

arms G carrying brushes and movably connected with the spider arms, in combination with the pivoted lighter bar J, provided with the sleeve C having vertical rods M rigidly connected with the sleeve of the spider arms, and the hand screw K for adjusting the lighter bar, whereby the spider arms can be moved vertically to radially adjust brushes at any times during the operation of the machine. 4th. The combination, with the sleeve F having the inclined spider arms F movably connected with the brush carrying wings G, of the shaft D slotted at S and tubular above the slot, the spring Q encircling the shaft, the transverse fid R and the rod R₁, and screw T for adjusting the fid. 5th. The series of permanent spaced brushes H and a series of interchangeable flanged beater sections M and the brush sections H, adapting the machine to be converted from a polishing to a combined polishing and beating machine. 6th. In a wheat scourer and polisher, the revolving cylindrical series of brushes H provided with air spaces *n* formed between the series of brushes, and the brush heads G mounted upon the radially and vertically adjustable wings F G and revolving within the perforated screen O.

No. 16,185. Improvements on Churning Apparatus. (*Perfectionnements aux barattes.*)

Benjamin F. Moore and Benjamin Moore, Heathcote, Ont., 23rd January, 1883; for 5 years.

Claim.—The combination, with the base A having posts B C connected by horizontal parallel bars D D, of the elbow lever E provided with handle F and foot rest G, pitman L and slide J having arm K.

No. 16,186. Improvement on Lifters.

(*Perfectionnement des manches d'ustensiles.*)

Charles F. Fellows, Chelmsford, Mass., U.S., 23rd January, 1883; for 5 years.

Claim.—The combination of the arms B C and D.

No. 16,187. Improvements on Pneumatic Diaphragm Levers. (*Perfectionnement aux leviers pneumatiquess de diaphragme.*)

Alonzo Durkee, New York, N. Y., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. In a mechanical wind musical instrument, a pneumatic diaphragm lever D consisting of a recessed block D₁ provided with orifices *b* and *c* and having a raised rim *f*, flexible diaphragm *g*, hinged tapering lever *h* provided with valve closing screw *h*₂ and exhaust valve *m*. 2nd. A pneumatic diaphragm lever provided with an exhaust valve, a screw arranged upon said lever and adapted to be operated by the valvular action of the diaphragm, to close and hold the exhaust valve. 3rd. In a mechanical musical instrument, a pneumatic lever constructed with inlet orifice, raised rim, flexible diaphragm and hinged tapering lever.

No. 16,188. Improvements on Road Scrapers. (*Perfectionnements aux pelles à cheval.*)

Albert Gerow, Picton, Ont., 23rd January, 1883; for 5 years.

Claim.—1st. The combination, with a wagon frame having a platform or floor 7 supported on side bars 6 6 and provided with standards 9 9, of the shovel or scraper 12 hung at its rear to a tail board 12, the ends sliding in grooves in the standards and a windlass 15, and rope or chain 14 for fitting the scraper from the ground by the operation of a lever. 2nd. The combination, with a wagon having a platform or floor 7 carrying windlasses, of a scraper or shovel 12 provided with two balls 18 19, one attached to the front axle of the wagon and the other suspended by the pulley 20 hung on a rope or chain 21 winding on a windlass 22, whereby the scraper can be raised from the ground and dropped for gathering. 3rd. An earth shovel or road scraper 12 having a bottom to fall and discharge the contents. 4th. The combination of a platform wagon, a scraper 12 suspended therefrom, and windlasses for operating the scraper. 5th. In combination with a platform wagon and a shovel or scraper hung therefrom, and windlasses for operating the scraper, steering wheel 27 for moving the front axle pivotally on the king-bolt to guide the machine in travelling.

No. 16,189. Improvements on Potato-Diggers. (*Perfectionnements aux arrache-potates.*)

Henry D. Herrington, Amos Broughton, Hoosick, and Sidney E. Durt, White Creek, N. Y., U.S., 23rd January, 1883; for 5 years.

Claim.—1st. The combination, with a semi-circular digging blade A of a potato digger, of a series of cutting blades B attached to the circular blade A. 2nd. The combination with the plows of a potato digging machine, of the adjustable upright J secured to the plow beam V, arms *x* and fulcrum support *et*. 3rd. The combination, with digging blades and means for oscillating said blades, of plows arranged in advance of the digging blade and arranged to run on each side of the row of potatoes to be dug, cutting away the sides of the row and aiding in removing the vines. 4th. The combination of the digging blade A with the series of cutting blades B and separating fingers C having an oscillating motion, cleaning fingers D and mechanism for operating the fingers. 5th. The combination of the digging blade A separating fingers C, cleaning fingers D, endless sprocket chain, sprocket wheels *et* F, cranks Z and pivoted arms *et*.

No. 16,190. Improvements on Machines for Bleaching Fruits and Vegetables. (*Perfectionnements aux machines à blanchir les fruits et les légumes.*)

Daniel M. Donald, Norwich, Ont., 24th January, 1883; for 5 years.

Claim.—1st. The combination of case A having the hopper H, formed to keep back the sulphur and receive the fruit and vegetables, and belt B on rollers C D driven by pulley E, to move and discharge the fruit and vegetables. 2nd. The combination of the chaffing disk K with screen I and pipe L.

No. 16,191. Improvements on Shears.

(*Perfectionnements aux ciseaux.*)

Azor J. Phipps, Boston, Mass., U. S., 24th January, 1882; for 5 years.

Claim.—1st. The blades A B provided with handles C D, in combination with the guard G provided with the holder K, stop J and spring H. 2nd. The depression L and guard M, in combination with the blade A. 3rd. The holder K for securing the guard G to the wick tube. 4th. The stop J for steadying the guard and keeping it in proper position in respect to the wick tube. 5th. The guard projecting beneath the handles C D as shown at Z, and provided with the spring H.

No. 16,192. Improvements on Stop Motions for Spoolers. (*Perfectionnements aux casse-mèche des bobineuses.*)

Alexander G. Brown, Williamstown, Mass., U. S., 24th January, 1883; for 5 years.

Claim.—The levers M pivoted to a platform between the bobbins and spindle C, and each provided with a loop L between its fulcrum and spindle C, and with a downward projection *n* on its inner end, in combination with the bobbin spindles, the bar R, rollers K O, loop Q and a spool spindle C.

No. 16,193. Improvements in the Method of, and Apparatus for Ventilating Water Closets. (*Perfectionnements dans le mode et les appareils d'aérage des latrines.*)

Thomas Rowan, London, Eng., 24th January, 1883; for 5 years.

Claim.—1st. The respective combination of parts forming modifications of the improved apparatus for ventilating water closets, urinals, drains, sewers, and the like, for treating smoke, chemical fumes and the like, from chimneys, and flues, and stoves, wherein are employed jets of water. 2nd. The employment of a jet or jets of water in combination with forms of apparatus described and shown.

No. 16,194. Improvements in Horse Shoes.

(*Perfectionnements dans les fers à cheval.*)

George Bryden, Hartford, Conn., William E. Banks, Brooklyn, and John B. White, New York, N. Y., U. S., 24th January, 1883; (Extension of Patent No. 8346.)

No. 16,195. Improvements in Horse Shoes.

(*Perfectionnements dans les fers à cheval.*)

George Bryden, Hartford, Conn., William E. Banks, Brooklyn, and John B. White, New York, N. Y., U. S., 24th January, 1883; Extension of Patent No. 8347.)

No. 16,196. Improvements on Pole Rings.

(*Perfectionnements aux anneaux des timons de voitures.*)

David S. Norris and James Godwin, (Assignees of James Fenning,) Danbury, Conn., U. S., 25th January, 1883; for 5 years.

Claim.—1st. The divided ring S S and a ring V at a right angle thereto, in combination with a neck yoke and stop A. 2nd. The divided ring S S, the metallic ring V and the elastic ring V₂, in combination with the neck yoke and stop A. 3rd. The metallic pole ring comprising the divided ring S S, the metallic ring V at a right angle thereto, the latter provided with an inner elastic ring V and the whole adapted to be applied to a neck yoke.

No. 16,197. Improvements on Tags.

(*Perfectionnements aux étiquettes.*)

Edmond A. Warren and Thomas J. Moore, Brooklyn, N. Y., U. S., 25th January, 1883; for 5 years.

Claim.—The tag A composed of two plies or thicknesses and provided with the strengthening frame B composed of a string or wire extending around the tag, near the margin, and secured between the two plies or thicknesses by pasting or cementing them together both inside and outside the frame, whereby the tag is protected all around the margin against being torn, and is prevented from curling up or becoming rumpled.

No. 16,198. Improvements on Apparatus for Heating Railway Cars. (*Perfectionnements aux appareils de chauffage des voitures de chemin de fer.*)

Louis Fitzgerald, (Assignee of Maurice J. Walsh,) New York, N. Y., U. S., 25th January, 1883; for 5 years.

Claim.—1st. The combination, with a pipe or pipes for conveying steam along a train, of an injector or pump on the locomotive, and means whereby the same may be readily connected with said pipe or pipes and supplied with steam from a boiler, for the purpose of draining from the pipe or pipes any water that may remain therein, and whereby it may be readily disconnected from said pipe or pipes, when it is no longer desired to be used. 2nd. The combination, with two pipes extending around or through a car, one arranged within the