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INVENTIONS PATENTED.

No. 1645. WILLIAM S. MEAD, New York, U. S., 17th October, 1872, for 5 years: "A Sewing Machine." (Une Machine à coudre.)

Claim.—1st. The rotary hook Y, and thumb and finger mechanism whereby the loop is elongated and the thread crossed to receive the descending needle in the formation of a chain and a spiral stitch; 2nd. The two eccentrics B, B, on the main shaft A, whereby one raises and the other moves the feed forward; 3rd. Providing the shuttle case F, with a lower bar G, to rest the shuttle; 4th. The employment of a lever H, and springs I, and L, for operating the thumb and finger mechanism; 5th. The oval egg form of sweep given to the hook Y, in elongating, relinquishing and seizing the loop, in making a spiral stitch when the thread is in the shuttle and the chain stitch when the shuttle thread is disconnected; 6th. The formation of a lock stitch when the thread is in the shuttle, by the hook Y, after taking up the loop from the needle, casting it over the under part of the shuttle, and then seizing the succeeding loop from the needle and drawing up the first loop into the cloth; 7th. The adjustment of the thread by passing it backward through the eye d, backward around the disc c, forward through the eye d, and thence to the needle bar e, and needle for securing the "take up," and for tightening the thread when the hook is at the bottom of the shuttle; 8th. The employment of a rotary washer o, as set forth.

No. 1646. CHARLES H. PARSHALL, Detroit, Mich., U. S., 17th October, 1872, for 15 years: "A Lubricator." (Un graisseur.)

A mechanical apparatus for feeding oil for lubricating purposes
Claim.—1st. In an oil Cup, the combination of the concentric tubes K and L, the latter being provided with the openings v, and gaugeable opening z; 2nd. In combination with an Oil Cup, in the hot air chamber C, when inclosing the tube D, packed at d, d, and provided with ducts f, f; and 3rd. The combination of the cup B, provided with faucet M, and stem G, provided with ducts J, J, screw valve I, tube I, and wick or without the concentric tube K.

No. 1647. THOS. O. WARD, Kalamazoo, Mich., U. S., 17th October, 1872, for 5 years: "A Railway Brake." (Un frein de chemin de fer.)

Brake worked by compressed air from a reservoir on locomotive connected by pipes and valves with railway cars, which Engineer is enabled to apply or disconnect instantaneously. Also acts automatically when a car becomes detached from train.
Claim.—1st. The valve D, with the chamber F, chamber G, head P, seat F, and ball E, arranged to operate in connection with the air pump A; 2nd. The reservoir I, in connection with pipes Y, and Z, arranged with stop cock in each; 3rd. The automatic closing valve coupling K, spring O, with rubber packing R, acting in combination; 4th. Cylinder U in combination with spiral spring D₁, piston head A₁, with piston rod B₁, stop cock C₁, in pipe T, also pipe d; 5th. The arrangement of the air pump A, cylinder U, spiral spring D₁, pipes Y, T, d, stop cock L, C₁, S₁, C₁ and I, and valves D and H, and piston rod and piston B, B₁, hose M, N.

No. 1648. CYRUS WELLINGTON SALADEE, St. Catharines, Ont., 17th October, 1872, for 5 years: "A Gate." (Une barrière.)

A Gate hinging on portable post, swinging both ways, self-locking, and capable of being adjusted at any height to fit on the ground.

Claim.—1st. The portable post B; 2nd. The adjustable brace H, in combination with the brace lock I, and 3rd. The combination of the portable post B, arms E, lever E, and intermediate post D, in connection with the main body of the Gate.

No. 1649. CYRUS W. SALADEE, St. Catharines, Ont., 17th October, 1872, for 5 years: "A door and gate spring." (Un ressort de porte et de barrière.)

A round rod or spring of steel of appropriate length and thickness is so arranged in combination with a bracket and two arms that the torsional action of same closes door or gate.
Claim.—The combination of the bearing D, arms A₁, and B, Brackets C, and H, with the torsional spring F, as described.

No. 1650. CYRUS W. SALADEE, St. Catharines, Ont., 17th October, 1872, for 5 years: "Springs for Vehicles." (Des ressorts de voitures.)

One or more equalizing shafts are so applied and operated in connection with torsional springs as to compel them to act in unison so as to prevent side motion or undue strain, and to gain a greater degree of central vibratory motion
Claim.—1st. In combination with Torsional Springs in the equalizing shafts B and B, 2nd. Supporting and operating the lever ends of torsional springs in or upon the outer ends of oscillating cranks C, 3rd. The arrangement of torsional springs A in pairs so that their bearings J, shall be or a parallel line with the edges of the bed plate, 4th. Securing the squared ends I of the springs A, in position by means of the screw nuts O, and 5th. Forming the lever arms of torsional springs in the shape of a half circle and securing the outer ends of the same in their bearings by screw-nuts F.

No. 1651. CYRUS W. SALADEE, St. Catharines, Ont., 17th October, 1872, for 5 years: "Springs for Vehicles." (Des ressorts de voitures.)

Claim.—1st. Torsional spring A, in the employment of squared rods of steel; 2nd. Supporting and operating the lever ends of squared torsional springs in the loose sleeve bearing B, 3rd. Forming the sleeve B as a part of the crank C, and 4th. The combination of the sleeve B, rod A, and split journal box D, E.

No. 1652. JOHN B. ARMSTRONG, Guelph, Ont., 17th October, 1872, for 5 years: "Improvements in Carriages." (Perfectionnements dans les Voitures.)

Claim.—The making of carriage springs with the solid tits or raised parts A, A, also putting the nut or washer C (shouldered on the end of the king bolt) on the top of the head block plate D and sinking the same into the wood on the under side of the head block E, as specified.

No. 1653. JAMES COLLINS, Guelph, Ont., 17th October, 1872, for 5 years: "Improvements on Harvest Rakes." (Perfectionnements aux râteliers à grains.)

Claim.—1st. The combination of the rake-head F, the upwardly inclined slotted rake-arm F₁, the swivel joint G, the bracket B₁, the continuously revolving arm C₁, and the vertical rod C₂, that pass through the slot /, in the rake-arm F₁, and serves to operate it; 2nd. The combination of the rake-head F, the slotted rake-arm F₁, the bracket B₁, the revolving rod C₂, and the adjustable collar c₁, on the rod C₂ for regulating the height that the rake-head is lifted above the platform; 3rd. The combination of the rake-head F, the rake-arm F₁, the hinge plate G, the bracket plate B₁, provided with means for adjusting the hinge plate G, and rake-arm F₁, relatively to the finger beam, and the revolving crank-arm c₁, for operating the rake; 4th. The combination of the bracket B₁, the inclined rake-arm F₁, pivoted to the bracket B₁, the rake-head F, the friction roller / and the guide plate H.