

No. 1909. RICHARD HARISON, Waddington, N. Y., U. S., Assignee of Rodney G. Nash, Morrisburgh, Ont., 18th December, 1872. (Re-issue of Patent No. 193.) "Machine for Reducing Wood into Paper Pulp." (Machine à convertir le bois en pâte de papier.)

*Claim.*—The employment of the wheel *c*, having its periphery of iron or steel roughened, indented or upraised to form cutting or grinding edges thereon.

No. 1910. JAMES DEAN, Detroit, Mich., U. S., 18th December, 1872, for 5 years: "A Slip-Keel and Centre-Board." (Une quille glissante avec sa voie.)

*Claim.*—1st. The slip-keel or contro-board *C*; 2nd. The shaft *D*, carrying the worm *G*, on an elevated portion of the slip-keel *C*, for raising and lowering the same; 3rd. The combination with the slip-keel *C*, of the strap *K*, and indicator-rod *L*; 4th. The shaft *D*, provided with spirals enclosed in case *H*, and attachments; 5th. In combination with the slip-keel *C*, the shaft *D*, so arranged that it may be tilted as described.

No. 1911. AUGUSTUS DAY, Detroit, Mich., U. S., 18th December, 1872, for 5 years: "A Railway Track Clearer." (Machine à nettoyer les voies de chemin de fer.)

Specially applicable to horse-cars.

*Claim.*—1st. The construction and arrangement of the shank *B*, with relation to the scraper *A*, draw-bar *C*, and diagonal brace *E*; 2nd. The combination with the draw-bar *C*, and scraper *A*, of the diagonal brace *E*; 3rd. The guard *F*; 4th. The chain *J*, pulley *K*, and crank-shaft *P*, for raising and lowering the scrapers; 5th. The recessed and slotted crank *L*, bar *M*, thumb-piece *d*, latch *e*, and spring *N*, in combination with the cam notch *f*, of the bracket *T*; and 6th. The construction and arrangement of the tumbler *O*, with relation to the crank *T*, and its latch-bar *M*, for locking the latter.

No. 1912. GEORGE MOREHOUSE, Chatsworth, Ont., 18th December, 1872, for 5 years: "Machine for Washing and Wringing Clothes." (Machine à laver et tordre le linge.)

This invention relates to an improvement in that class of washer wherein the clothes are rubbed between a concave corrugated shell and an oscillating convex frame.

*Claim.*—1st. The combination in a washing-machine having a close-box *A*, of an open concave shell *B*, and oscillating convex frame *E*, of less diameter whereby a graduated space downward is attained for the reception and manipulation of the clothes; 2nd. The combination of a clothes wringer and washer as set forth, the arrangement and application of the friction-roller *H*, and inclined plane *I*.

No. 1913. DAVID B. SPOONER, Syracuse, N. Y., U. S., 18th December, 1872, for 5 years: "A Water Meter." (Un compteur à eau.)

*Claim.*—1st. A water-meter, the combination of the halves of the shell having the projecting bosses with the diaphragm having a thickness in excess of the distance between the halves of the shell when clamped together, the bosses being adapted to regulate accurately the distance between the halves of the shell, and also the compression of the diaphragm-edge; 2nd. The combination of the disks *b* and the diaphragm *a*, the disks being provided with curved-edges, and being clamped upon the diaphragm only at their edges; 3rd. A water-meter, the combination of a central diaphragm adapted to vibrate between the disks but connected therewith with valve operating mechanism, the disks and diaphragm moving together as one; 4th. In the combination of the diaphragm, disks, disk-arms, and yoke, the disks being clamped upon the diaphragm by the disk-arms which are spread apart and held by the yoke; 5th. The combination of the disks *b*, having the spindles *b2*, with the arms *c*, having the tapering sockets; 6th. The combination of the casting *A*, having a recess with the partition *d*, and plate *f*; 7th. The moulded rubber partition *d*, of the form shown; 8th. The combination of the disk-arms with the partition *d*, the centre or moving part of the partition being located just above the fulcrum of the arms; 9th. The moulded rubber valve covering *g*, provided with a bearing face upon its sole adapted to rest against the valve-seat when the valves are operated; 10th. The plate *K*, having cast upon it the lower part of the valve-chest and the discharge pipe, the latter communicating with the valve-chest above the plate, and having a discharge end carried below the edge of the plate, in order that the latter may be properly packed; 11th. The combination of the cast stem and valves with the divided valve-chest; 12th. The centres *S*, provided with the notch, in combination with the set screws *r*; 13th. The combination of the links *h*, with the standards *i*, and the carrier *h*, the links being located at the end of the carrier; 14th. The yoke *c*, cast in one piece with the taper points *el*, the sides being adapted to spring apart to admit the rigid arms of the lever-arm *f*; 15th. The apex lever *f*, having the centre of its pivot point in line with the centre of the apex *q*; 16th. The combination of the yoke, the apex-lever *f*, with carrier-frame *h*; 17th. The combination of the diaphragms *a* and disks adapted to move together with the disk-arms yoke swinging carrier-frame having the apex and valves, and the apex-lever and apex; 18th. The combination of the prismatic projection *q*, with the prismatic projection *e*; 19th. The combination

of the oscillating yoke carrying the vertically-moving prismatic projection, with the carrier-frame having a corresponding projection; 20th. In a water-meter a pendant carrier-frame adapted to support the valves; 21st. A water-meter the combination of the oscillating yoke carrying the vertically-moving prismatic projection, the pendant carrier-frame having the fixed prismatic projection and the valve rod carrying the valves and the valve-chest; 22nd. The valve-chest provided with the chambers 1, 2, 3, having ports *a*, *a*, *a*, with the central swinging shaft *C*, having the valves *D*; 23rd. The combination of the strap *K*, with the vertically moving rod and the yoke; 24th. A water-meter, the combination of the shaft *C*, having the series of valves adapted to close the ports with the set screws *r*, and the swinging carrier-frame; 25th. A water-meter, the valve chest *A*, provided with the ports *a*, *a*, *a*, the discharge ports *a*, *a*, having an enlarged area; 26th. A water-meter swinging valve adapted to regulate the supply and discharge of the water; 27th. The shaft *C*, provided with the threaded and plain portions in combination with nuts and valves having threaded and plain portions; and 28th. In a water-meter the combination of a series of valves arranged upon a single shaft with mechanism for holding said valves until the movement of the diaphragm is completed or nearly so, and then shifting the same.

No. 1914. GEORGE SCHATZ & JOHN ZIMMERMAN, Graters' Ford, Pa., U. S., 18th December, 1872, for 5 years: "A Washing Machine." (Machine à laver.)

Consists in the use of a pivoted or swinging dasher with springs and a treadle attachment.

*Claim.*—1st. In the dasher *C*, in combination with the sliding blocks *el*; 2nd. The combination and arrangement of the lever *D*, provided with a spring *d2*, located at the rear of the box, the treadle *E*, spring *el*, and rod *E3*; 3rd. The combination of the dasher *C*, lever *D*, rod *d*, with or without the spring *d2*; 4th. The wringer-rest *G*, when constructed in through form and made to communicate with the box by an opening; and 5th. The novel combination of the box *A*, lid *B*, dasher *C*, lever *D*, rod *d*, spring *d2*, treadle *E*, spring *e*, rod *E3*, and guide *F*.

No. 1915. WILLIAM NEVERS, Bridgetown, Me., U. S., 23rd December, 1872, for 5 years: "Machine for Propelling a Sleigh on Ice." (Machine pour faire marcher les traîneaux sur la glace.)

*Claim.*—The wheel *F*, with projecting teeth or brads to cut into the ice, in combination with the sleigh on skates.

No. 1916. ROBERT BLAIN, Barrie, Ont., 23rd December, 1872, for 5 years: "A Portable Bench." (Un banc portatif.)

*Claim.*—1st. The combination of the legs *C*, the cross-girts *F*, *F*, and arms *K*, with the rod *D*, attaching the same to the seat *a*; 2nd. The back *B*, with the cleats *E*, *E*, and braces *J*, *J*, together with the method of attaching the same to the said seat by the hinges *H*, *H*, *H*, and the spring or bottom *G*, on the arm *K*, to keep the said back *B*, in its place when the said seat or bench is set up.

No. 1917. JOSEPH BEAUDRY, Montreal, Que., 23rd December, 1872, for 5 years: "A Tailor's Square." (Une équerre de tailleur.)

Consists of a flexible and graduated steel blade with adjustable scales.

*Claim.*—1er. Une équerre de tailleur pour prendre la mesure des habits, la combinaison de la lame d'acier flexible et gradué, *a*, avec les échelles No. 2, No. 3, No. 4 et No. 5, 2me. La combinaison des échelles mouvantes No. 3, No. 4 et No. 5, au moyen des boutons à crer et de la vis d'arrêt, 3me. La formation et le calcul du trapèzoïde *P*, *V*, *O*, *W*, pour tailler le haut des manches

No. 1918. GEORGE GOODYEAR, New York, U. S., 23rd December, 1872, for 5 years: "Improvements on Boots and Shoes." (Perfectionnements aux chaussures.)

*Claim.*—1st. A shank piece for boots and shoes, consisting of two or more leaves from a single piece of wood or similar material formed by slitting from one end toward the other leaving a portion solid at the said other end; 2nd. A shank piece for boots and shoes formed from a single piece of wood slit from each end toward the centre leaving a portion at or near the centre solid and uncut.

No. 1919. GEORGE GWYNN, New York, U. S., 23rd December, 1872, for 5 years: "A Steam-Engine Packing." (Une garniture de chemin de fer.)

*Claim.*—1st. The composition for the preparation or treatment of packing composed of Paraffin, India Rubber, lead, zinc, graphite or plumbago, wood saw-dust and quick-silver; 2nd. The wrapping *A*, in combination with the fibrous core *B*.

No. 1920. JAMES W. INNES, Newbury, N. Y., U. S., 23rd December, 1872, for 5 years: "A Potato Digger." (Un extracteur de patates.)

Consists of a shovel, plough and rake so arranged as to dig the potatoes from the soil and deposit them upon the surface.