

chamber; 3rd. The partitions E built close and provided with openings at the base for the downward passage of cold air; 4th. As a lining for the walls of ice houses, refrigerators, &c., one or more thickness of paper soaked in linseed oil.

No. 9733. Improvements in Spring Draught Tugs. (*Perfectionnements aux chaînes à ressort de remorque.*)

John F. Miller, Pittsburgh, Pa., U. S., 1st March, 1879, for 5 years.

Claim.—The staple C C' passing longitudinally through a spiral spring and in combination therewith, and with the heads B and B'.

No. 9734. Improvements on Boiler Furnaces. (*Perfectionnements aux fourneaux des chaudières.*)

Edward R. Stege, Chicago, Ill., U. S., 10th March, 1879, for 5 years.

Claim.—The transverse blast pipe G placed beneath the front support d, of the grate and having steam openings g, arranged in line with the interstices between the grate bars, in combination with the steam supply pipe F and air openings h in the boiler front.

No. 9735. Improvements on Tobacco Caddies. (*Perfectionnements aux boîtes à tabac.*)

William P. Niles, Belleville, Ont., 10th March, 1879, for 7 years.

Claim.—The combination of the sides, back and bottom A, top B, door C and latch D.

No. 9736. Improvements on Tables. (*Perfectionnements aux tables.*)

Albert H. Hogins, Morrisania, N. Y., U. S., 10th March, 1879, for 5 years.

Claim.—The pivoted wedge-shaped section b, provided with the cleat j, the bars c e sliding in ways d f under the table top, in combination with the frame of the table and with the top C.

No. 9737. Improvements on Car-Couplers. (*Perfectionnements aux attelages de wagons.*)

James McDonald, Blythe, David D. Hay, Listowel, and James W. Christie, Elenna, Ont., 10th March, 1879, for 5 years.

Claim.—1st. The combination of the iron swing slide A and the iron pin B together with coupling link C; 2nd. The combination with the iron swing slide A, the iron pin B, and the coupling link C of the jaws of the coupler C, and the form of the inside of the coupler back of the pin D.

No. 9738. Improvements on Circular Saws. (*Perfectionnements aux scies rondes.*)

William McDonald, Milltown, N. B., 11th March, 1879, for 5 years.

Claim.—1st. The end frames A A' and 19 combined together by longitudinal rods and arranged to support the rotating machinery; 2nd. The brackets Y bolted to the frame A A' to support the trunnions of frames Z Z', provided with press rollers V; 3rd. The elastic cushion C, imposed between the standards 10 and the ends of the roller frames V, for receiving the jarring impact; 4th. The set work levers E E' hinged at their lower ends to a fixture and attached to the sliding bars L L', by straps O and spring dogs K K K, for moving each saw independently by its collar sliding on the arbor B; 5th. The clutches G, fixed with babbitt-metal for receiving frictional wear in contact with the saw collars; 6th. The arrangement of the gear wheel P, journaled under the saw arbor for driving the roller gear wheels P' P', from their lower periphery; 7th. The arbor B provided with the longitudinal groove h, in combination with feather connections 4, of movable saw collars 5 5 5 and the fixed saw collar 29; 8th. The movable saw collars 5 5 5, provided with washers and screws 14, for securing the saws thereto; 9th. The combination with the arbor B, of a number of movable saws severally mounted on independent sliding collars, relatively adjustable to each other and to a fixed saw by set work levers F; 10th. In combination with a revolving arbor provided with fixed and movable circular saws, the lower stationary grooved feed rollers N N' and upper adjustable press rollers V V'; 11th. In combination with the arbor B, of the feed pulley u, the feed pulley R, shaft S and pulley T, and the feed gears P P' P'; 12th. The upper press rollers V, supported in the rocking frame Z Z', having eye bolts 13 at each end to attach rods to hoist the rollers suspendedly; 13th. The rocking frame Z Z' journaled to brackets Y, and carrying the roller V in journal boxes; 14th. The saw-guides D, bolted to frames f, having slots 16 for their adjustment to the saws and provided with a wood facing 12, in contact with the saw to prevent vibration; 15th. The collars 11 and screws 12, on both sides of the journal box to prevent endwise vibration of the arbor B.

No. 9739. Improvements in Fire-Proof Cornices. (*Perfectionnements aux corniches réfractaires.*)

James L. Murphy, Carleton Place, Ont., 11th March, 1879, for 5 years.

Claim.—1st. The outside cave and gable cornices for houses, a coating or bed of mortar, cement, plaster of Paris or analogous substance connecting the wall of the building with the mortar coating or shingle bed of the roof; 2nd. A cornice for the eaves and gables of houses, worked in the shape of mouldings or other fanciful design, and composed of mortar, cement, plaster of Paris, or other fire-proof material.

No. 9740. Machine for Putting Threaded Nuts upon Bolts. (*Machine à placer les noix filetés sur les boulons.*)

Charles D. Rogers, Providence, R. I., U. S., 13th March, 1879, for 15 years.

Claim.—1st. In a machine for putting nuts upon bolts for sale in the market, the combination of the following instrumentalities or organisms: two separate hoppers for the bolts and nuts respectively, two separate recipients, the one for the bolts and the other for the nuts, suitable mechanism for delivering the bolts and nuts, one at a time, to their respective recipients.

suitable mechanism for swinging the holders for the bolts and the nuts into coincidence and mechanism for causing the bolts and nuts to be combined together; and in combination with suitable mechanism for delivering nuts, one at a time, an intermittently revolving recipient for the same consisting of a spindle or series of spindles mounted in tubular casing, each spindle being capable of being revolved at stated times upon its own axis and formed with a pair of stationary jaws and a pair of spring holders at the end nearest the delivering mechanism for receiving and holding the nuts; 3rd. The combination, with the tubular case or holder in which the same is mounted, of a spindle for receiving and holding a nut, such spindle being arranged to have a longitudinal movement within its holder at stated times for projecting the nut against the end of the bolt upon which it is to be screwed; 4th. The combination with the spindle or series of spindles for holding the nuts of a revolving clutch face shaft adapted to lock with a corresponding clutch upon the head of each spindle and arranged at stated times to engage with the head of each spindle, or the series of spindles, if there be more than one, and intermittently revolved, whereby the spindle carrying the nut in its jaws is projected longitudinally to bring the nut against the end of the bolt upon which it is to be screwed, and, at the same time, to be rotated; 5th. The combination, with the tubular case or holder in which the same is mounted, of a spindle for receiving and holding a nut and a spring adapted to retract the spindle when the latter is relieved from the endwise pressure of the clutch faced turning shaft, which causes the spindles to be projected and revolved; 6th. The combination with an intermittently revolving recipient for receiving and holding nuts of suitable mechanism for conveying and discharging the nuts, one by one, and a punch or plunger having an intermittent longitudinal movement for forcing the nuts in succession into the receiving and holding jaws of the nut holder; 7th. The combination of a spindle, for receiving and holding a nut, having an intermittent rotary movement around a fixed axis, a cleaver rod or device d, and an inclined pin or equivalent device Y, for operating such cleaver whereby, in case a nut sticks in the holder it will be discharged before a second nut is introduced; 8th. In combination with suitable mechanism for delivering screw bolts one at a time to an intermittently revolving recipient for the same, a spring clamp operated by means of a revolving star wheel or equivalent device for applying pressure to the side of the bolt, to prevent it from turning in the holder while the nut is being screwed upon the bolt; 9th. The combination of an intermittently revolving recipient for receiving and holding nuts with an intermittently revolving recipient for receiving and holding bolts, said two recipients being so arranged that at each interval of rest of the two respectively, the axis of one of the holders for the nuts and one of the holders for the bolts will coincide in the same straight line.

No. 9741. Improvements in Refrigerators. (*Perfectionnements aux garde-manger.*)

Allen M. Murphy, Toronto, Ont., 13th March, 1879, for 5 years.

Claim.—1st. The flanges C C' extending rearwardly on the disk sections and provided respectively with sockets and studs, for the purpose of forming a detachable fastening for the door at its lower edge; 2nd. The disk sections provided with a projecting head F, in combination with the rubber washer and countersunk recess around top hole opening.

No. 9742. Improvements in Beer Pumps. (*Perfectionnements aux pompes à bière.*)

John Cosgrave and Lawrence J. Cosgrave, Toronto, Ont., 13th March, 1879, for 5 years.

Claim.—1st. An air pump operated in any suitable manner and provided with suction pipe, connecting with the cooling chamber of refrigerator ice box and a discharge pipe arranged to connect in a detachable manner with a key contained in said cooling chamber, for the purpose of discharging the liquid contained in said key, by the force of compressed cold air drawn from the cooling chamber; 2nd. The combination of the pump D, suction pipe E with valve 12, discharge pipe F with valves F' F', with the key C and cooling chamber of refrigerator ice box; 3rd. The bellows shaped pump D having an interior spring 1, and foot lever G.

No. 9743. Improvements on Canister Covers. (*Perfectionnements aux couvercles des bidons.*)

William Sawdon, Toronto, Ont., 13th March, 1879, for 5 years.

Claim.—A semi-circular cover C, centrally pivoted to the permanently fixed semi-circular cover B, by the pivot D, in combination with the guide pieces E, forming a close joint between the canister A, and said cover C.

No. 9744. Machine for Trimming Boot and Shoe Soles. (*Machine pour finir les semelles des chaussures.*)

Charles A. Black, Chicago, Ill., U. S., and Stephen S. Black, Fredonota, N. B., 13th March, 1879, for 5 years.

Claim.—1st. Devices for trimming the edges of the soles of boots and shoes composed of upper feed wheel a, having a smooth periphery, lower feed wheel c operated by suitable machinery, said feed wheels adapted to clasp the edge of the sole and carry it against a fixed knife C, whereby the superfluous leather on the edge of the sole is trimmed off quickly and neatly; 2nd. The combination of the feed wheel a and c operated by suitable machinery with the fixed knife C; 3rd. The feed wheel c on shaft E, journaled in the vertically sliding box F and provided with the universal joints d d in combination with the radius shaft E, curved knife C and feed wheel a; 4th. The curved knife C secured at the upper end between the bushing h, and feed wheel a, and at the lower end of the jaws E E', by the slotted bolt c', in combination with the feed wheels a and c; 5th. The upper feed wheel a operated by shaft d, the feed wheel c and shaft E and controlled by springs H H', the lever J, the knife c, pulley B' and gearing C D d'; 6th. The shield k, in combination with feed wheel a to protect the uppers of boots and shoes from injury by the wheel a.

No. 9745. Improvements in Door Fastenings. (*Perfectionnements aux fermetures des portes.*)

Emil Jaeger, Montreal, Que., 13th March, 1879, for 5 years.

Claim.—The combination, in a sash and door fastening, of a spindle provided with a handle and operating by its rotation through chains or like con-