

of its longer edges and also with one or more projections *b*, extending upward from such plate, and being to support an anchor fluke and permitting or aiding in its discharge, under circumstances. 3rd. The improved anchor fluke supporter and tripper, consisting of the plate *A*, the projection *b*, the recess *c* and one or more chocks *h*; 4th. The plate *A*, provided with the anchor-fluke receiving recess *c*, supporting projection *b* and curved-guide-flange *i*; 5th. The plate *A* provided with the anchor fluke receiving recess *c*, the supporting projection *b*, the curved guide-flange *i* and one or more chocks *h*; 6th. The combination of the plate *A*, adapted to support an anchor by its fluke, and to release the fluke when the anchor is dropped, combined with the cat-head *H* having the lever *L*, rope *R* and pin *P*.

### No. 8380. Improvements on Hoisting Machines. (*Perfectionnements aux élévateurs.*)

John Fenson, Toronto, Ont., 1st February, 1878, for 5 years.

*Claim.*—1st. In combination with a water cylinder of known lifting capacity, of one, two or more supplementary water cylinders arranged in connection with suitable automatic mechanism to be thrown in and out of working connection as the load on the car varies. 2nd. The lever beam *K*, mounted on trunnions in such a manner that it is divided into two arms of unequal length, on the shorter arm of which the upper rope wheel of hoist is mounted, and to the adjustably weighted longer arm is connected a valve or valves of suitable construction in such manner that when the load on the car is increased above a given weight, the balance of the lever will be disturbed, causing it to move on its fulcrum and to throw one or more supplementary lifting cylinders into working connection with the main cylinder, and when the extra load is removed from the car, the lever will be returned to its original position, allowing the inlet valves to the supplementary cylinder to be closed to automatically regulate the lifting capacity of the hoist in proportion to the weight to be elevated. 3rd. The combination of the hoist *J*, rope *G*, wheel *I*, adjustably weighted lever beam *K*, with the inlet valves of one or more supplementary lifting cylinders. 4th. The combination with the car of a hoist or elevator, of a permanently fixed weight scale. 5th. A relief valve placed in the piston head or bottom of cylinder, for the purpose of allowing a piston to travel through a cylinder filled with water and to relieve the piston from the force of atmospheric pressure, should the supply of water above or below the head be cut off at any point in the length of its stroke; 6th. The combination with the upper rope wheel *I*, mounted on a tilting lever beam of one or more registers or counters, arranged to register the amount of water consumed by one or more cylinders. 7th. The valves 10 and 11, connected to, and arranged in combination with the lever *K*, for the purpose of automatically operating cylinders of unequal capacity, either singly or jointly, as the load to be lifted requires; 8th. One or more relief valves *C*, arranged in combination with the supply and discharge pipes in such a manner as to admit of two or more cylinders being operated jointly or singly through one working valve *C*. 9th. The valves 10 and 11, arranged in connection with hydraulic cylinders, in combination with the cam disc 7 operated through suitable mechanism by the lever 2.

### No. 8381. Improvement in Steam Boiler Cleaners. (*Perfectionnements dans les nettoyeurs des chaudières à vapeur.*)

John A. Fordon, Bay City, Mich., U.S., 1st February, 1878, for 5 years.

*Claim.*—1st. The combination with a steam boiler of the skimming pan *C* placed in the rear part of the boiler, so as to receive at its larger open end the surface current, the flow pipe *D*, for conducting off the material caught up by said pan, the collecting chamber *E* and the return pipe *F* passing through the heat; 2nd. The combination of the collecting chamber *E*, provided and constructed with the converging sides, and the pipe *F* provided with the cock *o*, with the receiving chamber *H*, and the pipe *P* provided with the cock *r*.

### No. 8382. Improvements on Filter Presses. (*Perfectionnements aux filtres à presses.*)

John Bowing, London, Eng., 1st February, 1878, for 5 years.

*Claim.*—1st. A filter press composed of rings with intervening perforated or slotted plates or discs all held together by the rods and running by means of rollers *a* on rails. 2nd. The use in filtering presses such as that above described, or acting in the same manner, of cloth or analogous material acting against the plane interior surfaces of the chamber, and conducting the liquid intended to be expressed to the circumferential exit apertures, or equivalent apertures, through which the expressed liquid is forced to exude in the manner described. 3rd. A filter press composed of rings and intervening slotted diaphragms having central inlet and circumferential outlets.

### No. 8383. Improvements in Fanning Mills. (*Perfectionnement dans les turbines criblées.*)

Anthony Kline, Bond-Head, Ont., 1st February, 1878, for 5 years.

*Claim.*—1st. The side frames of a fanning mill consisting of horizontal and uprights planted on the outside of machine casing and connected together by cross ties and stays. 2nd. The combined riddle *H*, forming by the combination in a single portable frame of a receiving and delivery board and two or more riddles or sieves. 3rd. The combined portable riddle *H*, in combination with the shoe *G*. 4th. A riddle or sieve provided with end laps or loops, into which laps or loops a thin steel sustaining bar *i* is inserted. 5th. The receiving board *L*, with wire cloth connected to and placed on a line with the underside thereof.

### No. 8384. Improvements on Bolt Locks. (*Perfectionnements aux boulons de sûreté.*)

Edward J. Lockwood, Danbury, Ohio, U.S., 2nd February, 1878, for 5 years.

*Claim.*—The headed bolt, or pin *A*, slotted at its end and provided with a spring *D*, and with a key *C* pivoted in the slot.

### No. 8385. Improvements on Fog Signals. (*Perfectionnements aux signaux de brume.*)

The Neptune Fog Horn Co., Quebec, (Assignees of George Sweeney, Montreal, Que.), 6th February, 1878, for 5 years.

*Claim.*—1st. The air cylinder *E*, provided with a sounding reed or whistle and a steam cylinder *D* vertically arranged, each having a piston *D*; *E*

connected by a rod *F*, in combination with a steam boiler *A* and valve-taps for supplying and exhausting the cylinder *D* of steam. 2nd. The lever *K*, having pins *M* and *N*, operated by the pistons *D*; *E*, automatically opening and closing the three way valve, connecting the supply and exhaust pipes *H*, *I*, of the boiler *A* and cylinder *D*.

### No. 8386. Railway Frog Protector. (*Protecteur des rails de croisement des railroads.*)

George N. Geddes, Glenora, Ont., 11th February, 1878, (Extension of Patent No. 2055,) for 5 years.

### No. 8387. Improvements in the Indexing of Books. (*Perfectionnements dans les index des livres.*)

Charles H. Denison, Bay City, Mich., U.S., 11th February, 1878, for 5 years.

*Claim.*—1st. A book, the front edges of which are provided with one or more series of segmental recesses cut in the manner described, each recess cut to the leaf to be indicated, said leaves on their exposed part bearing the appropriate letter, name or character indicating the matter to be found on said leaf; 2nd. A book, the front edges or ends of which are provided with one or more series of segmental recess cut in the manner described, each recess cut to the leaf to be indicated, said leaves on their exposed part bearing the appropriate letter, name or character indicating the matter to be found on said leaf, and the front and back covers bearing on their outside faces a series of duplicate letters, names or characters, each member of which is arranged directly opposite its original belonging to the adjacent series of recesses, so that when the book is lying on either side it can be opened to any desired letter, name or character by a single movement; 3rd. A book the front edges or ends of which are provided with one or more series of segmental recesses, cut in the manner described, said leaves, on their exposed part, bearing the appropriate letter, name or character indicating the matter to be found on said leaf, and on all the leaves in the book on the same side of the recesses, directly opposite its corresponding recess, so that when the book is opened at any page, the student can turn to any desired letter, name or character by a single movement; 4th. A book, the front edges or ends of which are provided with one or more series of segmental recesses, cut in the manner described, each recess cut to the leaf to be indicated, said leaves bearing on their exposed part the appropriate letter name or character indicating the matter to be found on said leaf, and the front and back covers bearing on their inside faces, at the margin thereof, a series of duplicate letters, names or characters, each member of which is arranged directly opposite its original belonging to the opposite series of recesses, so that when the book is lying on either side or open at any page, it can be opened to any desired letter, name or character by a single motion.

### No. 8388. Machine for Raising Saw-logs on to the Mill Floor. (*Machine à monter le bois de sciage sur le pavé des moulins.*)

William Hamilton, Peterborough, (Assignee of John Ludgate, Ashburnham Ont.), 11th February, 1878, (Extension of Patent No. 2043,) for 5 years.

### No. 8389. Improvements on Milk-Coolers. (*Perfectionnements aux garde-lait.*)

Alpheus C. Bowen, Alexandria Bay, N.Y., U.S., 12th February, 1878, for 5 years.

*Claim.*—1st. The vertical cooling tubes *C*, their mouths opening into a chamber *M*, formed by the top *E*, the lower ends terminating in a hollow flat bottom *D*, and inserted within a tank *B*, whereby water supplied thereto will circulate around the same, for cooling the milk therein; 2nd. The tank *B* connected to an elevated water reservoir *A*, having internal vertical arranged independent cooling tubes *C*, connected to a bottom *D*, surrounded by water within the tank for cooling the milk supplied thereto; 3rd. The vertical tubes *G*, terminating in a bottom *D*, within a tank *B*, and opening into a chamber *M*; 4th. The chamber *M* opening to the tubes *C*, having a strainer covering *K*.

### No. 8390. Improvements on Peg Floats. (*Perfectionnements aux boulons de cordonnage.*)

Amos Whitteore, Cambridgeport, Mass., U.S., 12th February, 1878, for 5 years.

*Claim.*—1st. The combination with rotating cutters *J*, rotating guards or shields *m*. 2nd. Rotating cutters *J*, in combination with the rotating plate formed with shield *m* and scored as shown; 3rd. The removable rotating cutter *J*, in combination with the plate *L*, and shields *m* of segment form. 4th. Cutters *J*, which rotate with the plate *L*, in combination with stud *g* and holes *s*; 5th. The shield plate *L*, perforated at *f*, in combination with gear-case cover *E* provided with the perforation *v*. 6th. In combination with rotating cutters *J* and rotating shield plate *L*, the gearing *G*, *H*, and *e* applied in a gear case *D*, which is set at an angle with respect to the spindle *A*.

### No. 8391. Improvements on Combined Washers and Wringers. (*Perfectionnements aux laveuses-essoreuses.*)

George Morehouse, Orangeville, Ont., 12th February, 1878, for 5 years.

*Claim.*—1st. A washer having the bottom of its concavity of an inverted parabola form, and a convex rubber *F*, hung eccentrically therein. 2nd. The convex rubber *F* having projecting bars *I*, and oscillating within a washer whose bottom is of a parabola form. 3rd. The combination and arrangement of the rollers *J*, *K*, blocks *L*, *M*, bar *O*, spring *P*, bolts *Q*, screws *R*, and bar *S*, with the sides *A* of the washer.

### No. 8392. Improvements in Pumps. (*Perfectionnements dans les pompes.*)

Hiram L. Doolittle and James Averill, Jr., (Assignees of Joseph Armon, Champlain, N.Y., U.S., 12th February, 1878, for 5 years.)

*Claim.*—1st. The combination of the cylinder *A*, piston *E*, stem *F* and ram *b* *C*, with a pump barrel or stock and nozzle; 2nd. The handle *a* and pitman *d*, attached to the stem *F*, at any suitable point above the piston *E*, in combination with the piston stem *F* having piston *E*, and the stem *b* having piston *C*.