

thereof, the recess *d* and bearings *D*, in combination with the plates *F* attached to the proper timbers under the car. 3rd. The combination of the dog *I*, link *J* and bolt *K*. 4th. The pin *L* bent back upon itself with a longer and a shorter arm, in combination with the shelf *d*. 5th. The recess *c* adapted to receive and retain the link *J* when concealed within said draw-bar. 6th. The internally pivoted dog *I*, the hand hole *b*. 7th. The placing of the follower bars or plates *E* edgewise to the line of impact, thus receiving greater strength.

No. 13,434. Improvements on Churns.

(*Perfectionnements aux barattes.*)

George A. Conover, Trafalgar, Ont., 17th September, 1881; for 5 years.

Claim.—A barrel *C* provided with trunnions *B* secured at the centre of the bulge of the barrel and resting in bearings, made on the ends of the standards, or the frame *A*, a suitable handle *D* being secured to one of the trunnions, in combination with the loose head *E* bound by an iron ring *F* and provided with adjustable bars *J*, connected to the disk *K*, secured to the same centre bolt *L* as the handle *M*, by which the bars *J* are simultaneously thrown into slots made in the lugs *I*.

No. 13,435. Improvements on Refrigerators.

(*Perfectionnements aux garde-manger.*)

Judson A. Baldwin, Shelburne, Vt., U. S., 17th September, 1881; for 5 years.

Claim.—1st. The combination of the door, a movable shelf and an inside door which is attached to the shelf, the inside door being made to close the opening in the side of the refrigerator when the shelf is drawn out. 2nd. The combination of the door *B* and cleats *a* having the track *d* upon them, the shelf *C* provided with wheels and, having attached to its inner end, the track *c*.

No. 13,436. Improvements on Grain Elevators.

(*Perfectionnements aux éleveurs de grain.*)

George A. Stewart, Toronto, Ont., 17th September, 1881; for 5 years.

Claim.—1st. The placing of the bins in the basement of the building. 2nd. The bottoms of the bins formed of joists and flooring, and sloping at such an angle as will allow of a free discharge of the grain. 3rd. The mode of discharging the grain through a valve into the lower conveyor, and the wire and spring attachment for opening and shutting the same.

No. 13,437. Improvements on Apparatus for Treering Boots.

(*Perfectionnements aux appareils d'emboucher les bottes.*)

Frank P. Simonds, Natick, Mass., U.S., 17th September, 1881; for 5 years.

Claim.—1st. In an apparatus for treering boots, a flexible rubbing belt or strap, and means to cause it to reciprocate longitudinally, in combination with movable grinding mechanism, whereby the said rubber may be presented to different parts of the boot being treed. 2nd. The rubbing strap and means to reciprocate and guide it, combined with a guide supporting frame having a swinging movement to carry the said strap longitudinally over the surface of the boot. 3rd. The rubbing strap and its actuating mechanism, combined with a swinging frame, and strap sustaining plate or carriage having a sliding movement in the said frame. 4th. The combination with the strap and mechanism to actuate it, of the pivoted strap guiding arms arranged to embrace the boot, and bring the strap into contact with the surface thereof. 5th. The strap and sliding plate to support it, combined with the take up or tension levers automatically operated by the said plate, in its movement to maintain the proper tension for the said strap. 6th. The strap and its actuating mechanism, combined with the swinging supporting frame therefor, the plate or carriage adapted to slide in the said frame, and the strap guiding frame pivoted on the said plate, and forked to embrace the boot being treed. 7th. The combination, with the rubber and its actuating mechanism, of the swinging supporting frame therefor, and its counter-balancing mechanism to maintain it in equilibrium. 8th. In combination with the swinging frame having mounted thereon the mechanism for rubbing the boot, the toggle jointed levers connected with the said frame, and the counter-balancing weight hung thereon. 9th. The combination of the swinging frame, and the sliding strap supporting plate thereon, with a treadle and suitable connections for moving said sliding plate, and a weight for counter-balancing the same. 10th. The combination of the swing frame *C*, the sliding plate *A*, pivoted frame *T*, pivoted levers *J*, take up levers *F*, flexible rubbing strap *G* and connections *E*, guiding shears or pulleys therefor, and mechanism for imparting to said rubbing strap an endwise reciprocating motion. 11th. The combination of the swinging frame *C*, sliding plate *H*, take up levers *F*, the links connecting the said levers and plate, the flexible rubbing strap *G*, suitable pulleys for guiding said strap, and mechanism for imparting to said strap a reciprocating endwise motion.

No. 13,438. Improvements in Washing Machines.

(*Perfectionnements aux laveuses mécaniques.*)

Isidore Gérard and Peter Tremblay, Newton, Ks., U. S., 17th September, 1881; for 5 years.

Claim.—1st. The adjustable washboard *n*, hinged in the reservoir, in combination with the rock shaft *P* provided with the horizontal arm *p* and the vertical arm *p'*, and the operating rod *R* and rack *T*. 2nd. The adjustable washboard formed with the concave portion, in combination with the revolving cylinder having pivoted rollers. 3rd. The crank shaft *D*, journaled in the sides of the reservoir, and carrying the cylinders formed of the disks *F* *F* and the pivoted rollers *f*, in combination with the adjustable washboard, and means for revolving the shaft and cylinder.

No. 13,439. Improvements on Corn Husking Machines.

(*Perfectionnements aux machines à éplucher le blé d'ind.*)

Hugh Sells, Vienna, Ont., 17th September, 1881; for 5 years.

Claim.—1st. The narrow bands or collars *B* at or near ends of rollers as applied to husking machines. 2nd. The set screws *C*, for adjusting the picking rollers, the shell boxes *I* and the extension of the fly wheel shaft *D* across frame, in combination with the bands or collars *B*, as applied to husking machines, and producing new results.

No. 13,440. Improvements on Car-Couplings.

(*Perfectionnements aux accouplages des chars.*)

Elijah Hickman, Red Bluff, Cal., U. S., 17th September, 1881; for 5 years.

Claim.—1st. The draw-bars *B* with their shoulders, extensions *g* and wedge-shaped hook *p*, said draw-bars having their rear ends attached to sliding blocks *D*, while their opposite or outer ends pass through enlarged openings *l* against the bottoms of which they are pressed by spring *h*, so that the hooks *p* will over-ride each other, and couple by lifting vertically. 2nd. The backward pointing hooks *p* made wedge-shape towards their outer or back edges, and attached to draw-bars, which are capable of lifting vertically, so that the hooks will over-ride each other in coupling and uncoupling.

No. 13,441. Improvements on Cattle Stanchions.

(*Perfectionnements aux étauçons à bestiaux.*)

Mills H. Barnard and Albin Taplin, Forestville, Ct., U. S., 17th September, 1881; for 5 years.

Claim.—1st. The combination of the stanchion frame, neck bars, cross pieces and cranks. 2nd. The combination of the stanchion frame, neck bars and cross pieces, with the spring *c* and transverse arm *g*. 3rd. The combination of the stanchion frame, neckbars, one cross piece and crank *p* hanging it, the opposite cross piece and the mechanism for hanging it to the frame, so as to allow free play of the crank at the other end.

No. 13,442. Improvements on Fanning Mills.

(*Perfectionnements aux tarares-cribleurs.*)

James Cavers, North Dunfries, Ont., 17th September, 1881; for 5 years.

Claim.—A fine sieve *E* provided with a chess board *F*, in combination with a supplementary sieve *E'* connected to the chess board *F* by the tube *G*, and provided with a chess board *H*.

No. 13,443. Improvements on Pipe Couplings.

(*Perfectionnements aux manchons des tuyaux.*)

Henry G. Dennis, New Bedford, Mass., U.S., 17th September, 1881; for 5 years.

Claim.—1st. In combination with the pipe *A* having an annular bead *B* near the end, and with the pipe *E*, the collar or bell *C*. 2nd. In combination with the pipe *A* provided with an annular bead and swayed outwards at the end, and the pipe *E* contracted at the end of a collar or bell *C*. 3rd. A removable bevelled bell or collar *C* made with a rebate *D*, and an aperture *F* extending from the outer to the inner surface.

No. 13,444. Improvements on Refrigerators.

(*Perfectionnements aux garde-manger.*)

John Alexander, Toronto, Ont., 18th September 1881; (Re-issue of Patent No. 12,928.)

Claim.—1st. The vertical ventilating flue *H* leading from a point, at or near the bottom of the cooling chamber *B*, to the exit *K* outside the refrigerator, at or near its top. 2nd. The vertical ventilating flue *H*, in combination with the ventilator or ventilators *L* over the warm air passage *D* into the ice chamber. 3rd. The vertical ventilating flue *H*, in combination with a cold air passage or passages *G* from the sides of ice chamber, with a guard or guide *m* directing cold air from side passage or passages to the centre of cooling chamber. 4th. The vertical ventilating flue *H*, in combination with an open rack *F* and water sheds *C*, and trough *Cl*. 5th. The cold air passage *G* from sides of ice chamber *A*, in combination with open ice rack *F* and water sheds *C*, and troughs *Cl*. 6th. A warm air passage or passages *D*, in combination with the open ice rack *F* and water sheds *C*, and troughs *Cl*. 7th. The standing bottom *N* in a refrigerator, falling towards, and in combination with the receiving chamber *I* and the vertical ventilating flue *H*. 8th. The receiving chamber *I* cut through the inner skin of the refrigerator and properly incased, so as to direct the draught towards the ventilating flue *H*. 9th. The combination of the vertical ventilating flue *H*, ventilators *L* at the top of warm air passage *D* into the ice chamber, cold air passages *G* from sides of ice chamber, the guard or guide *m* directing cold air to centre of cooling chamber, open ice rack *F*, water sheds *C*, troughs *Cl*, slanting bottom *E* of the cooling chamber, and receiving chamber *I* at the rear of said bottom.

No. 13,445. Improvements on Car-Couplers.

(*Perfectionnement aux accouplages des chars.*)

Auguste M. Béchar, Richard D. Morkill, jr., and James R. Woodward, Sherbooke, Que., 18th September 1881; (Re-issue of Patent No. 11,352.)

Claim.—1st. The combination with a draw-bar head provided with a coupling pin of a weighted pendulous trip pivoted in said draw-bar head, to hold a coupling link between said trip and the coupling pin on a more or less downward incline from the draw-bar head, so that the said link will enter the mouth of a lower opposite draw-bar head. 2nd. The combination, with a draw-bar head provided with pin receiving openings, and a coupling pin of a pendulous trip, pivoted in said draw-bar head and having a bulge or convex portion on its outer surface, or face to