

attached thereto, with or without spring *h* and with treadle *m* or its equivalent; 3rd. The combination of the flat burner *a*, pivoted cap *g* and plates *e*; 4th. The combination of the flat burner *a*, weight *d* and sliding plates *e*; 5th. The combination of the plate *e* having projections *h*, with the burner *a* provided with cap *g* having slotted hole *h*.

No. 7530. Improvements in Furnaces for Steam Boilers.

(*Perfectionnements aux fourneaux des chaudières à vapeur.*)

Charles D. Smith, Philadelphia, Pa., U.S., 7th June, 1877, for 5 years.

Claim.—1st. The horizontal manifold *H* having projections *a* and vertical column *D*, in combination with the drum *M*, manifold *P*, connected with the drum and pipes *R* and *K* connecting the manifolds *P* and *H* with the top and bottom of the boiler, whereby a circulation of the water is maintained through said manifolds and drum; 2nd. The combination with the drum *M* and manifold *P*, at the rear of the boiler of pipes *N*, connecting said drum and manifold together, the said manifolds communicating with the steam space of the boiler; 3rd. The combination of the fire bridge wall and drum *M*, the manifold *H*, vertical columns *D*, pipe *L*, connecting the bridge wall and manifold, and pipe *A* connecting the bridge wall and boiler.

No. 7531. Machine for Drying Fruit.

(*Machine à sécher les fruits.*)

George A. Johnston, Simcoe, Ont., 7th June, 1877, for 5 years.

Claim.—The combination of the wooden box *H* with the top frame work of wood *A* and *B*, and glass *C* on supports *E* and *F*, and ventilators *G* covered with gauze.

No. 7532. Combined Towel Rack and Wall Protector. (*Ecran porte-serviette.*)

Edwin Pullan, Detroit, Mich., U. S., 7th June, 1877, for 5 years.

Claim.—A washstand provided with grooved guides *A* and *A* having catches *H* *H*, in combination with the sliding frame *B* carrying the wall projecting sheet *D*; 2nd. The sliding frame *B* which is provided with rod *C*, staples *c*, removable wall protecting sheet *D*, lifting knobs *F*, *F*, towel rack *G*, in combination with a washstand which is provided with strips *A* and stops *H* *H*.

No. 7533. Improvement on Rein-holders.

(*Perfectionnement aux porte-rénes.*)

Frank E. Hall and Charles W. Richardson, Portland, Me., U. S. 7th June, 1877, for 5 years.

Claim.—1st. The combination of plate *A* having concave under side ears *B*, set screws *C* and projection *A* with spring *D*; 2nd. In a detachable device adapted for use on any carriage or vehicle, the combination of a spring *D* with a plate *A* and set screw *C*.

No. 7534. Reversible Hinged Slates.

(*Ardoises à charnières réversibles.*)

Theophilus Van Kannel and Christian F. Rapp, Cincinnati, Ohio, U.S., 7th June, 1877, for 5 years.

Claim.—The combination of the slates *A* with the hinge link *B*; 2nd. The slates *A* having the grooves *a*, in combination with the link *B* the filling piece closing the opening into the grooves; 3rd. In combination with the links *B* or *B*, the frames *A* having a portion overhanging the recess *A*; 4th. In combination with the frames *A* the links *B* or *B* and the barbed or other staples *D*; 5th. In combination with the frame *A* having the overhanging portion, the links *B* or *B* and the staples *D*.

No. 7535. Improvements in Railway Freight Cars.

(*Perfectionnements dans les wagons à fret de railroads.*)

Richard Eaton, John M. Vernon and George Sandereson, Montreal, Que., 8th June, 1877, for 5 years.

Claim.—1st. The combination, in a railway freight car, of adjustable floors with hoppers and discharge outlets; 2nd. The combination, in a railway freight car, of a central metallic or other chamber provided with inlets in roof, and having inclined floors and discharge valves at the bottom, said central chamber having separate compartments on either side provided with side doors, inlet apertures and adjustable or other floors together with hoppers having chutes and valves; 3rd. The combination, in a railway freight car, of a round or other shaped tank or chambers with side compartments, the chambers being depressed in the centre and elevated at the ends so as to give proper fall, and having suitable valves for control and discharge of cargo; 4th. In a railway freight car comprising a combination of any of the central and side chambers, the inclined planes, delivery chutes and hoppers as before mentioned, in combination with and carried upon six wheels; 5th. A railway freight car without roof and having low sides, in combination with any adjustable floors, hoppers and chutes herein mentioned; 6th. In combination with any kind of freight car the ventilators *L*.

No. 7536. Improvements in Horse Boots.

(*Perfectionnements dans les souliers des chevaux.*)

John B. Hall and James R. Silliman, Toronto, Ont., 8th June, 1877, for 5 years.

Claim.—1st. A horse boot or wrapper constructed with a lining and perforated with holes to allow of ventilation; 2nd. A horse boot or wrapper having a plate as seen at *F*; 3rd. A horse boot or wrapper having sponge, or other soft porous material, for the reception of glycerine held to the bottom of the foot by a metallic spring plate attached to a horse boot.

No. 7537. Improvements on Sawing Stones.

(*Perfectionnements dans le sciage des pierres.*)

Richard A. Tilghman, Philadelphia, Pa., U. S., 8th June, 1877, for 5 years.

Claim.—The use of a mixture of different sizes of grains or globules obtained from melted iron or steel, or their alloys, in the sawing of stone glass pottery and similar hard substances, in place of using of grains of waste uniform size in the same operation, as heretofore supposed to be preferable in practising the said process.

No. 7538. Combined Check and Driving Reins. (*Pauces-rénes et guides de cheval combinés.*)

James McLean, L'Etéte, N. B., 8th June, 1877, for 5 years.

Claim.—The arrangements and combination of the driving reins *A* and check reins *E*, connected to bit *C* passing through loops *F* at the ears and thence through turret *G* in the back pad intermediate of the driving rein turrets *B*, and thence connecting with the driving reins *A* rearward of the latter.

No. 7539. Improvements in Mowers and Reapers.

(*Perfectionnements dans les faucheuses-moisseuses.*)

William T. Jones, Doon, Ont., 8th June, 1877, for 5 years.

Claim.—1st. The shear cutting knives *F*, in combination with the axle bar; 2nd. The lever *B* in combination with the recessed collar; 3rd. The connecting rod *D* with block and fitted with anti-friction roller, in combination with the cam on the driving wheel *A*; 4th. The casting *E* fitted to frame *H*, in combination with the elongated axle *C*.

No. 7540. Broom Bag. (*Sac à balai.*)

James S. McMurray and Thomas K. Fuller, Toronto, Ont., (Assigned to Edward D. Bronson), 8th June, 1877, for 5 years.

Claim.—A broom bag, the lower end of which is provided with the foldable cord *b*, flaps *B* and *C*, one or more of the said flaps being provided with eyelets *E*, for the reception of the projecting cord ends *D*.

No. 7541. Caramel Chewing Gum.

(*Gomme-caramel à mâcher.*)

Frank Sibley and James Holmwood, Jr., Buffalo, N.Y., U.S., 8th June, 1877, for 5 years.

Claim.—A composition of paraffine, coffee, sugar and grape sugar or glucose.

No. 7542. Railway Rail Washer.

(*Rondelle de rails de railroads.*)

John M. MacKay, Quebec, Que., (Assigned to Auguste M. Bécharé) 8th June, 1877, for 5 years.

Claim.—La platine ou washer *a* qui sert à empêcher de dévier les rails, surtout les rails qui servent à réunir les rails de chemin de fer.

No. 7543. Double-Acting Force Pump.

(*Pompe foulante à double effet.*)

George W. Hooper, Green, Me., U.S., 8th June, 1877, for 5 years.

Claim.—1st. The combination of the cross head *H*, pivoted bar *M* both slotted handle *O* and arm *Q*; 2nd. The combination of the adjustable tap *K* with the grooved guide bars *J*, the rollers *I* and the cross head *H* attached to a piston rod *E* of a pump.

No. 7544. Improvements on Horse Hay Forks.

(*Perfectionnements aux fourches à cheval.*)

William W. Ellis, Salmon Beach, N.B., 11th June, 1877, for 5 years.

Claim.—The curved tines *A*, articulated to toggle bars *B* and *C* and centrally pivoted to the extended arms *E* of a head *C* having a lug *F* to which the bar *G* is pivoted.