

way leading into the cylinder H, protected by the valve B, which is connected to an adjustable partition a, designed to form a division in the chamber D, the passage-ways b, f and F, arranged as described, to connect the two divisions of the chamber D to the chamber of the valve A, as described, in combination with the valve C seated on the escape pipe I in the chamber E, and connected to the adjustable partition a, which divides the chamber E, as specified, and the passage-way F<sub>1</sub> connecting one division of the chamber E with the chamber of the valve A, the passage-ways F and F<sub>1</sub> being located in the chamber of the valve A, substantially as and for the purpose hereinbefore explained. 3rd. A passage-way located between the supply and discharge valve-chamber, and having two check-valves, the one near the discharge valve-chamber being set so that it remains closed when the water pressure from the supply is within the supply valve-chamber, but opens by the back pressure from the cylinder caused by the weight of the car, the moment that the water-pressure in the supply chamber is removed, thereby opening a passage-way between the lower portion of the discharge valve-chamber and the top portion of both the supply and discharge valve-chamber, so that the pressure of the water from the hydraulic cylinder shall instantly close the valves, substantially as and for the purpose specified. 4th. The valve-chambers D and E, provided with valves B and C, each connected to an adjustable partition a, dividing its respective chamber passage-ways F and F<sub>1</sub>, designed to connect the two chambers D and E on one side of their partitions, and the passage-way b arranged to connect the other side, in combination with the check-valves c and d located in the passage-way b, and so arranged in connection with their respective seats that an excess of pressure in the chamber E will open the valve c and close the valve d, and excess of pressure in the chamber D reverses this action, so that when communication is opened between the chamber E and passage-way f, communication between the passage-way f and chamber D is closed, substantially as and for the purpose specified. 5th. The double-seated valve-chamber M, provided with passage-ways leading to the valve-chambers D and E and cylinder H, in combination with the double-faced valve N fixed to the valve-spindle O, and designed to be acted upon by some moving part, so that the valve shall cut off communication between the cylinder H and supply-chamber D when the car reaches the top of the building, leaving the passage between the cylinder and the discharge-chambers open, so that the valve B remains under the control of the operator for the purpose of lowering the elevator, or to cut off communication between the discharge-chamber E and cylinder H when the car reaches the bottom of the building, in which position the passage-way between the cylinder and supply-chamber is left open, and the valve A remains under the control of the operator for the purpose of raising the elevator, substantially as and for the purpose specified. 6th. The double-seated valve-chamber M, provided with passage-ways leading to the valve-chambers D and E, and cylinder H, in combination with the double-faced valve N fixed to the valve-spindle O, and designed to be acted upon by some moving part, as specified, and mechanism to hold the valve N in the centre of the centre of the chamber M, when not otherwise acted upon, substantially as and for the purpose specified. 7th. The rock-shaft P connected to the spindle O, and provided with an arm Q, arranged to engage with the sleeve U placed on the guide-rod R, as specified, in combination with the sleeve V adjustably connected to the sleeve U, and arranged to be acted upon by the cross-head S, substantially as and for the purpose specified.

### No. 26,368. Art or Process of Preparing Smokeless Fuel. (*Procédé de Préparation du Combustible sans Fumée.*)

Ferdinand Koopman, Hamburg, Germany, 2nd April, 1887; 5 years.

*Claim.*—1st. The art or process of mixing coal with limestone, pulverized or otherwise rendered into small pieces, and making briquets from such mixture, substantially as and for the purpose specified. 2nd. A compound, composed of pulverized coal, limestone and pyrolusite formed into briquets, substantially in the proportions and for the purposes set forth.

### No. 26,369. Steam Boiler. (*Chaudière à vapeur.*)

Noel F. Sawyer, Haverhill, Mass., U.S., 2nd April, 1887; 5 years.

*Claim.*—1st. In a steam generator, the hollow water front a having the rearward projecting hollow water chambers a<sub>1</sub>, a<sub>2</sub>, adapted to form the sides of the fire-box, and having the inclined tops a<sub>11</sub>, a<sub>12</sub> for the purpose of causing a proper circulation of the water within said chambers a<sub>1</sub>, a<sub>2</sub>, as set forth. 2nd. In a steam generator, the hollow water front a having the vertical division walls a<sub>3</sub>, a<sub>4</sub>, as described, combined with the hollow water chambers a<sub>1</sub>, a<sub>2</sub>, and U-shaped circulating pipes g, g, g, connected to the rear of the water front a, as and for the purpose set forth. 3rd. In a steam generator, the hollow water front a and the U-shaped circulating pipes g, g, g, connected to the rear of said hollow water front, in combination with the fire-box arranged between the upper and lower legs of said U-shaped circulating pipes g, g, g, as set forth. 4th. In a steam generator, the hollow water front a and the U-shaped circulating pipes g, g, g, connected to it, as described, in combination with the plates f, n, and flue o in which the lower legs of the circulating pipes g, g, g are contained, as and for the purpose set forth. 5th. In a steam generator, the hollow water front a and the U-shaped circulating pipes g, g, g, as described, in combination with the inclined cover m for conducting the products of the fire to the highest portion of said circulating pipes, and the return flue o for heating the lower portions of said pipes g, g, g, as set forth.

### No. 26,370. Cutter-bar Adjustment for Mowing Machines. (*Souche de lames de faucheuses.*)

Newton Cossitt, Brockville, Ont., 2nd April, 1887; 5 years.

*Claim.*—1st. The combination of the arm A, brace B, pivoted connections b, b<sub>1</sub>, pintle a<sub>1</sub>, bracket D, D<sub>1</sub>, lever L, catch l, notched segment G, hinge joint H, lugs h<sub>1</sub>, and arm A, substantially as shown and described. 2nd. The combination of the arm A, pintle a, hinge

joint H, segment G, bucket D, lug D<sub>1</sub>, lever L, catch l, spring handle l<sub>1</sub>, and rod h<sub>1</sub>, substantially as shown and described.

### No. 26,371. Grain Separator and Cleaner.

(*Tarare-cribleur.*)

John P. Bond, J. H. Brubaker and Thomas J. Calbert, Warsaw, Ind., U.S., 2nd April, 1887; 5 years.

*Claim.*—1st. The combination of the frame A, shoe and screens, the fan-chamber placed inside of the frame and provided with air openings, the fan, the exhaust passage R, door S, passage K provided with opening L, slide M, passage I and chamber N, whereby the grain is separated and cleaned either by suction or by suction and blast, substantially as described. 2nd. The combination of the frame A, the shoe and screens, the fan-chamber placed inside of the frame and provided with air openings, the fan passage R, door S, passage K provided with opening L, slide M and passage I with the chamber N, deflector or screen placed in the top of the chamber, the moderating board Q, and a means for moving it, substantially as described.

### No. 26,372. Mowing Machine. (*Faucheuse.*)

William J. Clokey, Toronto, Ont., 4th April, 1887; 5 years.

*Claim.*—1st. A mowing machine in which spokeless main wheels are supported by suitable friction rollers, journaled around circular side-pieces of the frame of the machine, through which side-pieces the extension-bar supporting the cutter-bar, and the pitman to drive the knife passes, substantially as and for the purpose specified. 2nd. A spokeless main wheel C having a spur-wheel D attached to it to mesh with the spur-pinion G, in combination with the circular side-piece A of the frame fitted over the spur-pinion G, and provided with rollers E to revolve within the groove a, the whole being arranged substantially as and for the purpose specified. 3rd. An extension-bar M supported at one end at f to the frame, and at its other end to the cutter-bar O, in combination with the lever Q, arranged substantially as and for the purpose specified. 4th. An extension-bar M supported at one end at f to the frame of the machine, and having its end m bent at right angles to it and fitted into the sleeve N suitably connected to the cutter-bar O, in combination with the lever P sleeved on the bar M, and connected by gearing to the sleeve N, substantially as and for the purpose specified. 5th. An extension-bar M supported by the frame of the machine, and suitably connected to the cutter-bar O, in combination with a draught-rod U connected at one end to the extension-bar M, and at its other end to the whiffletree V, substantially as and for the purposes specified. 6th. A pitman K having an eye b formed on it with a conical hole formed in it to fit over the conical hub d fixed to the projection e, in combination with the bolt f and nut g, substantially as and for the purpose specified.

### No. 26,373. Watch Case Pendant.

(*Queue de boîte de montre.*)

Casper Kistler, Sterling, Ill., U.S., 4th April, 1887; 5 years.

*Claim.*—1st. The combination of the pendant A, provided with the interior thread M and external annular shoulder H, the winding-stem B provided with the annular recess D, the screws C and the crown E provided with the annular recess G, and internal boss F having the exterior thread F<sub>1</sub>, the boss F being thus adapted to be screwed into the open end of the pendant A, and the outer end of the latter to enter coincidentally the recess G until the inner edges of the crown E shall abut against the shoulder H, substantially as shown and for the purpose described. 2nd. The combination of the pendant A, provided with the interior thread M and external annular shoulder H, the winding-stem B having a limiting longitudinal play in the pendant A, the crown E provided with the annular recess G and internal boss F having the exterior thread F<sub>1</sub>, the boss F being thus adapted to be screwed into the open outer end of the pendant A, and the outer end of the latter to coincidentally enter the recess G until the inner edges of the crown E shall abut against the shoulder H, substantially as shown and for the purpose herein specified.

### No. 26,374. Variety Moulding Machine.

(*Machine à moulures variées.*)

Samuel J. Shimer, Milton, Penn., U.S., 4th April, 1887; 5 years.

*Claim.*—1st. The combination, with the lower tool, the main table and the upper tool arranged in the hinged arm E, of the intermediate detachable and adjustable table D formed with a tool aperture, and projected from and supported by an adjustable support on the main table between the tools above the main table, whereby the work may be accommodated to the action of the lower tool or to the tool in the hinged arm, as specified. 2nd. The combination, with the sliding housing of the lower tool spindle, of the vertical lifting rod provided with a lifting-arm, a vertical rod or turning-bar beneath the lifting rod, a cam-shaped block secured to the top of said turning-bar and serving as a rest or support for the lower end of the lifting-bar, and an operative device for rotating said cam-block and vertically reciprocating the lifting-bar, substantially as described. 3rd. The combination, with the hand-lever, of the shifting mechanism formed with a cam-shaped surface upon the lower end of the lifting-rod rests, and is supported and the sliding housing of the lower tool, of the lifting-rod disposed through guide-arms in the past of the machine, and having a projecting arm extending within the housing, substantially as described. 4th. The combination, with the table of a moulding machine, of the overhanging arm E comprised of a stationary base-piece, and a fore-arm hinged to said stationary base-piece by a lap-joint secured by a pivotal bolt, and having in one face a quarter-groove and in the other a pin projected within said groove, substantially as described.

### No. 26,375. Hat-Holder. (*Porte-manteau.*)

William H. Atwood, Hudson, N.Y., U.S., 4th April, 1887; 5 years.

*Claim.*—1st. A hat-holder consisting of inwardly bent pointed at-