

**No. 18,025. Weather Strip.** (*Bourrelet de porte.*)

Henry Carter, Gold Hill, Col., U.S., 3rd November, 1883; 5 years.

*Claim.*—As an improvement in weather-strips, the combination with the weather strip K having the trunnions J J at its ends, which have their bearing, in the eyes I I, of the raised portions or flanges H H at each end of the threshold, and provided with the upwardly-projecting nib L at one end of the strip M secured to the door by the flange N, and having the downwardly-projecting main portion O provided on its underside with a recess, in which is embedded the elastic strip P and formed with the recess R, to accommodate the nib L at the end of the weather-strip, as and for the purpose set forth.

**No. 18,026. Pessary.** (*Pessaire.*)

William W. Turver, Parkdale, Ont., 3rd November, 1883; 5 years.

*Claim.*—1st. A pessary composed of side branches C and a curved top portion A having a depending front portion adapted to support the bladder, and a rear portion E depending between the side branches and adapted to support the womb, substantially as set forth. 2nd. A pessary composed of side branches C, a top portion A adapted to support the bladder and a depending flexible apron E adapted to support the womb, substantially as set forth. 3rd. A pessary composed of a pliable wire frame and a covering of soft rubber constructed with a convex top A and a depending apron E, substantially as set forth.

**No. 18,027. Hop Dryer.** (*Séchoir à houblon*)

James L. Filkins, Sangerfield, N. Y., U. S., 3rd November, 1883; 5 years.

*Claim.*—1st. In a dryer, an upward tapering air flue or chamber covered upon each side with slats or other foraminous substance, so that an intervening space may be formed into and through which heated air may pass into the substance being dried, substantially as described. 2nd. In a dryer, the combination of a foraminous tapering air flue resting upon a foraminous floor over a heated chamber, substantially as described. 3rd. In a dryer, an imperforate wall, an incline rack forming in connection with such wall an air flue, substantially as described. 4th. In a dryer, two incline racks connected at the top, open at the bottom forming an air space between, substantially as described. 5th. In a dryer space K, between the walls, formed by the outer surface of the two incline racks through which heated air is brought in contact with the drying substance, all as substantially described.

**No. 18,028. Hub for Vehicle Wheel.**(*Moyeu de roue de voiture.*)

Thomas Brown and Samuel N. Brown, Dayton, Ohio, U. S., 3rd November, 1883; 5 years.

*Claim.*—1st. As a new manufacture, a compressed wrought-iron band, ring or ferrule void of all joints and seams, produced from a previously coiled strip of metal, and having a plain outer surface and a triangular or concave inner surface, substantially as specified. 2nd. The method of banding hubs, substantially as described, which consists in making an annular peripheral groove in the hub, and compressing therein a solid metallic band by pressure exerted upon its surface in radial or concentric lines, without producing unequal end pressure upon the grain of the wood. 3rd. A wooden hub strengthened by one or more seamless metallic bands pressed in annular peripheral grooves in the hub, by pressure exerted upon the surface of the band in radial or concentric lines, at right angles to the axis of the hub, without any longitudinal movement being imparted to either the band or bands, or to the hub, during the act of compressing. 4th. The combination, with a wooden hub provided with one or more annular grooves formed in its periphery, of the continuous annular metallic strengthening band, which is triangular or plano-convex in cross-section, and which is pressed in the said groove by pressure exerted upon the surface of the band acting in radial or concentric lines at right angles to the axis of the hub, without any longitudinal movement of the band or bands, or the hub, while compressing the band or bands, substantially as described.

**No. 18,029. Steam Boiler Furnace.**(*Foyer de chaudière à vapeur.*)

Byron Sloper, New York, N. Y., U. S., 3rd November, 1883; 5 years.

*Claim.*—The described process of promoting the surface combustion of fuel and bringing the same to an intense incandescent heat, by the decomposition of steam in connection with highly heated air, both the steam and air being delivered each separately and in a broad thin horizontal, or nearly horizontal, stratum in close proximity to the whole surface of the fuel, so that all the atoms of steam come into instant contact with the fuel, substantially as and for the purpose specified.

**No. 18,030. Horse Power Speed Regulator.** (*Régulateur de la vitesse des machines.*)

Jasper A. Rouse, East Berkshire, Vt., U. S., 3rd November, 1883; 5 years.

*Claim.*—1st. In a speed-regulator, the combination of the shaft B, the wheel A having the clutch C with the loose pulley L provided with the split-hub M, substantially as shown. 2nd. In a speed regulator, the loose pulley L, having a split-hub M, the block D, weighted arms F F, springs J, levers G, pads g and rope S, which operates the pad T through the levers P R, combined together and with the drive-wheel, substantially as shown and for the purpose set forth. 3rd. In speed-regulators, the foundation block D and leaf-piece E, by which it may be readily attached to the clutch C, substantially as described. 4th. The combination, in speed-regulators, of the weighted arms F, adjustable spring J, swinging ear H, and brake-levers G, with the foundation-block D and leaf-piece E, substantially as set forth.

**No. 18,031. Device for Clearing Railway Tracks.** (*Appareil pour débayer les voies de fer.*)

William C. Rice, Oakland Valley, Iowa, U. S., 3rd November, 1883; 5 years.

*Claim.*—1st. A device for preventing the accumulation of snow and sand or tracks, or in railway cuts and switches, consisting in a fence or gate of one or more panels placed at the top of the cut, each gate or fence panel being provided with means for causing it to be automatically tilted or adjusted to the direction of the wind by the wind itself, and cause the wind to pass underneath said panel and down the side of the cut, substantially as and for the purpose set forth. 2nd. A series of adjustable gates or fence panels arranged at the top in the sides of a railway cut, the top panels being provided with means for automatically tilting or adjusting them to the direction of the wind, the panels or sections in the side of the cut being tilted or adjusted by the wind and by the top panels, through the intervention of suitable mechanism connecting the said panels at the top and side, substantially as and for the purpose set forth. 3rd. In a device for clearing snow from railway cuts by the direct action of the wind, one or more pivoted panels A journaled in posts D, said panels being provided with a rigid wind gauge and a pivoted deflecting gauge, the wind gauge acting to turn the panel, the deflecting gauge acting through the intervention of suitable mechanism to release the panel from one locked position and allow it to turn and be locked in a new position, substantially as shown and described. 4th. In a device for clearing snow from railway cuts, the combination, with one or more movable faucets A, arranged as described, of wind deflectors pivotally secured to posts placed in rear of the panels and adapted to turn by the action of the wind, substantially in the manner and for the purpose described. 5th. In a device for clearing snow from railway cuts, the wind deflectors P secured to posts placed at a suitable distance in rear of the movable panels A, the movement of said deflectors being limited by posts P<sub>1</sub>, said deflectors acting to turn the current from an oblique to a direct course to said panels A, substantially as set forth. 6th. In a device for clearing snow from railway cuts by the action of the wind, one or more panels or gates A pivotally mounted on posts D, said panels being provided with a wind gauge and deflecting gauge, and a curved plate having recesses *e e*, adapted to receive locking device levers I I, as and for the purpose set forth. 7th. The combination, with a gate or panel, provided with a wind gauge and a locking plate E, of the deflecting gauge G and locking levers I I, actuated by said deflecting gauge through the intervention of chains I I or other suitable means, as and for the purpose set forth. 8th. The combination, with an upper gate or panel A, actuated as described, of one or more intermediate lower panels A<sub>1</sub> automatically operated by the movement of the upper panel, substantially as described. 9th. The combination, in a snow-clearing device for railway cuts, of one or more pivoted or turning panels or gates at the top of the cut, a series of wind deflectors in rear of each, a series of one or more panels in the sides of the cut, the upper panels being provided with wind gauges and deflecting gauges, said deflecting gauges acting to lock or unlock the upper panels from any fixed position and acting through the intervention of a chain, drum and suitable levers to lock or unlock the lower panels, in the manner and for the purpose described.

**No. 18,032. Knitting Machinery.**(*Machine à tricoter.*)

William H. McNary, Brooklyn, N. Y., U. S., 3rd November, 1883; 5 years.

*Claim.*—1st. In circular knitting machines, the arrangement of mechanism for working the thread-guide slides and the presser, as described, with reference to sheets I, II and III, consisting in addition to the old rock levers N<sub>5</sub>x and N<sub>6</sub>x, which operate the upper yarn guide-slide of the rock-levers N<sub>5</sub> and N<sub>6</sub>, which actuate the lower yarn guide-slide, and the additional sliding bar N<sub>2</sub> for setting the rock-lever N<sub>5</sub> into acting position, and the coupling arrangement N<sub>3</sub>, which couples automatically the new sliding bar N<sub>2</sub> to the old sliding bar N<sub>1</sub>, whereby, through the continued action of the switch wheel, one or other of the fabrics illustrated by the diagrams, in sheets VII and VIII, is produced at pleasure. 2nd. In circular knitting machines, the adaptation to the forked switch lever *e*, of the slide *f* with its attachments (*biz*: the square stem *f*<sub>3</sub> with the rock lever *f*<sub>5</sub> pivoted on it, and the vertically sliding tappets *f*<sub>4</sub> *f*<sub>5</sub>) whereby, through the action of the pattern plate furnished with the system of long and short pins 1 2 3 4, and double inclines *fx* and *fix*, the switch of the switch-wheel is reversed, also the double incline *k* for coupling and uncoupling the sliding bars N<sub>1</sub> N<sub>2</sub>. 3rd. In circular knitting machines, the yarn guide *m*<sup>8</sup> formed of round wire and fitted with pinions *m*<sub>7</sub> which gear into a stationary rack *m*<sup>9</sup> on the fixed bridge-piece B<sub>x</sub>, such guides being mounted so as to turn axially in the segment-shaped slide M, provided with cam slots to receive pins projecting from a reciprocating slide or driver *m*<sub>12</sub> actuated through a rock lever and link from the cam *m*<sup>10</sup> on the cam shaft, whereby the thread guides receive a half turn at every reverse of the traverse motion of the thread guide bar and a motion towards and from the needles during the working of every course, as described with reference to sheet XI. 4th. In straight knitting machines, the arrangement of mechanism for working the thread guide slides and the presser, as described, with reference to sheets IX and X, consisting of (a) the two yarn guide slides M M<sub>1</sub> worked independently by notched disks F<sub>1</sub> N<sub>5</sub>x, carried by sliding bars N<sub>2</sub> N<sub>3</sub>, and fitted with pinions N<sub>4</sub> N<sub>5</sub>, which receive continuous rotary motion through spur gear *a*<sub>3</sub> *a*<sub>5</sub> from the pinion D<sub>2</sub> on the cam shaft, the sliding bars moving in guides in the rib A<sub>1</sub> and receiving a traverse motion respectively from the worm wheel G<sub>3</sub> and the toothed sector of the rock lever Z<sub>1</sub>, both of which are actuated independently from the switch wheel, (b) the adjustable tappets *m*<sub>2</sub> *m*<sub>3</sub> carried by the yarn guide slides, which enable the rock lever M<sub>2</sub> to reset both the yarn guide slides when changing the direction of motion; (c) the presser N mounted in guides on the longitudinal rib A<sub>1</sub> and furnished with inclined slots to receive pins *n* from a sliding bar N<sub>1</sub>, which is reciprocated from a rotary cam *n*<sup>3</sup>x for the purpose of imparting a backward and forward motion to the presser, such combination of mechanism