

guiding neck with a plunger which makes portions of its strokes in each of the three parts, viz.: neck, feed chamber and barrel; 10th. In combination with the pump constructed and arranged as shown, a water space D₁; 11th. The combination of the pump with the water space D₁, having tubes G₁, annular ring H₁ and circulating pipes I₁; 12th. The combination of boiler N with the heater, composed of water space D₂, water tubes G₂, annular ring H₂, circulating pipes I₂, deflector K₂; 13th. The combination with the pump, the heater composed of tubes N₁ O₁, water bridge P₁, with exhaust pipe Q₁; 14th. The combination with the boiler, N, of a heater, composed of tubes N₂ O₂, bridge P₂, having openings R₂ and exhaust pipe Q₂; 15th. The combination of the exhaust pipe W with the pipe A₁, having bell mouth B₁; 16th. The combination of the tank K with, or otherwise, chamber C, having heater coil C₁, with the tender tank and a pump; 17th. The combination of the tank K or chamber C, having coil C₁ connected with the exhaust port or exhaust pipe of the steam cylinder.

No. 9705. Improvements on Steam Boilers.

(Perfectionnements aux chaudières à vapeur.)

Guy D. Daly, Flatbush, N. Y., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. In the construction of a steam boiler, the combination of the fire chamber B, water space C, cock F F, tubes G G, cocks H H and tubes I I; 2nd. In constructing a steam boiler with tubes G G, placed in the fire chamber, and extending up through the crown sheet of the boiler, and having on their upper ends cocks F F, and on their lower ends cocks H H; 3rd. In connection with the water space of a steam boiler, one or more circulating systems, each consisting of cock F, tube G, cock H and tube I; 4th. The method of arbitrarily controlling the action of the valves of the cocks F F and H H; 5th. A steam boiler having, within its fire chamber, water tubes communicating at one end with the water chamber, and at the other end with tubes, outside of the boiler, that themselves connect with the water chamber; 6th. A steam boiler having water tubes in the fire chamber, in which the water circulation is controlled by the automatic action of the valves.

No. 9706. Improvements in Folding Tables.

(Perfectionnements aux tables brisées.)

Walter Thomas, Genesee, Ill., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. In a folding table, the braces B B hinged to the table-bed A and provided with the projecting cleats c c and springs b b, in combination with the rungs C and legs a a a a; 2nd. In a folding table, the combination of the folding braces B B, springs b b, rungs C, legs a a a a, and cleats D D, with the table-bed A.

No. 9707. Reach for Bob Sleighs. (Timon d'attelage pour les traîneaux-accouplés.)

William M. Ruttan, Wooler, Ont., 3rd March, 1879, for 5 years.

Claim.—The reach described and the couplings at B and D, only so far as their application to the reach is concerned.

No. 9708. Improvements in Door Hangers.

(Perfectionnements aux pentures des portes.)

Hubert R. Ives, Montreal, Que., 3rd March, 1879, for 5 years.

Claim.—The combination of the chilled pin C with the rivet iron pin t cast in the end for rivetting, upon which the sheave d revolves with the cap b.

No. 9709. Improvement on Vehicle Springs.

(Perfectionnements aux ressorts des voitures.)

Henry W. Pell, Rome, N. Y., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of the straight side springs D D fixed by their centres, beneath the side bars C C, and the arched end springs F F supporting the bed by their centres, and fixed to the extremities of the side springs D D by the lock joints d d; 2nd. Braces I to clip king-bolt tie and circle, and running to side bars C C.

No. 9710. Improvements on Cradles.

(Perfectionnements aux berceaux.)

George W. Ayer, Montreal, Que., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of a folding wedge-shaped frame composed of legs A and head-piece B, pivoted together, a pendulous frame composed of bars C C having a bow D, pivoted thereto, and an adjustable chair pivoted to the bars C C by the front legs F, and to the rear legs by bars G; 2nd. The cords J, for supporting the chair-back from the bars C C in an adjustable position; 3rd. The combination and arrangement of the bars C C, with bow D, cord N and head-piece B, of the frame A for swinging the chair.

No. 9711. Improvements on Butter Cutters.

(Perfectionnements aux tranches à beurre.)

Isaac M. Rhodes, Hancock, Mich., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of the cylinder A and semi-circular pivoted knives I I, the latter being adapted both for cutting and lifting the butter or lard; 2nd. A cylinder provided with circular knives movable upon pivots, and an interior adjustable follower, for cutting and taking out butter and lard in rolls, and at the same time measuring the same; 3rd. The combination of the cylinder A, head B, tube C, with slot a and notches b, and the following D with hollow stem F, having lug t and knob E; 4th. The combination of the cylinder A, knives I I and handles G G.

No. 9712. Improvements in the Silber Lamp.

(Perfectionnements à la lampe dite "Silber.")

Ernest Chanteloup, Montreal, Que., (Assignee of Patrick Carroll, Chatham, N. B.), 3rd March, 1879, for 5 years.

Claim.—The combination with a lamp burner having either a circular wick, dual flat wicks, or other multiple wicks, the bell or spreader G, perforated and carried centrally at a suitable height above the wick tube.

No. 9713. Improvements on Car Couplings.

(Perfectionnements aux attelages des wagons.)

Jacob Chapman, West Bay City, Mich., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. In a car coupling, the gravitating brackets D D, formed with the shoulders h h, in combination with the stop e in the bottom of the draw-head; 2nd. The combination of the cap H, curved bar G, slat S on same, brackets D D, coupling-pin C, removable seat E, with the draw-head A.

No. 9714. Improvements on Refrigerators.

(Perfectionnements aux garde-manger.)

David A. Stevens, Toledo, Ohio, U. S., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of the inclined troughs, the drip shelves serving to cover and protect the joists of the ice floor, main frame and the valves or pivoted wings between the shelves and the troughs, all arranged between the joists and within the space occupied by the main frame, whereby space is economized and compactness of structure secured; 2nd. The combination of the ice floor racks provided with cross pieces over the troughs with the drip shelves and troughs, whereby the spattering of the drip is prevented; 3rd. The combination of the ice cage, the ice floor racks with its cross pieces, the drip shelves and troughs, and the conduit and exit pipes, whereby the drip is prevented from contact with the framework and walls.

No. 9715. Improvements on Nut Locks.

(Perfectionnements aux arête-écrous.)

William Whitford, Kendallville, Ind., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of the washer A, having equi-distant radial grooves b b, with the washer B having recess c and equi-distant radial grooves b₂ b₂, and the pin P, the grooves in the washer B being closer together than those in washer A, and vice versa.

No. 9716. Improvements in Bottle Stoppers.

(Perfectionnements aux bouchons des bouteilles.)

Henry Barrett, Hampton, and John Bailey, Silvertown, England, 3rd March, 1879, for 5 years.

Claim.—1st. In the manufacture of internal stoppers for bottles for containing aerated or gaseous liquids, a vulcanite, or elastite, or vulcanized gutta-percha stem or body with a soft india rubber washer in one piece, with the hard stem or body, by combining the two parts together by vulcanization; 2nd. The stoppers manufactured substantially by the modes described, and consisting, respectively, of a stem a of hard rubber, or elastite, or vulcanized gutta-percha, and a washer of soft, elastic vulcanized rubber b combined in one piece.

No. 9717. Improvements on Milk Coolers.

(Perfectionnements aux garde-lait.)

Sanford P. Bacheller, Canton, N. Y., U. S., 3rd March, 1879, for 5 years.

Claim.—1st. The combination of the concentric pans or tanks A B C, provided with overflow F and discharge outlets L; 2nd. The tanks B and C, connected by pipes H H, whereby a circulation of water in the two tanks is maintained, for cooling the milk in the intermediate pan A; 3rd. In combination with the concentric tanks A B C, the base D pivoted to, or rotatably supported from, bench G.

No. 9718. Improvements in Bed Bottoms.

(Perfectionnements aux fonds des lits.)

Gidion Huntington, London, Ont., (Assignee of Albert C. Langworthy, Aurora, Ill., U. S.), 3rd March, 1879; (Extension of Patent No. 3152) for 5 years.

No. 9719. Improvements on Registering Locks. (Perfectionnements aux serrures à combinaison.)

Henry Clark, Baltimore, Md., U. S., 8th March, 1879, for 5 years.

Claim.—1st. A padlock having a pivoted shackle which has the same axial centre as the key and the tumbler moving mechanism, and moves in a plane having a right angle to the body of the lock; 2nd. In combination with a lock provided with radially moving pin tumblers, a guard tumbler arranged in front of the remaining tumblers and having such lateral dimensions as to conceal from view the same; 3rd. In combination with a lock provided with radially moving pin tumblers, a guard tumbler placed in front of the remaining tumblers and having its inner end in contact with, or close proximity to, the inner side of the key hole, when in position to permit the locking mechanism to be operated; 4th. A lock provided with a revolving shackle, a circular kerf formed upon the casing and extending upward around the pivotal opening for said shackle, in combination with a corresponding recess formed within the contiguous super-imposed portion of said shackle; 5th. A registering lock provided with a pivoted shackle, which rotates in a plane having a right angle to the body of the lock, and furnishes an axial bearing for and upon which are placed registering discs; 6th. In combination with a lock provided with radially moving pin tumblers, a key having a radially opening within its body through which one of said tumblers may drop to its normal position, after said key has been inserted within the lock; 7th. As a means for permanently enclosing the casing of a padlock, a cover fitted into the open end of the same and secured in place by compressing or swaging the contiguous metal upon or over its edge; 8th. A registering lock in which the dial wheels or discs are journaled upon and rotate around the same axis with the key; 9th. As a means for communicating the motion of the primary registering dials H to the succeeding or secondary dials H, the radial peripheral notches h formed in said dials, the discs H₁ having each within its periphery one radial notch h₁, and upon its rear face a stud h and the wheels I, provided with peripheral teeth t and having upon their rear faces the pins t.