Rockford, and Wilber F. Behel, Chicago, Ill., U. S., 23rd March, 1877, for 5 years.

*Claim.*—1st. Stiles and cross rails rabbeded on its inner edges, framed and bored, constituting a frame for the reception of vibrating slats; 2nd. A blind slab provided with tenons / on both ends, and shoulders g on both sides of the tenon in the same plane, the slab above the point h reduced in length at both ends, about equal to the depth of the rabbet on the inner edge of the stiles, forming a double shouldered slab; 3rd. The combination of the rabbed blind frame and the double shouldered blind slab pivoted therein; 4th. In combination with the rabbed blind frame and double shouldered blind slab pivoted therein, the blind rod E hinged to the blind slats, for the purpose of adjusting the slats and locking them in a closed position by forcing the end of the rod outward on the upper edge of the lower and intermediate cross rails; 5th. The metallic capped rubber spring, in combination with a pivoted blind slab for the purpose of holding the slats in adjusted position to control the admission of light; 6th. The metallic capped rubber spring as an article of manufacture.

## No. 7253. Improvements on Carriages.

(*Perfectionnements dans les voitures.*)

John McBride, Strathroy, Ont., 23rd March, 1877, for 5 years.

*Claim.*—The arrangement of the long horizontal straight spring or spring reach B C.

## No. 7254. Improvements on Cuspadores.

(*Perfectionnements aux crachoirs.*)

James C. Moore, Philadelphia, Pa., U. S., 23rd March, 1877, for 5 years.

*Claim.*—A self-righting cuspadore having a deep rounded base flattened at a funnel the mouth of which is in diameter equal to or greater than said base, and a flattened breast uniting said base and funnel, the said breast approximating the planes of the centers of gravity and figure, which lie nearly in the plane of the cusp or salient angle of the body.

## No. 7255. Improvements in Eaves Troughs.

&c. (*Perfectionnements aux dalles de toiture.*)

William P. Moulton, Burlington, Vt., U. S., 23rd March, 1877, for 5 years.

*Claim.*—1st. The wooden trough A formed with a true outside circle, & edges X X moulded, and an increased swell from the edges to the center; 2nd. The metallic coupling C formed tapering from the centre towards said ends, and provided with flanges a a along its edges; 3rd. The metals

coupling E G, provided with a coupling flange attached to the part E the outlet; 4th. The flange head H in combination with the wooden trough A, 5th. The wooden conductor I made in two semi-circular parts provided with tongue and grooved joints on the ends and sides; 6th. The mode of fastening the two semi-circular parts of the conductor by cross bradding and spiral springs or their equivalent.

### No. 7256. Improvements on Steam Boiler Injectors.

(*Perfectionnements aux injecteurs de chaudières à vapeur.*)

James Fergus, Philadelphia, Pa., U. S., 23rd March, 1877, for 5 years.

*Claim.*—1st. The combination with the body of an injector, of a removable tube B adapted to a longitudinal opening in said body, and provided with a steam nozzle and inlet and outlet openings, the whole being combined with a fixed or movable valve stem; 2nd. The combination of a body A and its chambers at b d f and the fixed valve spindle i, with the movable tube B, its nozzle e, passage g h and openings g h, and with devices for operating the said tube; 3rd. The combination of the tapering plug D and its protecting valve stem i, partly threaded with the tube B and its nut j, the recessed edges of which are adapted to ribs k on the body of the injector; 4th. The combination of the water chamber b and overflow chamber d of the injector with the openings g and h in the tube B, said openings being arranged in respect to each other; 5th. The combination of the valve O, opening h and contracted portion E of the tube B, with the contracted portion of the body A and its valve seat n and with the overflow branch; 6th. In combination with a removable tube E, the sliding plug 5 and central stationary jet tube 2.

### No. 7257. Improvements in Churns.

(*Perfectionnements dans les barattes.*)

William Wilson, Ramsay, Ont., 24th March, 1877, (Extension of Patent No. 1382,) for 5 years.

*Claim.*—1st. The tilting bar D in its arrangement and application to the posts A A and fulcrum post C and friction wheels I, for adjusting the table E at any required inclination; 2nd. The sliding J secured to the posts A A above the plane of the table E; 3rd. The arrangement of the arm I and its combination with the posts A A, for carrying the walking beam G.

### No. 7258. Improvements on Post Augers.

(*Perfectionnements aux tarières à clôtures.*)

Charles W. Pool, Wiscow N. Y., 26th March, 1877, for 5 years.

*Claim.*—1st. The blades A A when twisted on their supports and made to converge at their lower extremities; 2nd. The combination of the curved blades A A, shank B having a socket c, and arms e et fitting in said socket and secured by means of a wedge f or its equivalent.

### No. 7259. Improvements in Trusses.

(*Perfectionnements aux bandages herniaires.*)

John R. Alexander, Montreal, Que., 20th March, 1877, for 5 years.

*Claim.*—1st. A complete metallic band not being a spring, encircling and fitting the body; 2nd. The combination with the junction piece K of the pieces A received therein and secured by springs, or in any other usual way; 3rd. The combination with the side pieces A A, each provided with a pin and screw of the piece R, hinged and perforated, and the plates H with or without pads I; 4th. The combination in any hernia pad of the pad proper L, central pin M, sleeve N, and springs Q; 5th. In combination with a band wholly or partly encircling the body and arranged to suit different cases and regions of rupture and bodily configuration, the ring O secured thereto, into which is threaded a sleeve sliding upon a pin attached to the front of the pressure pad and surrounded by a spring; 6th. The combination with the band A and junction piece K, of the abdominal support R secured thereto and provided with springs for pressure; 7th. A hernia pad or abdominal support composed of magnetized metal; 8th. A hernia pad or abdominal support composed of two or more metals, being respectively electro positives and electro-negatives to each other and combined.

### No. 7260. Improvements on Steam Boilers.

(*Perfectionnements aux chaudières à vapeur.*)

Henry S. Coleman, Chelmsford, Eng., 26th March, 1877, for 5 years.

*Claim.*—1st. The employment in, or combination with, a boiler constructed of two shells connected by short tubes of circulating tubes passing through the said connecting tubes; 2nd. Constructing the circulating tubes in parts fitted to slide telescopically in one another; 3rd. The arrangement of shaft within the upper shell of the boiler, for raising all the circulating tubes at once.

### No. 7261. Improvements on Bush and Cane Cutters.

(*Perfectionnements aux sécateurs.*)

Oliver Pickering, Needham, Mass., U. S., 26th March, 1877, for 5 years.

*Claim.*—1st. The ferrule B provided with the hooks b b b, the pivoted button b, and the bolt b, in combination with the handle A to receive and hold the shank of the cutter C; 2nd. The combination of the hooks D with the handle A.

### No. 7262. Improvement on Stove and Furniture Legs.

(*Perfectionnements aux pieds de poêles et de meubles.*)

William W. Tee, California, Ohio U. S., 29th March 1877, for 5 years.

*Claim.*—In combination with a stove plate or other article having stud E armed with teeth e e and stud F pierced for key piece H, the leg or foot A whose flange B has notch C and orifice D.

### No. 7263. Improvements on Sewing Machines.

(*Perfectionnements aux machines à coudre.*)

Thomas A. Macauley, N. Y., U. S., 26th March, 1877, for 5 years.

*Claim.*—1st. The combination of the main shaft C, pitman E, lever G and connection J; 2nd. The combination of the main shaft C, feed shaft I, lever G or its equivalent, and pitman lever K L, whereby an equal rotary motion of the main shaft C imparts an equal and opposite rotary motion to the feed shaft I, and a reciprocating motion to the lever G.

### No. 7264. Improvements on Semaphore

Lenses. (*Perfectionnements aux lentilles de sémaphores.*)

Charles F. Houghton, Coming N. Y. U. S., 26th March, 1877, for 5 years.

*Claim.*—A semaphore lens concavo convex in form the segment of either a sphere or a cylinder and having upon either or both of its faces a series of concentric corrugations.

### No. 7265. Improvements for Hanging Lock Gates.

(*Perfectionnements aux portes des portes d'élusées.*)

Thomas B. Townsend, Ottawa Ont., 26th March, 1877, for 5 years.

*Claim.*—1st. The eccentricity of the centres of working parts of suspending machinery with the centre of hollow quoin of wall, the turn table B, the anchor plate C lifting or adjusting gear D D' Du, casting E, the latter may be formed or modified to suit the different kinds of gates, the anti-friction plates or friction roller carriages e c, &c., each part severally or any combination of them; 2nd. The eccentricity of the centers of working parts of pivot with the centre of hollow quoin of wall the footstep G, abutment H, pivot or heel plate I, the friction roller carriage h or the anti-friction bearing plates h h h, as may, under the various circumstances, be considered best, the friction balls l, &c., each part severally or any combination of them.

### No. 7266. Improved Troller.

(*Elmoyer de pêche perfectionnée.*)

Henry C. Brush, Brush Mills, N. Y. U. S., 26th March, 1877, for 5 years.

*Claim.*—The combination of the float A with shank a, spoon B and hooks of an ordinary troller.

### No. 7267. Improvements on Safety Valves.

(*Perfectionnements aux soupapes de sûreté.*)

James Hoffman, Belvidere, N. J., U. S., 26th March, 1877, for 5 years.

*Claim.*—1st. The enlargement B of the escape pipe with lateral escape passages C above the seat of the safety valve, and the valve D combined with the valve D'; 2nd. The valve D arranged to close independently of the valve E, and connected by a tripping link or other equivalent devices to be disconnected for so closing.

### No. 7268. Improvement on Picture Frames.

(*Perfectionnement des cadres d'images.*)

John W. Grote, St. Catharines Ont., 26th March, 1877, for 5 years.

*Claim.*—1st. The angles A A on the wire or fixture; 2nd. The openings B B between the angles or bends on the wire or fixture; 3rd. The bends C C on the wire or fixture at the end of same.

### No. 7269. Improvements on Harvester Powers.

(*Perfectionnements aux engrangements de moissonnées.*)

Samuel Nixon, Ingersoll, Ont., 26th March, 1877, for 5 years.

*Claim.*—1st. The relative arrangement of the spur wheel F, pinion I, bevel wheel J bevel pinion K and shaft L, said wheels F and J operating the same path and the shaft L parallel to the same across the face of the wheel J and carrying pinion K at the end opposite to the crank wheel M; 2nd. The gear frame A having journal bearings for shafting cast integrally therewith; 3rd. The brace rod O connecting with a lug formed in case A and with the rear of the draft tongue to steady the latter.

### No. 7270. Improvement on Cryptography.

(*Perfectionnement dans la cryptographie.*)

Alexander Bergthold, New Ulm, Minn., U. S., 26th March, 1877, for 5 years.

*Claim.*—1st. The device or key for secret writing, consisting of a holding frame and interchangeable strips of metal or card board upon which are impressed or placed the letters of the alphabet or equivalent symbols, each letter or symbol being arranged upon a strip adjacent to a perforation therein; 2nd. A sheet of metal or card board upon which are impressed or placed the letters of the alphabet, or equivalent symbol, each letter or symbol being arranged adjacent to a perforation therein.

### No. 7271. Improvements on Horse Rakes.

(*Perfectionnements aux râteaux à cheval.*)

Robert Wilson, Ithaca, N. Y., U. S., 26th March, 1877, for 5 years.

*Claim.*—1st. A horse hay rake constructed with adjustable automatic mechanism, whereby it is caused automatically to tea the hay by a rapid collecting and dumping motion or to collect it into wind rows; 2nd. A ratchet wheel secured to one of the transporting wheels, in combination with a pawl secured to a rock shaft and having an adjustable tripping lug; 3rd. Rock shaft L in combination with spring I and pawl or pawls N, having adjustable lug or lugs; 4th. Adjustable chain P in combination with a foot bar rock shaft L and pawl or pawls N, provided with tripping lugs; 5th. The combination of an adjustable chain P with a foot bar, a rock shaft L, pawls N and ratchet wheels E attached to the transporting wheels.

**No. 7272. Galvanic Electric Plaster.**

(Emplâtre électro-galvanique.)

Ruben P. Hall, Vineland, N. J., U. S., 29th March, 1877, for 5 years.

*Claim.*—A combined galvanic or electric voltaic and therapeutic plaster.**No. 7273. Improvements on Box Machines.**

(Perfectionnements aux machines à boîtes.)

John Kisor, Nevada, Ohio, U. S., 29th March, 1877, for 5 years.

*Claim.*—The combination of the sliding frames D, rollers d d and former or cylinder b.**No. 7274. Improvements on Carriage Canopy Tops.** (Perfectionnements aux couvertures de voitures.)

Ebenezer Miller, Fredericton, N. B., 29th March, 1877, for 5 years.

*Claim.*—1st. The combination of the rail a a and the lugs e e. 2nd. The combination with the rail a a of the tubes b b and the bolts d d.**No. 7275. Improvements on Dish Warmers.**

(Perfectionnements aux chaufer-plats.)

Nathan Clark, New York, U. S., 29th March, 1877, for 5 years.

*Claim.*—A metal plate A and a suitable non heat conducting holder B.**No. 7276. Mode of Cooling and Lubricating Circular Saws, &c.**

(Mode de refroidir et de graisser les scies rondes, &amp;c.)

John J. Squire, Saint Louis, Mo., U. S., 29th March, 1877, for 5 years.

*Claim.*—1st. Introducing the cooling or lubricating fluid at the centre of the saw or disk, and by means of the centrifugal force generated by the saw or disk distributing such fluid upon the saw or disk; 2nd. Introducing the lubricating or cooling fluid at the centre of the saw or disk, and causing it to flow continuously upon the side or sides of the saw or disk from its centre to its periphery; 3rd. The combination of collars having chambers close to the saw and extending from the mandrel to the periphery of the collars and a perforated mandrel, the chambers and perforation being connected; 4th. The combination of the saw A and the collars C C, the latter having the chambers c c c, &c.; 5th. The combination of a saw or disk and collars, the latter having chambers in their inner faces respectively that extend from the mandrel to the periphery of the collars; 6th. The combination of a saw or disk and a collar or collars, the latter having chambers whose outer orifices are close to the side or sides of the saw or disk; 7th. The combination of the saw A, mandrel B having the perforation b, and the collars C C having the chamber c c, &c., and the channels c c c, &c.**No. 7277. Improvements on a Reed Organ.**

(Perfectionnements à un orgue à anche.)

William Bell Guelph, Ont., 29th March, 1877, for 5 years.

*Claim.*—The combination of the guides B B, bars C and D, parallel slides E E, levers F and H, studs L L and the knee lever X.**No. 7278. Improvements on Furnaces.**

(Perfectionnements aux fourneaux.)

Robert L. Walker, Boston, Mass., U. S., 29th March, 1877, for 5 years.

*Claim.*—The combination of the fire boxes B B with flues and dampers.**No. 7279. Improvements on a Churn.**

(Perfectionnements à une baratte.)

Alexander T. Whaley, Roxgrove, Ont., 29th March, 1877, for 5 years.

*Claim.*—1st. The combination of the spring power B and the loaded dasher D. 2nd. The combination with the bevelled edge of loaded dasher D.**No. 7280. Improvements in Screw Propellers.**

(Perfectionnements aux hélices.)

James Burson, New York, U. S., 29th March, 1877, for 5 years.

*Claim.*—Two or more blades of different radius and different areas relatively with each other and with openings through them.**No. 7281. Door Hanger.** (Penture de porte.)

John Dayer and William Robertson, Oakville, Ont., 29th March, 1877, for 5 years.

*Claim.*—1st. A door hanger formed with a disc-shaped head with protecting rim flange and a central inwardly projecting cylindrical stud; 2nd. A door hanger in which friction rollers are placed within the hub of the revolving wheel and on the outside of a central stationary stud; 3rd. The combination with the wheel D with projecting hub D' friction rollers E and central stud C of the capping washer F and screw G.**No. 7282. Process for Preventing the Accumulation of Carbon in Retorts Used for the Distillation of Carburetted Hydrogen.**

(Procédé pour empêcher l'accumulation du carbone dans les cuvettes employées pour la distillation du gaz hydrocarburé.)

Watson Kurg, Frostburg, Md., U. S., 29th March, 1877, for 5 years.

*Claim.*—Combining bituminous and semi-bituminous coals.**No. 7283. Tire Upsetting Machine.**

(Machine à refouler les bandages des roues.)

David W. Copeland, Theresa, N. Y., U. S., 29th March, 1877, for 5 years.

*Claim.*—1st. The combined tire upset shears and bender having the body piece B and slide D armed respectively with the upsetting or set G, the bending jaws, serrated cams, and shears; 2nd. The combination with the right angle side shank D and its bending, upsetting and shear jaw of the rigid body piece B, its bending upsetting and shear jaw, the loops C and the toggle lever L K.**No. 7284. Improvements on Scroll Sawing Machines.**

(Perfectionnements aux machines à scier.)

Charles N. Trump, Samuel N. Trump and Christian Frederick, Wilmington Del., U. S., 29th March, 1877, for 5 years.

*Claim.*—1st. The cast metal frame A having the jaw and set screw B, by which it can be fastened to a table or other support with the dropping arm on which is hung the fly wheel C, and with vertical standard F with its projecting lip or rest a, and the combination therewith of the fly wheel C, table D, vibrating arms G and H, straining rod I provided with capped spring nut, pivoted clamp O and P, and pitman connecting the lower arm and fly wheel with or without the treadle mechanism; 2nd. In a scroll sawing machine with vibrating arms, the combination of a stop or rest a for the back end of saw arm with the auxiliary spring and capped nut on the straining rods to hold the upper arm at rest and both arms in their bearings, when from any cause the saw blade is disconnected; 3rd. The arms or rods and X held apart when at rest, and when in operation moving in opposite directions, and the method of imparting continuous rotary motion by a single cord or strap connecting the ends of the arms and passing over a grooved or plain hub or pulley from a treadle mechanism; 4th. The combination of mechanism for scroll saw and treadle, to form together one complete easily worked foot power scroll sawing machine.**No. 7285. Improvement on Governor Valves.**

(Perfectionnement aux soupapes de gouverneurs.)

Junius Judson, Rochester, N. Y., U. S., 29th March, 1877, for 5 years.

*Claim.*—1st. The attachment for governor valves of the lever G, screw D, swivel bearing E and case C, provided with the rod H, slide g, nut f and spring h; 2nd. The combination with the lever G, screw D and valve rod A, of the swivel bearing E; 3rd. The combination with the lever G, of the screw rod H provided with a loop d fitting over the end of the lever, a hollow slide g resting upon the screw rod, a nut f resting below the slide and a spring h resting between the slide and the top of the case, the whole forming a device for regulating the upward pressure of the lever against the valve rod.**No. 7286. A Churn.** (Une baratte.)

Andrew McCauley and Benjamin Seratch, Bronte, Ont., 29th March, 1877, for 5 years.

*Claim.*—1st. The combination of the base plate A, upright B, crosshead O, shafts D H, wheels E F, pinion J, crank I J, pitman K, openogs M B B 2nd. In combination with a churn handle and churn, the revolving dashers N N.**No. 7287. Improvements in Signal Lamps.**

(Perfectionnements dans les lampes à signaux.)

Samuel Coxon, Toronto, Ont., 31st March, 1877, for 5 years.

*Claim.*—A signal lamp A provided with any required number of lights or glasses B, in combination with projecting shades or blinds C.**No. 7288. Improvement on Lamps.**

(Perfectionnement des lampes.)

Leverett H. Olmsted, Brooklyn, N. Y., U. S., 29th March, 1877, for 5 years.

*Claim.*—The combination with the lamp cap and wick tube of the chimney supporting fingers F F, constructed to retain the lower edge of the chimney at or about at a level with the top of the wick tube.**No. 7289. Improvements on a Fanning Mill.**

(Perfectionnements à un taraire.)

John Bennett, Belleville, Ont., 31st March, 1877, for 5 years.

*Claim.*—1st. The upper shoe A and lower shoe B connected with a peader B, wooden cleats M and N, in combination with upper concave bar

and lower bar *O*, friction roller *R* and rubber band *R<sub>2</sub>*; 2nd. The two shoes *A* and *B*, both having a shake parallel to the sides of the mill, in combination with the jarring motion on the lower shoe *B*; 3rd. The chute board *F* and eccentric *v* in combination with screen *D*, the cleats *M* and *N*, in combination with the upper shoe *A* and lower shoe *B* and suspender *L*; 4th. The adjustable crank, with the combination of the disc-and-arm with the bolt and thumb nut, the spout *E* in combination with the screens *C* and *D* and the pivot screen rests *G*; 5th. The combination of the union gauge of sleeves *B* and *A<sub>2</sub>*, with the spout *D<sub>2</sub>* and carrying board *C<sub>2</sub>*, and the construction of the same, also the convex washers *I*.

### No. 7290. Improvements on Trotting Sulkies.

(*Perfectionnements aux voitures de trotte.*)

John W. Wood and Charles Schoen, Owatonna, Minn., U. S., 31st March, 1877  
for 5 years.

*Claim.*—1st. The flanged ends *C*, combined with shafts or pins *C*; 2nd. The fender *D* combined with shafts *C*; 3rd. The shafts provided with jointed and telescoping tips; 4th. The combination of fender *D*, braces *E* and nut *F*.

### No. 7291. Improvements on Grain Binders.

(*Perfectionnements aux lieuses à grains.*)

Edwin H. Whitney, Magog, Que., and Thomas Connit, Oshawa, Ont., 31st March, 1877, for 15 years.

*Claim.*—1st. The combination with the slotted track *H* of the carriage *J* having rollers *a*, *b* and *d* and carrying the rake *K*, and provided with the slotted standard *V*, the toothed wheels *S* and *U*, the idle toothed pulleys *t* and the endless chain *s* provided with the crank *e*; 2nd. The rake *K*, coll'd spring *c*, lever *M*, with slot *s* and projecting pin *z* and the spring latch *k*, in combination with the stationary fingers *w* on the track *H*, and the spring hook *y* on the side of the frame; 3rd. The rake *W* provided with curved arms *v* and rollers *a* and *b* and operated by means of the lever *Z*, arm *A*, spring *h*, roller *e* and cam *f* on the wheel *B*; 4th. The combination of the vertical needle *Y*, guides *p*, slotted lever *D*, the vertical slotted slide *E*, arms *G*, *G'* and the cam *v* on the wheel *B*; 5th. The combination

of the intermittently rotating shaft *P*, wings *O*, four armed wheel *R*, pivoted jaws *S* with springs *m*, and arms *p* with rollers *n* and the stationary cam *T*; 6th. The combination of the wheel *B* with projecting pin *z*, the four-armed wheel *M*, shaft *N*, gears *k*, *k'* and the shaft *P* with the four-armed cord-catcher attached thereto; 7th. The combination of the intermittently-rotating shaft *y*, slotted collar *z*, spring-pawl *z* with arm *v* and the cam *v* on the wheel *B*.

### No. 7292. Improvement on Barber and Dental Chairs.

(*Perfectionnement des chaises de barbiers et de dentistes.*)

George W. Archer, Rochester N. Y., U. S., 31st March, 1877, for 5 years.

*Claim.*—1st. The combination of the standard *A* made in two parts, the supporting frame *D* and footstool *D* made in one piece, and the pivoted segment *G* attached to the supporting frame and passing through the base; 2nd. The independent segment *G* constructed with the cross head *o* pivoted to the supporting frame *D*, and the curved end *n* passing through a slot of the base *A*, and provided with suitable means for holding the chair at any adjustment; 3rd. The supporting base or standard made in two parts *A* fitting together at the centre and united by screws, the lower extremities branching outward to form the legs *c* and the upper ends expanding laterally and provided with solid pivots *f* to form the bearings *d* for the chair body; 4th. The supporting frame *D* and footstool *D* cast in one piece, constructed with the flanges *i*, arms *k*, platform *l* and bracket *m*; 5th. The combination with the slotted base *A* of the notched and hooked segment *G*, the spring *r* and the pivot lever or cam *H*; 6th. The side frame *l* constructed with the flanges *u*, the flange *v* and the right angled flange *x* whereby the same is adapted to secure the seat, the back and the arm of the chair together, and to form the side of the chair.

### No. 7293. Skate Holder. (*Ajustage de patins.*)

Ewen C. Henderson and Henry Fraser, Picton, N. S., 31st March 1877 for 5 years.

*Claim.*—The bar *A*, plates *B*, springs *C* and strap *D*.

## Lists of Patents issued up to 14th April, 1877, but not yet Officially published in the Patent Office Record.

No. 7294. W. C. Brochers and C. H. Barnum, Spring Lake, Mich., U.S.A., "Pressure Bar for Planing Machines," 31st March, 1877.

No. 7295. J. R. Hopper, Rochester, N.Y., U.S.A., "Potato Digger," 31st March, 1877.

No. 7296. J. H. Hatton, Fort Covington, N.Y., U.S.A., "Life-boat," 31st March, 1877.

No. 7297. A. Woodward, Shelburne Falls, Mass., U.S.A., "Cradle," 31st March, 1877.

No. 7298. J. Storer and J. Rear, Uxbridge, Ont., "Cylinder Cocks for Steam Engines," 31st March, 1877.

No. 7299. W. W. Wickes, (Assignee of J. J. Bate), Brooklyn, N.Y., U.S.A., "Refrigerator," (Re-issue of Patent No. 4255), 5th April, 1877.

No. 7300. R. Blakeston and W. C. Blakeston, Quebec, Que., "Twine Waxing Machine," 5th April, 1877.

No. 7301. H. Silver, Lindsay, Ont., "Scroll Stamp," 5th April, 1877.

No. 7302. G. Taylor, New York, U. S. A., "Gas Regulator," 5th April, 1877.

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No. 7304. J. W. E. Darby, Yarmouth, N.S., "Clothes Washer," 5th April, 1877.

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No. 7312. R. Goudny, London, Eng., "Compressed or Consolidated Coffee," 9th April, 1877.

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No. 7314. C. B. Hutchins, Ann Arbor, Mich., U. S. A., "Roofing Composition," 9th April, 1877.

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No. 7318. W. L. May, Chicago, Ill., U. S. A., and L. R. B. Wedleigh, Lyons, Iowa, U. S. A., "Tape Line Lumber Measure," 9th April, 1877.

No. 7319. J. Burt, Erin, Ont., "Fence," 9th April, 1877.

No. 7320. J. Waddell, Elora, Ont., "Brush Handle Attachment," 9th April, 1877.

No. 7321. F. B. Scovell, Waterford, Ont., "Safety Valve," 9th April, 1877.

No. 7322. C. F. Houghton, Corning, N.Y., U. S. A., "Lens," 11th April, 1877.

No. 7323. W. H. Murphy, Syracuse, N.Y., U. S. A., "Head for Paper Packages," 11th April, 1877.

No. 7324. W. Smith, San Francisco, Cal., U. S. A., "Water Meter," 11th April, 1877.

No. 7325. J. Chase, Orange, Mass., U. S. A., "Pruning Shear," 11th April, 1877.

No. 7326. J. Kimball, (Assignee of C. H. Harlow), Boston, Mass., U.S.A., "Pocket Match Safe, Tobacco Cutter and Case," 11th April, 1877.

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No. 7328. W. H. Fair, Waterville, N. S., "Coupler," 11th April, 1877.

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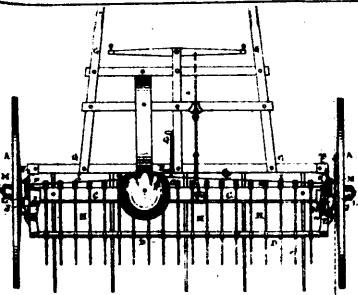
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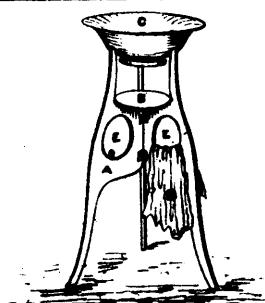
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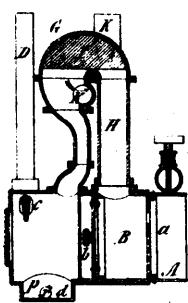
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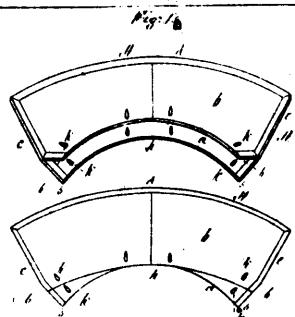
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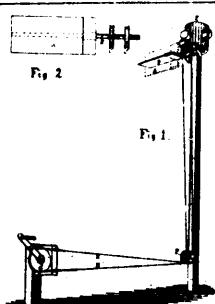
7171 Parker's Folding Washstand.



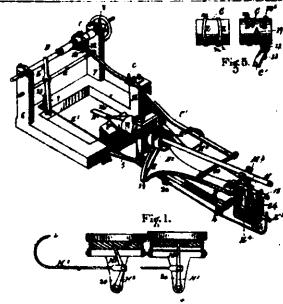
7172 Stevens, Holmes &amp; White's Improvements in Spark Arresters.



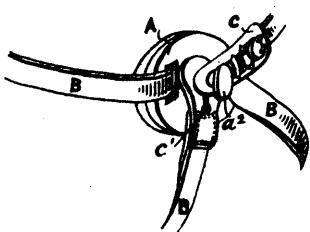
7175 Riley's Improvement on Collars for Garments.



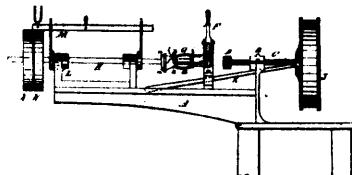
7177 Culham's Improvements on Semaphore Signals.



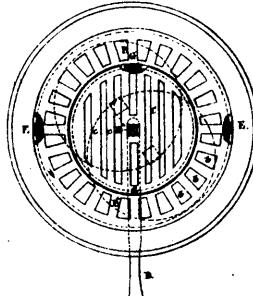
7179 Briggs' Improvements on Nail Machines.



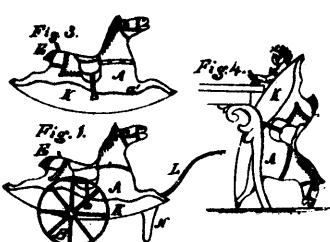
7180 Werum's Improvements on Trusses.



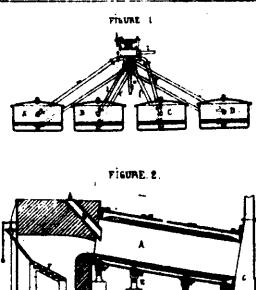
7181 Chadwick's Machine for Treading and Flanging Caps for Fruit Jars.



7182 Elliot's Improvements on Coal Stoves.



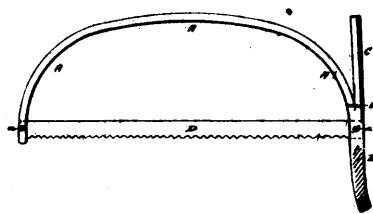
7183 Parker's Rocking Horse, Carriage, Sled, High Chair and Step-Ladder.



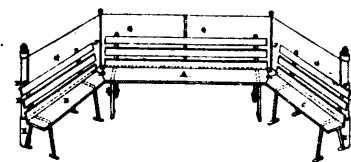
7184 Solvay's Improvements on the Manufacture of Carbonates of Soda.



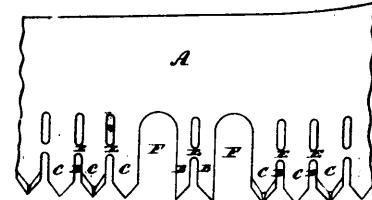
7185 Ruthven's Gas-Lighting Apparatus.



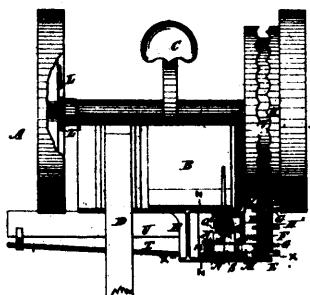
7186 Kinney &amp; Smyth's Improvements on Saw Frames.



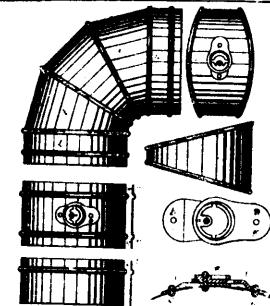
7187 Potter's Improvements in Church Benches.



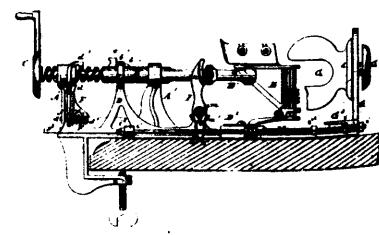
7188 Dietrick's Improvements on Cross-cut Saws.



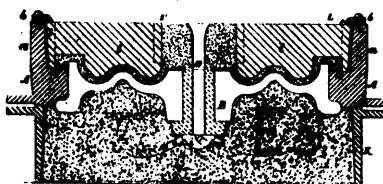
7189 Gray's Improvements in Mowers and Reapers.



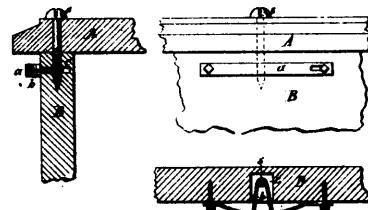
7190 Henis' Improvements in Sheet Metal Pipes.



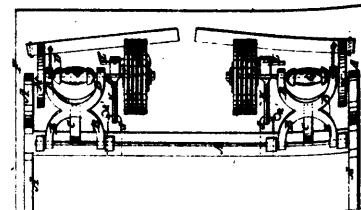
7191 Bergner's Improvements on Peach Parers.



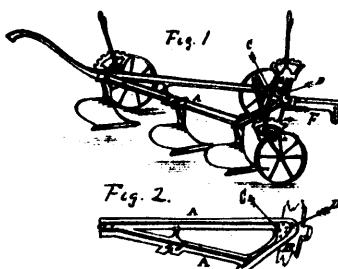
7192 Sax's Improvements on Car Wheels.



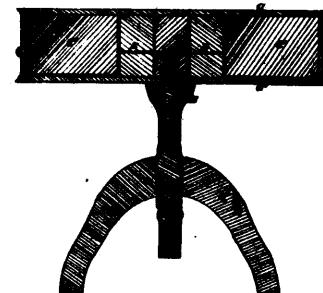
7193 McCarthy's Improvements on Screw Fastenings.



7194 Hill's Improvements on Hat Machines.



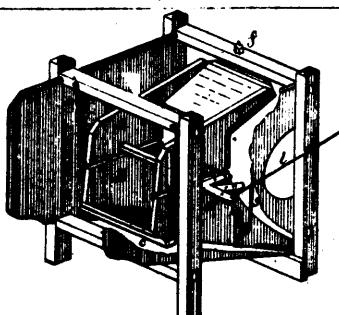
7195 Vary's Improvements on Gang Plough Frames.



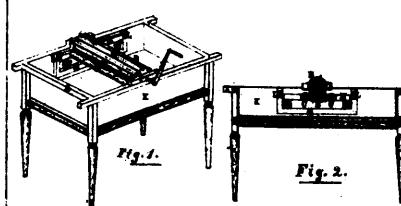
7196 Scott's Improvements on Work Tables.



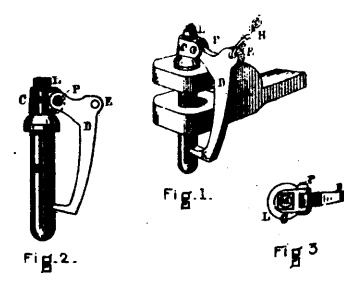
7197 Geen's Improvements on Boot and Shoe Tips.



7198 McKenzie's Improvements on Fanning Mills.



7199 Seger &amp; Stanton's Improvements on Washing Machines.



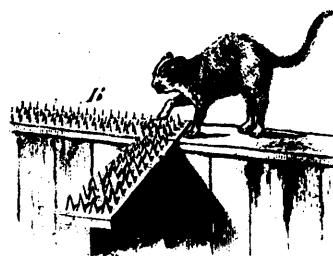
7200 Otis' Improvement on Horse Car Pole Attachments.



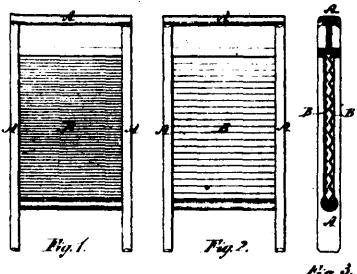
7201 Durkee's Art of Drying Fish.



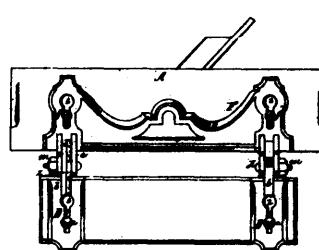
7203 Lench's Improvements in Sap Spouts.



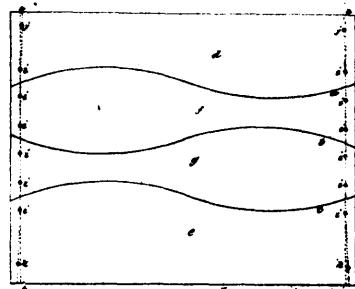
7204 Topliff's Improvement on Fences.



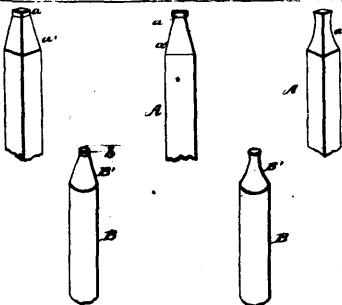
7205 Groom's Improvements on Wash-boards.



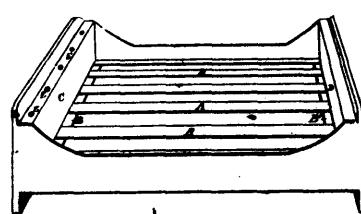
7206 Teanner's Improvements in Plane Guides.



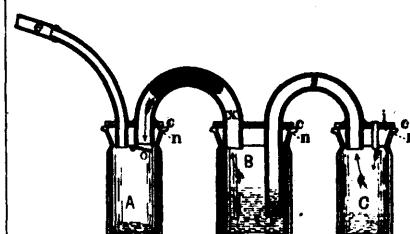
7207 Choate's Improvements on Stove-pipe Elbow Blanks.



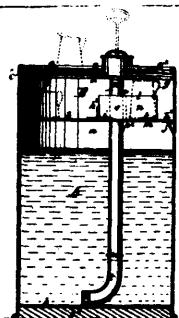
7208 Hargreaves' Improvements on Match Splints.



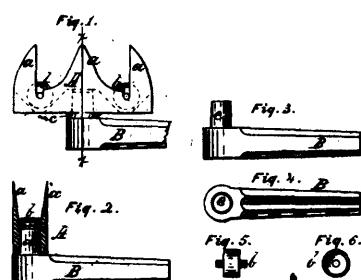
7209 Williams' Improvements on Spring Bed Bottoms.



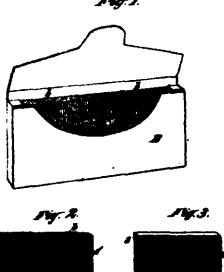
7210 Letts' Improvements on Inhalers.



7211 Munger's Improvements on Oil Tanks.



7212 Baldwin's Improvement in Gate Pivots.



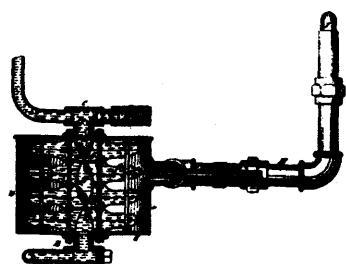
7213 Pearl's Improvement on Plug Tobacco.



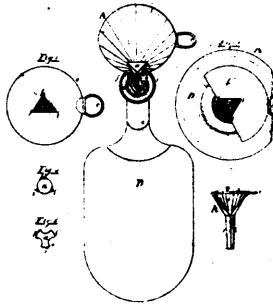
7214 Adams' Improvements on Freezers and Refrigerators.



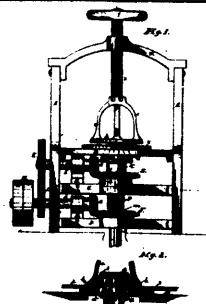
7215 Essery &amp; Webster's Improvement in Loose Pulleys.



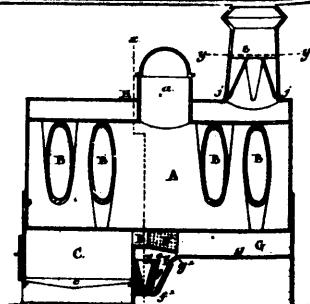
7216 Waters' Locomotive Feed Water Heaters.



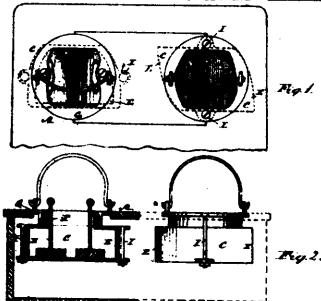
7217 Findlay, McDonald, Dunspaugh & Burns' Improvements on Funnels.



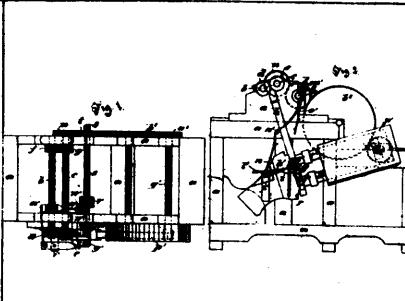
7218 Nugent's Machine for Flanging Boiler Heads.



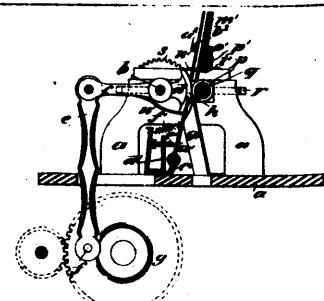
7219 Purdy's Improvements in Steam Boilers.



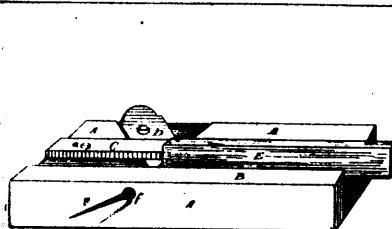
7220 Little & Clark's Improvements in Sad Iron Heaters.



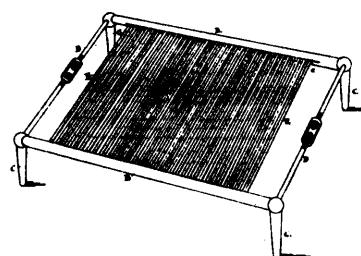
7221 Keys' Horse Shoe Nail Machine.



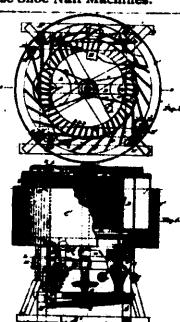
7223 Clapp, Pillow & Hersey's Improvements on Horse Shoe Nail Machines.



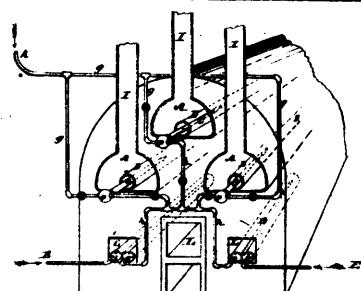
7224 Scollick, Manville & Brown's Machine for Manufacturing Twisted Taper Lights.



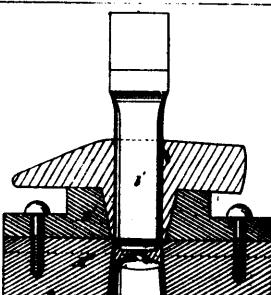
7225 Seymour & Milligan's Improvements in Plaiters for Dress Making.



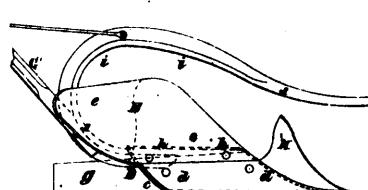
7226 Stata & Burrows' Improvements on Wind Mills.



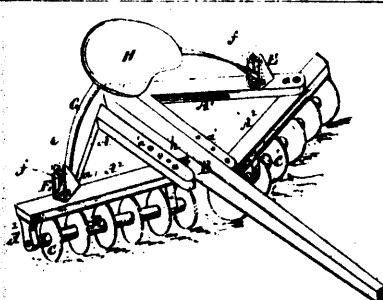
7227 Redhead's Process and Apparatus for the Manufacture of Illuminating Gas.



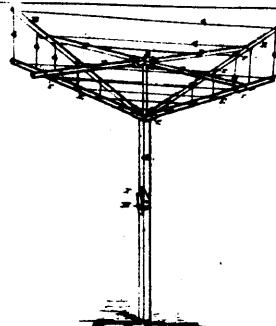
7228 Maydole's Improvement on the Art of Forging Hammers.



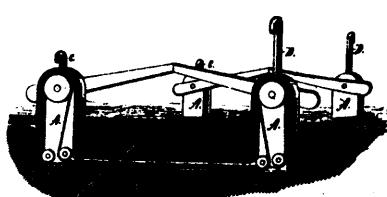
7229 Whiting's Improvements on Ploughs.



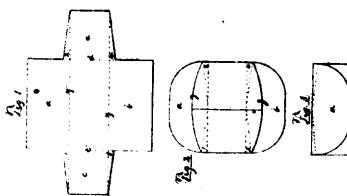
7230 Baer's Improvements on Wheel Harrows.



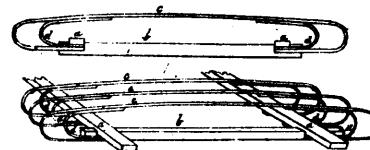
7231 Earle's Improvements on Clothes Dryers.



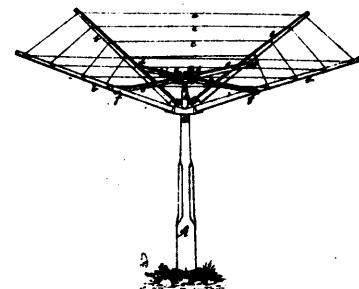
7232 Winsor's Improvements in Railroad Gates.



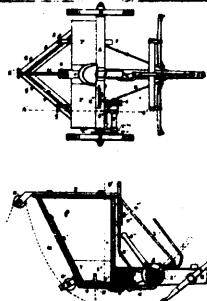
7233 Christey's Improvements on Safety Envelopes.



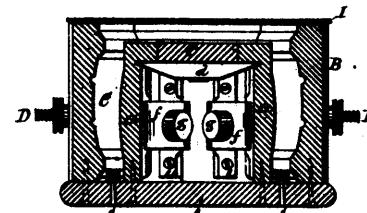
7234 Forsyth's Improvements on Spring-bed Bottoms.



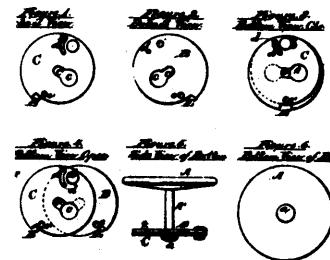
7235 Hill's Improvements in Clothes Dryers.



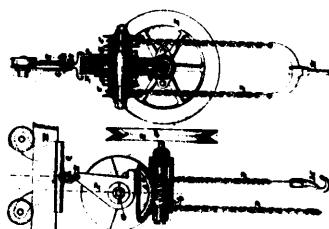
7236 Powell &amp; Kennedy's Improvements in Combined Wheel Harrows and Seed Sowers.



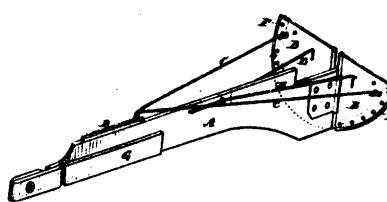
7237 Daniels' Method of, and Moulds for, Manufacturing Artificial Marble Coffins.



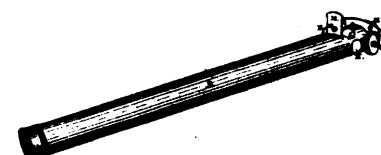
7238 Shur's Improvements on Button Fasteners.



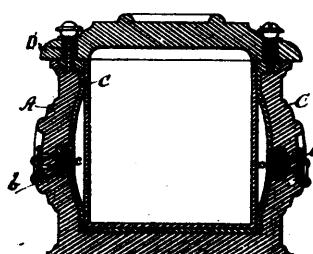
7239 Pennypacker's Improvements on Hoisting Apparatus.



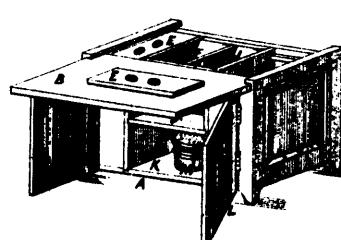
7240 Welbanks' Improvements on Stove-pipe Cleaners.



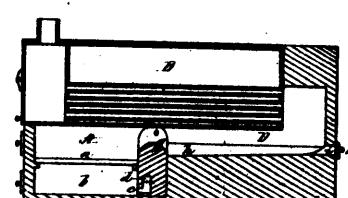
7241 Kent's Instrument for Indicating the Number of Spectacle Glasses.



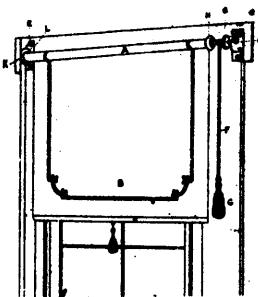
7242 Daniels' Art of Manufacturing Artificial Marble Coffins.



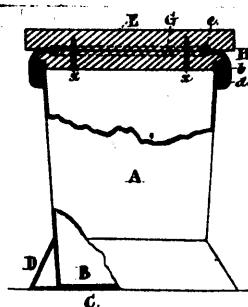
7243 McCulloch's Improvements on a Baking Side-board.



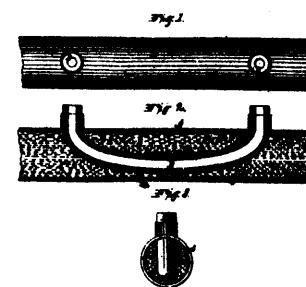
7244 Bryant, Young &amp; King's Improvement on Smoke Consuming Furnaces.



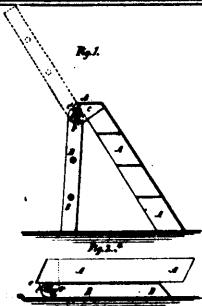
7245 Lash's Improvement in Window Blind Fixtures.



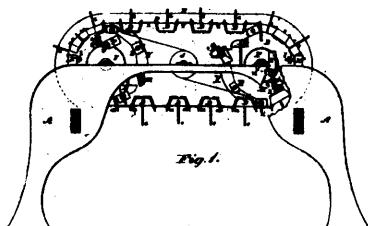
7246 Finnegan's Improvement on a Butter Package.



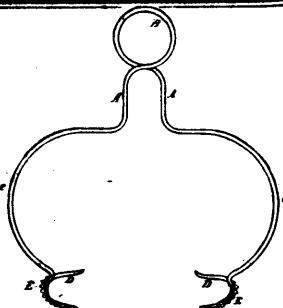
7247 Bujac's Device for Preventing Pipes from Bursting from Frost.



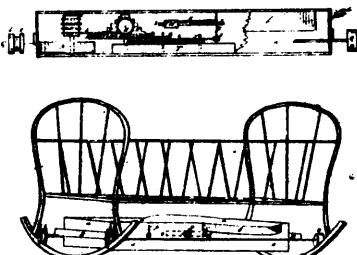
7248 Blauvelt's Improvements in Step-Ladders.



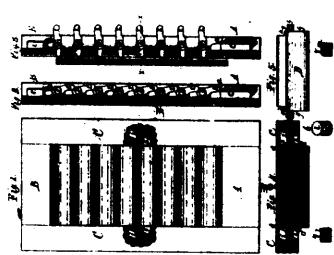
7249 Donnelly &amp; Taylor's Machine for Making Paper Bags.



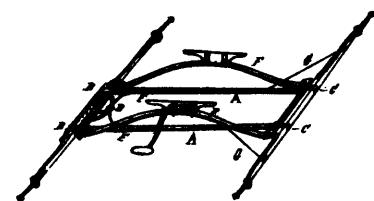
7250 Collins' Improvements in Bag-Holders.



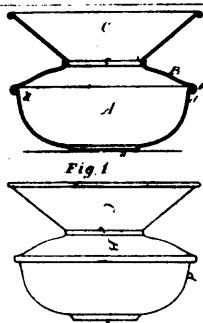
7251 Miller, Barlow &amp; Pennoyer's Machine for Rocking Cradles.



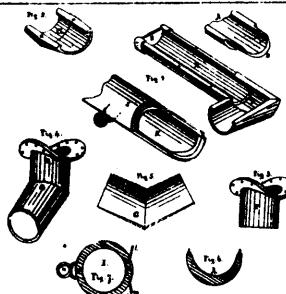
7252 Behel's Improvements in Window Blinds.



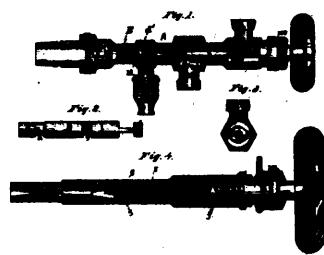
7253 McBride's Improvements on Carriages.



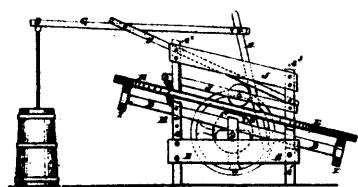
7254 Moore's Improvements on Cuspadores.



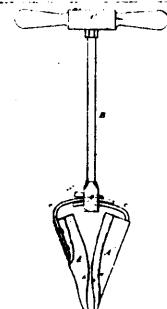
7255 Moulton's Improvements in Eaves Troughs, &amp;c.



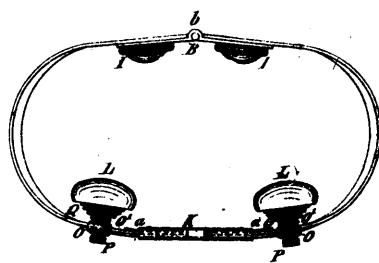
7256 Fergus's Improvements on Steam Boiler Injectors.



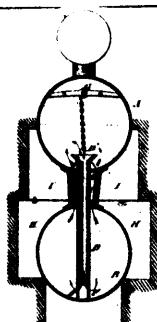
7257 Wilson's Improvements in Churns.



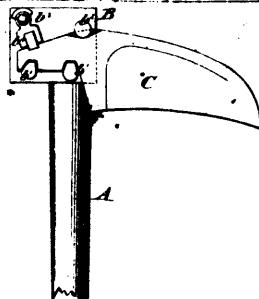
7258 Pool's Improvements on Post Augers.



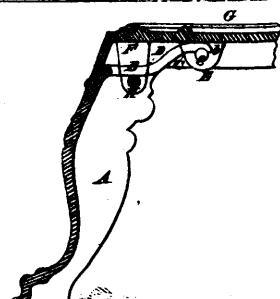
7259 Alexander's Improvements in Trusses.



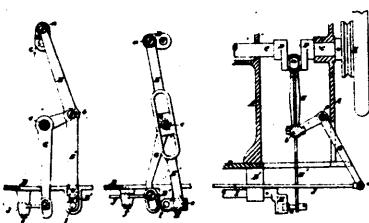
7260 Coleman's Improvements on Steam Boilers.



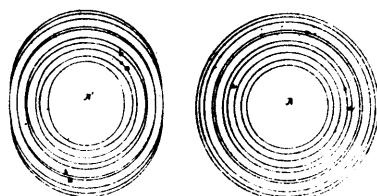
7261 Pickering's Improvements on Bush and Cane Cutters.



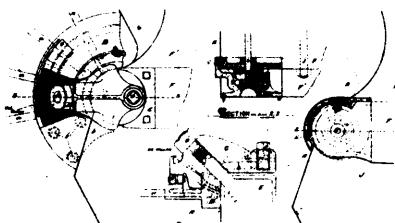
7262 Tice's Improvement on Stove and Furniture Legs.



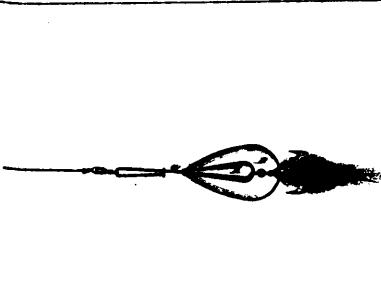
7263 Macauley's Improvements on Sewing Machine s



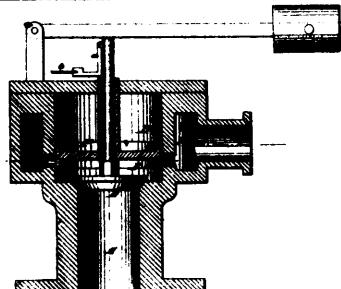
7264 Houghton's Improvements on Semaphore Lenses.



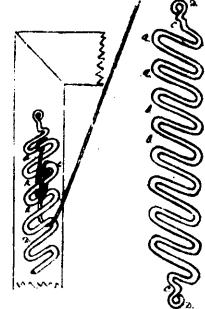
7265 Townsend's Improvements for Hanging Lock Gates.



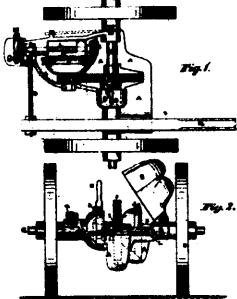
7266 Brush's Improved Trolley.



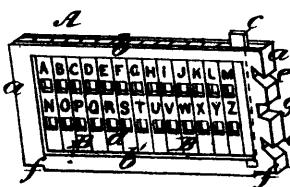
7267 Hoffman's Improvements on Safety Valves.



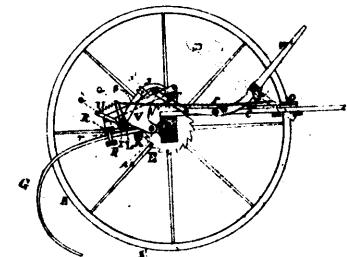
7268 Grate's Improvement on Picture Frames.



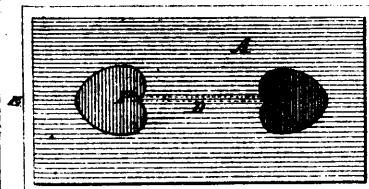
7269 Noxon's Improvements on Harvester Powers.



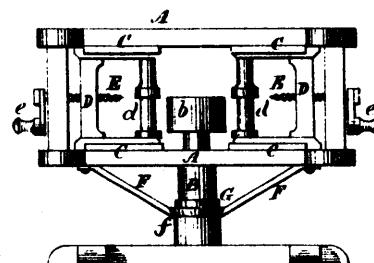
7270 Bergelhold's Improvement on Cryptography.



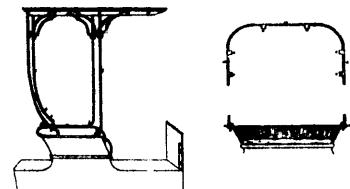
7271 Wilson's Improvements on Horse Rakes.



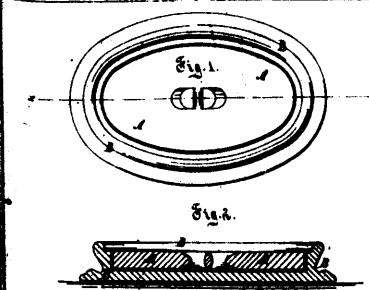
7272 Hall's Galvanic Electric Plaster.



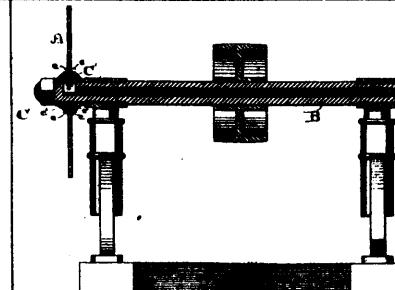
7273 Kisor's Improvements on Box Machines.



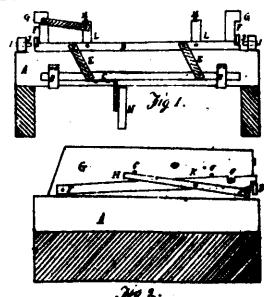
7274 Miller's Improvements on Carriage Canopy Tops.



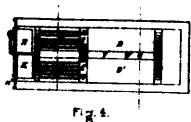
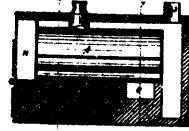
7275 Clark's Improvements on Dish Warmers.



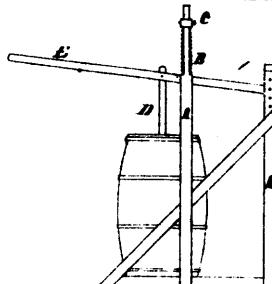
7276 Squire's Mode of Cooling and Lubricating Circular Saws, &amp;c.



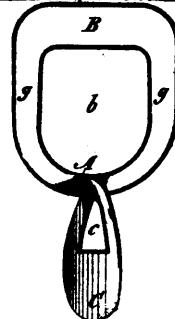
7277 Bell's Improvements on a Reed Organ.



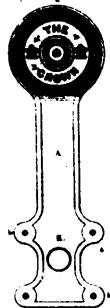
7278 Walker's Improvements on Furnaces.



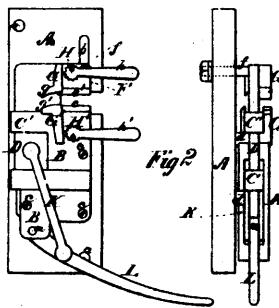
7279 Whaley's Improvements on a Churn.



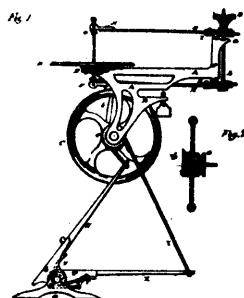
7280 Burson's Improvements in Screw Propellers.



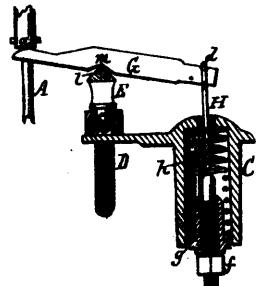
7281 Dayer &amp; Robertson's Door Hanger.



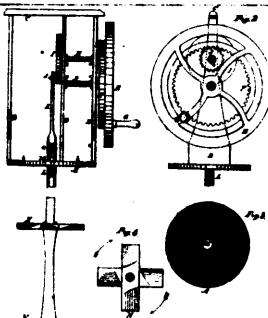
7283 Copeland's Tire Upsetting Machine.



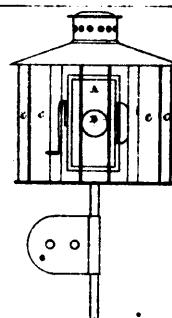
7284 Trump &amp; Frederick's Improvements on Scroll Sawing Machines.



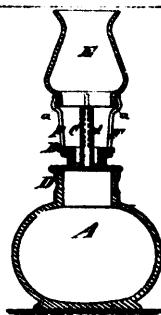
7285 Judson's Improvement on Governor Valves.



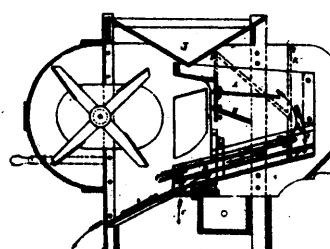
7286 McCauley &amp; Scratch's Churn.



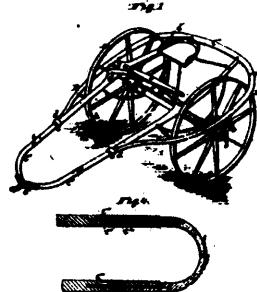
7287 Coxon's Improvements in Signal Lamps.



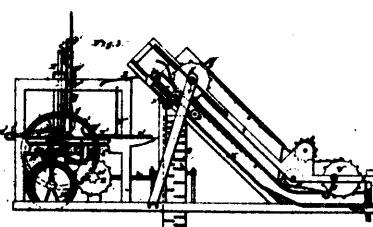
7288 Olmsted's Improvements on Lamps.



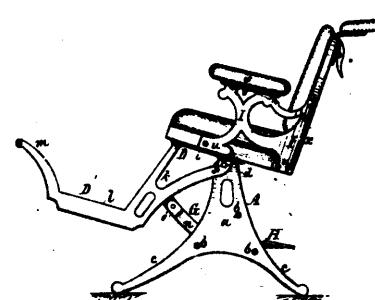
7289 Bennett's Improvements on a Fanning Mill.



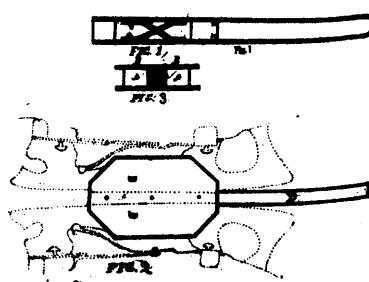
7290 Wood &amp; Schoen's Improvements on Trotting Sulkies.



7291 Whitney &amp; Conant's Improvements on Grain Binders.



7292 Archer's Improvement on Barber and Dental Chairs.



7293 Henderson &amp; Fraser's Skate Holder.