

specified. 3rd. The side bars F having, bolted to their bottom sides, a spring steel plate G, in combination with the spring steel plate E bolted to the bolster D, substantially as and for the purpose specified. 4th. The reach I K having a top reach place H secured to it by the bolts J and L, arranged substantially as shown and for the purpose specified.

No. 19,532. Flour Dressing Machine.

(Blutoir à Broses.)

John Riddell, Pakenham, Ont., 9th June, 1884; 5 years.

Claim.—1st. In a flour dressing machine, the sieve B suspended by the flat bars a from the sliding bars b, arranged to slide transversely in the frame A, substantially as described. 2nd. In a flour dressing machine, the sieve B suspended from the sliding bars b, which are arranged to run endways on the rollers or pulleys c, substantially as described. 3rd. A flour dressing machine provided with the eccentric shaft E working in the arm F, which is attached to the sieve B, and the crank and connecting rod I, all of which are for the purpose of imparting to the sieve or shaker B a combined longitudinal and transverse motion over stationary brushes, substantially as shown and described.

No. 19,533. Watch. (Montre.)

The Fahy's Watch Case Company, (assignee of James Lamont,) Sag Harbor, N. Y., U. S., 9th June, 1884; 5 years.

Claim.—1st. In a watch case, the combination of an outer case, a suitable pendant or stem attached to an inner case, an inner case hinged to the outer case upon an axis or pintle parallel with the pendant or stem and adapted to be opened on said hinge, substantially as described. 2nd. In a watch case, the combination of an inner case for carrying the movement, a suitable pendant or stem attached to the inner case, and an outer case composed of two parts secured together, the outer and inner cases having a hinged connection upon an axis or pintle parallel with the stem or pendant, whereby the inner case may be turned outwardly from the outer case at a right angle to the stem or pendant, substantially as described.

No. 19,534. Electric Block Signal for Railways. (Bloc de Signal Electrique pour Chemins de Fer.)

Stephen J. Swayze and John C. Lane, Sag Harbor, N. Y., U. S., 9th June, 1884; 5 years.

Claim.—1st. The signal-board E adapted to be automatically elevated by the passage of a train, the clutching and retarding mechanism D and the fan C, or its equivalent, in combination with the magnets a, lever b, spring c and switch G, connected as described and adapted to be opened and closed by the signal-board E, substantially as specified. 2nd. In a signalling system, the switches G connected to the main wire f by wires j and i, and adapted to be opened and closed by the signal-board E, in combination with the magnets a and the locking mechanism, whereby the setting of one signal will release the other, substantially as described.

No. 19,535. Hot Air Stove. (Calorière à Air.)

Peter H. Sims and Philip Hohmeier, Waterloo, 9th June, 1884; 5 years.

Claim.—1st. A self-feeding coal hot air stove, consisting of an annular base A, having central air passage A1, a conical grate casing B having elongated portion B1 joining the external casing, and closed by a door B2 having air slide B3, and containing grate B4, with shaker, said cone B supporting the fire-pot D, having a flaring flange d, furnished with air pipes D1, connecting a parallel flange or cone e, which supports the feed tube F and the cylindrical portion E, the external part of the casing E5 enclosing the fire-pot and grate cone, and extending down to the base, the cylinder E1 and downwardly and outwardly extending casing E2 provided with fire doors and mica lights, and the flue box H at the rear containing flue h opening into the down flue I, communicating with the base and the return flue I1, also the opening A1 provided with damper A2, said box H provided with opening H3, stove-pipe base H1 and check regulator H2, the feed tube F and cylinder E1 closed in at the top by a crown plate G provided with air outlets G1, g, g, slide g1 and a sand groove g3, and the cover G2 swivelled from a lifting pivot and having dip flange g2 dipping into the groove g3. 2nd. The combination of the hollow annular base A having air passage A1 and vertical partition at the rear, to separate the smoke inlet from the outlet, in combination with the down flue I communicating with the fire space, and the up flue I1 communicating with the outlet H1. 3rd. The combination of the base A with the grate cone B having elongated portion B1 joining the casing E5, and closed by a door provided with air slide. 4th. The combination of flange d, furnished with air tubes D1 and connecting a parallel flange or cone e, enclosed by the external facing E5 having flues I and I1 at the rear. 5th. The combination of the fire-pot D, flaring flange d, air tubes D1, and parallel flange e supporting cylinder E and feed tube F. 6th. The fire-pot D, flange d supporting the external casing E5, flange d1, I1, in combination with the flange e connected to the flue I, and downwardly and outwardly extended portion E2, provided with fire doors E3 and mica lights E4, the box H at the rear containing flue h communicating with the down flue I and the up flue I1, and provided with stove pipe base A1, check regulator H2, internal opening A2 and damper A2. 8th. The combination of the fire-pot D, flange d, air tubes D1, flange e, cylinder E and feed tube F, also casing E5, having flues I, I1. 9th. The combination of the cylinder E1, feed tube F and crown plate G, provided with air outlets G1, g, with slide and locking mechanism G3. 10th. The combination of the crown plates G connecting the cylinders E1, F, and provided with air outlets and said dip flange g2. 11th. The cover G2 pivoted to the crown plate G, the latter, closing the air space between the feed tube F and the external casing

E1, in combination with the casing E2 and the cylinder E, supported by the flange e, tubes D1, flange d and fire-pot D, all substantially as described and for the purpose set forth.

No. 19,536. Hat Sizing Machine.

(Machine pour Feutrer les Chapeaux.)

Nathan Harper, Newark, N.J., U. S., 9th June, 1884; 5 years.

Claim.—1st. In a hat-sizing machine, the combination of an endless felting belt travelling on pulleys or rollers, and a co-operating felting surface adapted and arranged to enable the hat-rolls fed thereto to traverse continuously the entire circuit of said surfaces as many times as may be desired before removal. 2nd. In a hat-sizing machine, a felting-bed having an additional opening at the opposite end or side to that at which the hats are usually introduced, said opening being provided with an adjustable lid or connecting piece adapted to close the same. 3rd. In a hat-sizing machine provided with an opening at each end, for the admission or for the discharge of the hat rolls, an adjustable lid door or connecting-piece adapted to close one of said openings when desired, to enable the hat rolls to traverse the entire circuit of the felting surfaces before removal. 4th. In a hat-sizing machine, the combination of an endless felting belt travelling on pulleys or rollers, with a stationary co-operating felting-bed, consisting of a yielding flexible apron or blanket entirely surrounding said felting belt, except at the joint where the hat rolls are introduced to said felting-belt. 5th. In a hat-sizing machine, the combination of pressing bands, consisting of metallic chains and springs, arranged to operate in connection therewith, for the purpose of increasing and regulating the pressure of the felting-bed or surface, substantially as described for the purpose set forth. 6th. In a hat-sizing machine, the combination of a felting surface consisting of independent rollers or slats and springs adapted to uplift or neutralize the weight of said rollers or slats, and thereby diminish the pressure of said rollers or slats upon the felting fabric, as set forth. 7th. In a hat-sizing machine, a feeding mechanism adapted to convey the hat-rolls or hat-bodies from the folders to the felting surfaces. 8th. In a hat-sizing machine, the combination of the felting surfaces with a discharging mechanism adapted to take or convey the hat-rolls from the said felting surfaces to the folders or other parts desired. 9th. In a hat-sizing machine, the combination of a feeding and discharging mechanism adapted to convey the hat-rolls from the folders to the felting surfaces, and from the felting surfaces to the folders. 10th. In a hat-sizing machine, the combination of a feeding and discharging mechanism constructed and arranged so that the hat-rolls, when supplied to either mechanism, will be conveyed to the felting surfaces. 11th. In a hat-sizing machine, the combination of a feeding and a discharging mechanism constructed and arranged so that the hat-rolls placed thereon will be conveyed to the felting surfaces, and will continue to traverse said surfaces and said mechanism as many times as may be desired without removal. 12th. In a hat-sizing machine, the combination of the felting-surfaces with a feeding-belt adapted to convey the hat-rolls from the folders to said felting surfaces. 13th. In a hat-sizing machine, the combination of a travelling belt adapted to take or remove the hat-rolls from said felting surfaces and convey them to the folders. 14th. In a hat-sizing machine, the combination of a travelling belt adapted to convey the hat-rolls to the felting surfaces with a travelling belt adapted to take or remove the hat-rolls from said surfaces. 15th. In a hat-sizing machine, a feeding-belt actuated by drums or rollers, arranged and adapted to cause the hat-rolls to travel to a point where they will come under the operation of the felting surfaces. 16th. In a hat-sizing machine, the combination of an endless felting-belt travelling on pulleys or rollers, with an endless feeding belt adapted to feed the hat-rolls to said felting belt. 17th. In a hat-sizing machine, the combination of an endless felting-belt with an endless discharging-belt adapted to take or remove the hat-rolls from the said felting-belt. 18th. In a hat-sizing machine, the combination of an endless felting-belt with an endless feeding-belt and an endless discharging belt, for the purpose set forth. 19th. In a hat-sizing machine, a feeding and a discharging belt or apron constructed and arranged at the same end of said machine. 20th. In a hat-sizing machine, a feeding and a discharging belt or apron, one of said belts being above and over, or approximately over the other. 21st. In a hat-sizing machine provided with feeding and discharging mechanism, a guide or connecting device adapted to guide or convey the hat-rolls from the one mechanism to the other. 22nd. In a hat-sizing machine, the combination of the feeding belt or band with adjustable bearings adapted to graduate the tension of said belt. 23rd. In a hat-sizing machine, the combination of the feeding mechanism with adjustable bearings adapted to move said mechanism nearer to, or farther from, the felting surfaces. 24th. In a hat-sizing machine, the combination of the discharging mechanism with adjustable bearings adapted to move said mechanism nearer to, or farther from, the felting surfaces. 25th. In a hat-sizing machine, the combination of the discharging belt or bands with adjustable bearings adapted to graduate the tension of said belts. 26th. In a hat-sizing machine provided with feeding or discharging mechanism, adjustable supports adapted to raise or lower the inner end of said mechanism to its appropriate relation to the felting-surfaces. 27th. In a hat-sizing machine, feeding or discharging mechanism arranged upon pivoted bearings that adapt said mechanism to be raised or lowered to its appropriate relation to the felting surfaces. 28th. In a hat-sizing machine, the combination of the felting-surfaces with adjustable bars c, belt u and rollers f, arranged and adapted for the purpose set forth. 29th. In a hat-sizing machine, the combination of belts n, o, drums or rollers f, h, h1, m and guide s, arranged and adapted for the purpose set forth.

No. 19,537. Hat-Sizing Apparatus.

(Appareil pour Feutrer les Chapeaux.)

Nathan Harper, Newark, N.J., U. S., 9th June, 1884; 5 years.

Claim.—1st. In a hat-sizing machine, a felting chamber having more depth or space at or near its centre, as at q, than at or near its sides or edge, as at r, said chamber being constructed and adapted to cause the hat-rolls while felting to have both a rotary motion on their axes, and a progressive motion at right angles thereto, substantially