

No. 8458. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Charles M. Banks and Robert W. Park Philadelphia, Pa., U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The combination with the reciprocating needle-bar B, standard E and spear-head *h*₁, of the lever F pivoted to said standard at *f*, and the lever G pivoted to lever F and *g*, said levers and standard being constructed and provided with mechanism, so that the lever G shall be alternately thrown on opposite sides of the spear-head and the proper intermittent reciprocating motion imparted to the bar B; 2nd. The combination with the reciprocating needle bar B, recessed standard E, provided with loop or equivalent *e* and spear-head H, of the levers F and G, springs *e* and collar *f*; 3rd. Adjustable plate H carrying the spear-head *h*₁, in combination with the head of the machine, the reciprocating needle bar B, standard E and intermediate mechanism, for imparting motion to said needle-bar.

No. 8459. Improvements on Beer Pitchers. (*Perfectionnements aux pots à bière.*)

Solomon C. Howell, Palmyra, N.Y., U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The pitcher A, in combination with the air tube B and the lid E, into which is secured the diaphragm H, 2nd. The lid E, in combination with the diaphragm H, the valve I and the spout L; 3rd. The lid E, in combination with the elastic ring D in the groove C.

No. 8460. Improvements on Skates. (*Perfectionnements aux patins.*)

Robert Guy, Dartmouth, N.S., 23rd February, 1878, for 5 years.

Claim.—The combination of the sole clamps *g*, with sole plate *f* and heel prod C.

No. 8461. Improvements on Shingle Machines. (*Perfectionnements aux machines à bardeau.*)

John Goldie and Daniel Cameron, Galt, Ont., 23rd February, 1878, (Extension of Patent No. 2115,) for 5 years.

No. 8462. Improvements on Cultivators. (*Perfectionnements aux cultivateurs.*)

James B. Armstrong, Guelph, Thomas Galloway and John Larsen, Oshawa, Ont., 23rd February, 1878, for 15 years.

Claim.—1st. The combination with flexible locking devices, for the teeth of seeders and cultivators, of the spring C constructed of ribbon, bar or round steel (or other suitable material) wound around a central axis, in regular or irregular convolutions to a spiral-screw form, or to a spiral volute form; 2nd. The spring C, in combination with the locking studs F provided with cheek and stop blocks and the drag bars A, 3rd. The eccentric block D, in combination with the spring C and drag bars A, 4th. Quadrant brackets G, in combination with the teeth, drag-bar and flexible locking bars, of a spring seeder or cultivating machine, for the purpose of permitting the angle of the teeth to the ground, to be altered without varying the character or strength of the locking device.

No. 8463. Improvements on Snow-Ploughs. (*Perfectionnements aux charrues à neige.*)

James O. Stackhouse, St. John, N.B., 23rd February, 1878, (Extension of Patent No. 2103,) for 5 years.

No. 8464. Improvements on Drying Apparatus. (*Perfectionnements aux appareils de séchage.*)

Levi K. Fuller, Brattleborough, Vt., U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The combination of the drying chamber A, blower E, condenser H and pipes D G, 2nd. The combination of a suitable exhaust blower and condenser, arranged to take moist air from a drying room, condense the moisture contained in it, and put the dried air back into the room; 3rd. The combination of a condenser H, with a heating apparatus C, or its equivalent, in the drying room, when arranged in such a manner that the former condenses the moisture from the air heated by the latter, before it re-enters the drying chamber, 4th. A drying chamber or room A provided with an internal heating apparatus C, or its equivalent, a blower for forcing to dry air, and an exit for the moist air.

No. 8465. Improvements on Circular Sawing Machines. (*Perfectionnements aux scies circulaires mécaniques.*)

William McDonald, Calais, Me., U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The journal G, centering in the end of the saw arbor B, and removable therefrom; 2nd. The removable journal G, centering in the end of the saw arbor, having a raised shoulder, and a hollow sleeve screwing thereon, and cutting against the end of the arbor.

No. 8466. Improvement in Spring Beds. (*Perfectionnement dans les lits à ressorts.*)

Esos C. Healey, Jarvis, Ont., 23rd February, 1878, for 5 years.

Claim.—The mode of connecting the slats AA, by means of the looped wire BB.

No. 8467. Apparatus for Trimming Bevel and other Gearing. (*Appareil à décroûter les roues coniques et autres.*)

John Smith and Josiah Course, Carleton Place, Eng., 23rd February, 1878, for 5 years.

Claim.—1st. The combination in an ordinary lathe of standard A, carrying radial bracket Et, with slide arm F carrying slide rest G and cutter H; 2nd. The combination of standard A with collar plate M₂, carrying fixed

centre M₁ and slotted link M, and with adjustable crank or disc N driven by over-head motion, carrying rod L, sliding rest G and cutter H; 3rd. The combination of the slide arm F carrying slide rest G and anti-friction roller F₂, with cam plates Q and with connecting rod R₂ sliding block R₁ and screw R, 4th. The combination of the vertical and adjustable slide P with cam plates Q; 5th. The combination (or not) with slide arm F, of lever and weight F₁; 6th. The combination in a planing, shaping or slotting machine of bracket R, slide S, actuated by screw S₁, vertical slide T and spring Z, with anti-friction roller V and cam plates Q; 7th. The combination of vertical slide W and adjustable screw *x*, with cam plates Q, 8th. The combination of bracket R and its appendages with sliding rest G.

No. 8468. Mechanism for Opening and Closing Doors of Hatchways. (*Appareil à ouvrir et fermer les panneaux de couilliers.*)

John B. Waring, Stamford, Ct., and William O. Allison, New York, U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The combination with a swinging door or cover provided with a downwardly-extending rod, bar or arm, having an inclined face, of an elevator platform, car or cab, provided with a tappet or projections, whereby during the ascent of said platform, car or cab, the said door or cover is opened with a slow initial movement, to permit the passage of the said platform, car or cab, and during the descent of said platform, car or cab, the door or cover is supported in closing, so that it will not slam noisily; 2nd. The combination with a swinging door or cover, provided with a downwardly-extending rod, bar or arm, having an inclined face, and an elevator platform, car or cab, provided with a tappet or projection, for acting on the inclined face of the said rod, bar or arm, of a push piece and prop mounted on the elevator platform, car or cab, whereby the door or cover may be opened by the action of the tappet or projection on the rod, bar or arm, with a slow initial movement, and subsequently by the action of the push piece, with a more rapid movement; 3rd. The combination with a swinging door or cover, provided with a downwardly extending rod, bar or arm, having an inclined face, and an elevator platform, car or cab, provided with a tappet or projection, for operating on the inclined face of the rod, bar or arm, of a recess in said arm to permit the passage of the tappet or projection beyond it, after performing its work; 4th. The combination with a swinging door or cover, of a rod, bar or arm, attached rigidly thereto and extending therefrom, and having an inclined face to be operated upon by a tappet or projection on an elevator platform, car or cab, and serving as a weight for effecting the closing of the door or cover, and preventing it from being slammed against the side of the hatchway during its opening; 5th. The combination with a swinging door or cover, of a hinged support and a rod, bar or arm, to be operated upon by a tappet or projection on an elevator platform, car or cab, all made in one piece, whereby rigidity and firmness are secured; 6th. The combination with a swinging door or cover, of a bell crank, or bent lever, pivoted in a hatchway, some distance above the said door or cover, a connection between said door or cover and one arm of said lever, a projection extending from the other arm, and an incline carried by an elevator platform, car or cab, whereby during the descent of the said platform, car or cab the door or cover will be opened to permit its passage, and during the ascent of the platform, car or cab, above it, the door or cover will be supported so that it will not slam noisily; 7th. The combination of a door B, support F, hinge C and rod, bar or arm E, made in one piece, a bell-crank or bent lever L, a connection between the latter and the said support F of the door or cover B, the tappet or projection G and an incline K on the elevator platform, car or cab D.

No. 8469. Odourless Excavating Apparatus. (*Appareil inodore à rider les latrines.*)

Charles H. Vouté, Toronto, Ont., 23rd February, 1878, for 5 years.

Claim.—1st. A receiving cask having two compartments C and C₁, connected respectively by air hose E and F to an air pump D, in such a manner that the operation of the pump exhausts the air from one compartment, while forcing it into the other; 2nd. The hose A leading from the vault B to the compartment C of a receiving cask, having a partition C₂ provided with an air-tight valve G, in combination with the compartment C₁ and discharging hose H, the said compartments being connected to the double acting air pump D; 3rd. A deodorizing compound made of tar, saw-dust and carbolic acid, or other suitable ingredients, and burnt within or near the pitting tent used in connection with the removal of night soil; 4th. The cast-iron head M, fitting the wooden barrel or cask L and held thereto by the cross bar P butting against the angle iron N and secured by the screwed bolt O; 5th. The cast-iron head M provided with lugs Q, in combination with the bolts R.

No. 8470. Process for Improving Fish Scrap. (*Procédé pour améliorer les déchets de poisson.*)

Stephen L. Goodale, Saco, Me., U.S., 23rd February, 1878, for 5 years.

Claim.—The process of washing fish or fish scrap with water subsequent to its being cooked and before it is finally pressed, whereby gelatine is removed, the yield of oil increased, and subsequent drying of the scrap facilitated.

No. 8471. Improvements in Potato-Diggers. (*Perfectionnements dans les arrache-patates.*)

Lewis F. Bailey, Newport, N.S., 23rd February, 1878, for 5 years.

Claim.—1st. In combination with the driving or carrying wheel of a potato-digger, gauge wheels D carried in frames secured to the axles of the main wheels, and raised or lowered at the will of the driver, 2nd. The combination of the wheels A A₁, frames BB, curved bars B₁ and teeth C; 3rd. The combination with the carrying wheels and digging apparatus proper, of a shaker vibrated through a crank disc and pinion intermeshing with and operated by a circular rack on one driving wheel.

No. 8472. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

Peter Wilson and Robert Lynn, Buffalo, N.Y., U.S., 23rd February, 1878, for 5 years.

Claim.—1st. The combination of the bottom head A with its passages and valves DD₁, the cylinder E with side passages GG₁, the top head H with chamber I₁ and two or more valves JJ₁, and the valve chamber K extend-