

tical drop die F1 provided with the ribs *d*. 4th. A table or platform provided with the die H, an adjustable guide J, in combination with the formers J1 provided with the friction rollers J2 and the plate H constructed with the spring pin *h*. 5th. The die H in combination with the plate H1, provided with the spring pin *h*. 6th. The die L recessed to receive only the spring portion of the shoe, in combination with the die L1 fitting said recess and provided with a bevelled face. 7th. The die N recessed and provided with protuberance *n* at the point, for forming the toe of the shoe, in combination with the die N1 provided with the concavity *n* on the front of the plunger. 8th. As a new article of manufacture, a spring horse shoe.

**No. 15,726. Improvements on Car-Couplings.** (*Perfectionnements aux accouplages des chars.*)

Francis Cordrey, Fort Wayne, Ind., U. S., 4th November, 1882; for 5 years.

*Claim.*—The rock shaft B supported in bearings above the draw-head and bent at, or near its centre, to form the depending crank bend B1, which extends beneath the draw-head of the car, in combination with the curved bail E secured to the horizontal portion of the crank bend and projecting upward through the bottom wall of the draw-head.

**No. 15,727. Improvement on Price Ticket Holders.** (*Perfectionnement des porte-étiquettes.*)

Ebenezer Whyte, Kansas, Mo., U. S., 4th November, 1882; for 5 years.

*Claim.*—1st. The combination of the shaft A having slot *a*, thimble A1 and tang *b*. 2nd. A price ticket-holder for securing price tickets.

**No. 15,728. Improvements on Belt Shifters.** (*Perfectionnements aux embrayages des courroies.*)

Edwin C. Durand, Greenwich, Ohio, U. S., 4th November, 1882; for 5 years.

*Claim.*—1st. The shifter A composed of the side pieces *a* secured together by the strips *az* and having, journaled between them, the pulleys *a3*, and adapted to be secured to the joint E by the braces *e*. 2nd. The shifter A and its pulleys *a3*, in combination with the pulley B and shifting bar F.

**No. 15,729. Improvements on Thrashing Machines and Separators.** (*Perfectionnements aux machines à battre et aux séparateurs.*)

Joseph Paradis and Norbert A. Bois, Longueuil, Que., 6th November, 1882; for 5 years.

*Claim.*—1st. In a portable thrashing machine or separator, the combination of the cylinder A carrying bars or beaters, and concave segment D pivoted at one end and having the other carried on spring, so as to give a yielding resistance. 2nd. The combination, with a thrashing machine or separator, of an elevator placed on one or both sides, said elevator being composed of an open belt or chain, so as to allow the grain to pass through it, and carrying scoops that raise the same to the outlet and then into the grain receptacles. 3rd. The combination, with a thrashing machine or separator, of a grain carrying cylinder Q for replacing the usually employed carrying belt, and cylinder P R for removing thrashed straw. 4th. The combination, with a thrashing machine or separator, of a carrying belt S.

**No. 15,730. Improvements on Combined Drills and Broadcast Sowers.** (*Perfectionnements aux semoirs en ligne et à la volée combinés.*)

Thomas Galloway, Oshawa, Ont., 6th November, 1882; for 5 years.

*Claim.*—1st. In a seeding machine, a scattering board suspended from shaft F carrying the distributor wheels E. 2nd. A scattering-board constructed of folding sections and suspended from the shaft carrying the distributor wheels. 3rd. In combination with a scattering-board constructed of sections hinged together and hung from shaft F carrying distributor wheels E, a locking device to secure the sections in a folded position. 4th. A scattering-board hung from shaft F carrying distributor wheels E and having a locking adjustment, to secure the board at any desired inclination. 5th. A scattering-board constructed in sections, hung from distributor shaft F and hinged to fold forward of said shaft, and opening to form a plane surface and be adjustable to any desired inclination and locked thereat. 6th. The combination of notched handle G, slotted link N, pin P and button Q, with the scattering-board sections hung from distributor shaft F, for locking said sections in a plane, at any desired inclination, by the endwise movement of the handle. 7th. A scattering-board constructed in sections having a folding and locking adjustment, one section provided with brackets F for the attachment of cultivator teeth or seed funnels G. 8th. The scattering-board constructed in sections hinged together and hung from shaft F and having adjustability to a greater or less inclination. 9th. The tube seed scatterer U carried by suspension from distributor shaft F and having a swinging adjustability. 10th. The frame B constructed of rolled angle or T-iron in sections.

**No. 15,731. Improvements on Boring Machines.** (*Perfectionnements aux machines à forer.*)

Nathan Saunders, Westerley, R.I., U. S., 6th November, 1882; for 5 years.

*Claim.*—1st. In a boring machine, the clutch *b* on the driving shaft combined with the springs *a* and train of mechanism for shifting the latch. 2nd. The spring *c* and *a*, *c* being stronger than *a*, operating on

the shaft E, combined with the shipper *d* and its operating mechanism, for the purpose of connecting and disconnecting the clutch *b* with or from the pinion *t*. 3rd. The shipper *d*, a bent lever pivoted to the carriage at *a3*, combined with the shaft E, spring *c* and latch *e*, whereby the spring *c* is forced back to allow spring *a* to unlock the pinion *t* from the shaft E, which is accomplished when the horizontal arm *t2* of the lever strikes the projection *u*, as the carriage moves up the frame. 4th. The latch *e* in combination with the shipper *d* and worm *g* for releasing said latch, set-screw *m*, spring *n* and spur *w*, which operate to throw said latch into connection with the worm. 5th. The worm *g* upon the end of the shaft E, combined with the plate *f* of the latch *e* and the train of mechanism connecting the clutch, whereby, after a hole has been bored to any required depth, the number of revolutions necessary to break the auger loose and clear out the chips is determined before the carriage runs up the frame. 6th. The gauge K combined with the flanges *x* and *y*, and grooves *x1* and *y1*, pawl *r1* and spring *z*, whereby the auger is stopped when the hole has been bored to the proper depth.

**No. 15,732. Improvements on Decoys.** (*Perfectionnements aux appeaux.*)

Charles T. Cochel, Uniontown, Md., U. S., 6th November, 1882; for 5 years.

*Claim.*—1st. In a decoy set or outfit consisting of a flock of floating, a flock of flying and one or more staff decoys. 2nd. The combination, with a boat, of decoys representing flying birds mounted upon arms or levers operated by treadles, so that the said decoys may be swung together over the boat, thus covering its occupant out of sight. 3rd. The boat A having bell-crank levers C provided with arms F, in combination with decoys representing flying birds attached to said arms F. 4th. The combination, with a flock of flying decoys attached to a boat, of one or more staff decoys representing single birds in advance of said flock. 5th. The flock or set of floating decoys having swivelled or iselyoo connected wires carrying weights moving freely upon said wires and provided with annular grooves, to receive the connecting lines, in combination with the anchor ropes having buoys or floats.

**No. 15,733. Improvements in the Process of Manufacturing Carbonic Oxide Gas.** (*Perfectionnements dans le procédé de production du gaz oxyde de carbone.*)

William Duffield, London, Ont., 6th November, 1882; for 5 years.

*Claim.*—The application and use of kiln coke in an incandescent state, for the decomposition of steam into carbonic oxide gas.

**No. 15,734. Improvements on Instruction Boards.** (*Perfectionnements aux tableaux d'école.*)

Thomas Packer, Thamesville, Ont., 6th November, 1882; for 5 years.

*Claim.*—1st. An improved sectional instruction board, consisting of two longitudinal grooved bars A connected by transverse stays B, two provided with loops C for suspending the frame, in combination with tablets G secured to cleats F sliding in the grooves of bars A and halved at the back, to cover the face of said bars. 2nd. The tablets G having cleats F sliding in a frame A, constructed of grooved bars A connected by stays B.

**No. 15,735. Improvements on Eaves Trough Hangers.** (*Perfectionnements aux gâches des gouttières.*)

William F. Stoetzel, Omaha, Neb., U. S., 6th November, 1882; for 6 years.

*Claim.*—1st. The combination, with the plate *b* arranged transversely across and secured to the eaves-trough, of the hanger A with its split or divided end provided with tongues *a* extended in opposite directions and resting upon and secured to the plate or bridge *b*.

**No. 15,736. Improvements in Vehicle Axles.** (*Perfectionnements aux essieux des voitures.*)

Alfred E. Smith, of Bronxville, N. Y., U. S., 6th November, 1882; for 5 years.

*Claim.*—An axle for vehicles constructed with a conical-shaped end and an annular groove, combined with a conical-edged collar or ring, a cap seat having an inner tapering bearing surface conforming with the axle end and collar, and an axle box with a screw-threaded end, to receive the cap nut.

**No. 15,737. Improvements in Buggy Seats.** (*Perfectionnements aux sièges des voitures.*)

Walton A. Eddy, Randolph, N. Y., U. S., 6th November, 1882; for 5 years.

*Claim.*—The combination of the bottom pieces B1B2 having their inner edges serrated and perforated for the reception of pins Ca, with the sides A secured to the bottom and to each other by the locking pieces *f*.

**No. 15,738. Improvements on Wood Working Machinery.** (*Perfectionnements aux machines à travailler les bois.*)

William H. Essery, Toronto, Ont., 6th November, 1882; for 5 years.

*Claim.*—1st. In a machine in which a feed roller is placed in a table adjustably connected to the main frame carrying the driving gear, the combination, with the spindle of the said roller, of a rod connecting the feed roller to the driving gear on the main frame and provided with a flexible joint or joints, for the purpose of permitting the free