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INVENTIONS PATENTED.

No. 14,708. Improvements on Heaters.

(*Perfectionnements aux appareils de cuisson.*)

Elijah E. Spencer, St. Armand East, (Assignee of William A. Morrison, Freligsburg,) Que., 1st May, 1882; (Extension of Patent No. 7426.)

No. 14,709. Improvements on Fanning Mills.

(*Perfectionnements aux tarares-cribleurs.*)

Ransom J. Horton, Massena, N.Y., U.S., 1st May, 1882; (Extension of Patent No. 7403.)

No. 14,710. Improvements in Preserving Chambers.

(*Perfectionnements aux chambres de conservation.*)

Charles Boss, (Assignee of Thomas Armstrong, Jr.,) Bathurst, N.B., 1st May, 1882; (Extension of Patent No. 7430.)

No. 14,711. Improvements on Gathering Machines.

(*Perfectionnements aux engerbeuses.*)

The Toronto Reaper and Mower Co., Toronto, Ont., (Assignee of William N. Whiteley, Springfield, Mass., U.S.,) 1st May, 1882: for 15 years.

Claim.—1st. In an independent gathering and binding machine, an elevator arranged to lift the grain from the ground and discharge it upon a grain receptacle, in combination with deflectors connected to, and operating binding mechanism in such manner that the instant sufficient grain has accumulated on the receptacle to form a proper sized sheaf, the pressure thereof throws the binding mechanism into action. 2nd. In an independent gathering and binding machine provided with mechanism for mechanically regulating the size of the gavel, an independent divider arm, arranged to divide into proper sized sheaves any accumulation of grain upon the receptacle. 3rd. In an independent gathering and binding machine, a gathering cylinder located in front of the elevator, and mounted upon its own wheels. 4th. The pivoted arms M supporting the gathering cylinder shaft L and provided with T-shaped ends *m* extending behind the elevator shaft K, in combination with the pin *n* and arm N arranged to form a flexible joint between the gathering cylinder and elevator. 5th. The foot lever U pivoted upon the main frame D and connected to the pole S by the rod W, in combination with the arm P fastened to the frame D and flexibly connected to the gathering cylinder by the rods Q, and arms M. 6th. In an independent gathering and binding machine, a lever pivoted upon the main frame and fulcrumed on the pole, for the purpose of raising the front of the machine. 7th. An elevator operated by the motion of the supporting wheels, and flexibly connected to the main frame of the machine, to enable it to independently adjust itself to the undulations of the ground. 8th. The elevator shaft H passing through bearings in the frame *j* and supported by the bracket I, in combination with the flexible tumbling shaft G, pinion F and main driving gear B. 9th. An elevator provided with folding rake teeth arranged to turn outward at the bottom, to gather the grain from off the ground and to fold back, clearing themselves of the grain at the point where it is discharged from the elevator. 10th. A double tree T adjustably attached to the pole S, in combination with the draft rods *a*, arranged to draw the machine without draft on the pole. 11th. An independent float X provided with curved ends Z, extending around the gathering cylinder shaft L, in combination with the pivoted arms Y, connecting the float X adjustably to the frame J. 12th. A main driving gear B, in combination with the pinions C F, connected to the binding and elevating mechanism by their respective flexible tumbling shafts E G.

No. 14,712. Improvements on Feed Mechanism for Circular Sawing Machines.

(*Perfectionnements aux appareils d'alimentation des scieries à scies circulaires.*)

Joseph H. Hermance, Toledo, Ohio, U.S., 1st May, 1882: for 5 years.

Claim.—1st. The combination of the frame *d* hinged on the shaft d_2, the pulley c_4 fixed on the shaft d_2, concentric with the centre of motion of the frame *d*, the feed roll *e* journalled in the outer or swinging end of the frame, the pulley c_5 journalled in and partaking of the motion of the frame and connected by suitable gearing to the feed roll, the set screw *f* fixed adjustably in the outer or swinging end of said frame, and the belt connecting the pulleys c_4 c_5. 2nd. In combination with the feed roll carrying frame *d* having one end hinged to the table a_2, the set screw *f* held in the frame *d*, and the guide *g* fixed on the table and arranged to direct the vertical movement of the said feed roll carrying frame.

No. 14,713. Improvements on Thrashers and Separators.

(*Perfectionnements aux batteurs-séparateurs.*)

John Fisher, jr., Woodstock, N.B., 1st May, 1882; for 5 years.

Claim.—1st, The combination of a perforated, serrated and reciprocating straw carrier floor D, the reciprocating grain pan E with separate floor piece *e* reciprocating in a contrary direction, the separating shoe G and the crank pitman and rocking shaft arrangement (or equivalent) to produce and impart to the said straw carrier, grain pan, separate floor piece, and the separator shoe, the necessary reciprocating motion. 2nd. The combination of a straw channel B, the impeding rake B_2, the screen B_1, the grain pan E *e* and hangers and swing links F F_1. 3rd. The combination of the grain pans and the crank pitman and rocking shaft arrangement (or equivalent) to produce the double reciprocating movement. 4th. The construction of the grain pan E, carrying the straw floor D and having a separate floor piece *e* reciprocating contrary and endwise, and forming a slot between their two meeting ends, for the delivery of the grain upon the grain table.

No. 14,714. Improvements on Process and Apparatus for Coating Wire.

(*Perfectionnements aux procédés et aux appareils pour enduire le fil métallique.*)

Luther L. Smith, Ansonia, Ct., U.S., 1st May, 1882 : for 5 years.

Claim.—1st. The method of covering with a deposit of metal a coil of wire by causing it to revolve, so that the wire will enter continuously at one place an electrolytic solution forming part of an electric circuit of which the wire is an electrode, travel through it in a spiral course and pass out at another place receiving the deposit of metal in its course. 2nd. In apparatus for effecting the uniform electro deposition of metal upon coiled wire, a tank of any desired length for containing the electrolytic solution, in which the several convolutions of the coil of wire are partially or wholly submerged, in combination with a horizontal roller upon which the several convolutions of the coil are hung, and guiding devices for separating the several convolutions of the coil from each other, and mechanism for causing the rotation of the roller, whereby the wire may be fed progressively through the solution in a helical path. 3rd. The tank A adapted to contain an electrolytic solution provided with the anodes B, and the guiding racks C, in combination with a horizontal roller E. 4th. The tank A adapted to contain an electrolytic solution, in combination with the roller E projecting outward from the tank A at both ends, and mechanism for effecting the rotation of the roller E.

No. 14,715. Improvements in Spike Machines.

(*Perfectionnements aux machines à clous barbelés.*)

Hervey W. Fowler, Chicago, Ill., U.S., 1st May, 1882; for 5 years.

Claim.—1st. The method of manufacturing spikes, by the contin-