

wheel, on either side of the head-plate, and a projection cast on the centre of the head-plate to fit into the socket on the bed-plate, 4th. In a buggy or other vehicle, a malleable iron fifth-wheel, the upper half of which has cast on it a metal reach projecting beyond the circumference of the wheel, and a lug cast on the outer surface of the wheel opposite to, but on a line with the reach, in combination with a stay rod, one end of which is fastened to the reach and the other end to the lug on the opposite side of the wheel, the said rod being bent, so as to pass round the axle-plate, passing over a bolt projecting from the bottom of the said plate at the centre of the fifth-wheel.

No. 16,837. Improvement in Spark-Arresters. (*Perfectionnement des arrête-flammèches.*)

Robert Brayton, David June and Oratus S. French, Trémont, Ohio, U. S., 11th May, 1883; (extension of Patent No. 8788.)

No. 16,838. Improvements on Sounding Apparatus. (*Perfectionnements aux appareils de sondage.*)

Joseph Léveillé, Montreal, Que., 11th May, 1883; (extension of Patent No. 8774.)

No. 16,839. Improvements on Horse Rakes. (*Perfectionnements aux râteliers à cheval.*)

William H. Hall, Tiffin, Ohio, U. S., 11th May, 1883; for 5 years.

Claim.—1st. The combination of an oscillating rake-head carrying wheels by which it is supported, a gear-wheel driven by said carrying wheels, a pinion turning in bearing upon the rake-head and meshing with said gear wheel, and a friction clutch or device adapted to arrest the motion of said pinion, whereby it will be carried onward along the periphery of the gear-wheel, to lift the rake-head and the teeth attached thereto. 2nd. The combination of a rake-head carrying wheels by which it is supported, spur-gears upon the hubs of said carrying wheels, pinions normally turning freely in or upon bearings connected with the rake-head and meshing with said gears, and friction clutches with which said pinions may be caused to engage to prevent their rotation, whereby they will be carried along periphery of the spur-gears to lift the rake-head. 3rd. The combination of an oscillating rake-head carrying wheels by which it is supported, spur-gears upon the hubs of said carrying wheels, pinions meshing with said spur-gears, and mounted to turn loosely upon the ends of the rake-head, disks or flanges upon said pinions and opposing disks or flanges upon the ends of the rake-head, with which the pinions may be brought forcibly into contact, to prevent their revolution and cause them to be carried onward by the gears to oscillate the rake-head. 4th. The combination of an oscillating rake-head carrying wheels by which it is supported, spur-gears upon the hubs of said carrying wheels, flanged spur-pinions meshing with said gears and mounted to turn idly in or upon bearings carried by the rake-head, boxes upon the rake-head for the bearings of said pinions provided with opposing flanges and mechanism for moving the bearings longitudinally within the boxes, to clamp the flanges upon the pinions against the flanges upon the boxes, and thereby prevent the rotation of the latter to cause the dumping of the rake. 5th. The combination of an oscillating rake-head, draft or carrying wheels by which it is supported, spur-gears upon the hubs of said wheels, flanged spur-pinions engaging with said gears, stubs or spindles upon which these pinions turn loosely, boxes upon the ends of the rake-head through which the squared shanks of the spindles are carried, flanges upon said boxes opposing the flanges upon the pinions, and rods connecting said shanks to a double or compound lever at or near the centre of the rake-head, whereby the pinions may be simultaneously moved in against the box flanges to prevent their rotation by frictional contact therewith. 6th. The combination of the oscillating rake-head, the draft wheels, the spur-gears upon the hubs of said wheels, the flanged spur-pinions intermeshing with said gears, the stubs or spindles upon which said pinions turn, the box flanges at the end of the rake-head, and the rods operated by a central lever and connected to the squared shanks of said stubs by adjustable joints. 7th. The combination of the oscillating rake-head, the draft wheels, the spur-gears upon the hubs of said wheels, the flanged spur-pinions meshing with said gears, the stubs or spindles upon which these pinions turn loosely, the flanged boxes mounted upon the end of the rake-heads and supporting said spindles, the rods connected at one end to the shanks of said spindles, the double lever to which the rods are connected at their meeting ends, a sliding passing through the rake-head and taking into a slot in the force arm of said lever and the foot lever for operating said link. 8th. The combination of the oscillating rake-head, the draft wheels, the spur-gears upon the hubs of said wheels, the flanged spur-pinions intermeshing with said gears, the spindles upon which these pinions turn loosely, the flanged boxes fixed to the ends of the rake-head and supporting said spindles, the double lever pivoted near the centre of the rake-head, the rods connecting it with the shanks of the spindles at each end of said head, the sliding rod passing through the rake-head and taking into a slot in the force arm of said lever, the foot lever pivoted to the thill-frame and operating said rod to clamp the pinions against the box-flanges, and the spring pressing against the heel extension from the double lever on the rake-head, to return it and the pinions to their normal position when the foot-lever is released. 9th. The combination, to form a means for operating the clutch of a horse hay-rake, of a lever pivoted near the centre of said rake, rods pivoted to said lever on opposite side of the lever pivot and passing longitudinally to the respective ends of the rake-head where they are connected with the clutching mechanism, a sliding rod passing through the rake-head and taking into a slot upon the force arm of the lever thereon, and a foot lever pivoted to the thill-frame and connected with said rod, whereby the lever upon the rake-head may be moved to project or retract the rods. 10th. The combination, to form a means for operating the clutches in a horse hay-rake, of a lever pivoted near the centre of the rake-head, rods pivoted to said lever on each side of the lever-pivot and passing to the clutching devices at the respective ends of the rake-head, a sliding rod passing through the rake head and taking into a slotted force arm the lever

thereon, a foot lever pivoted to the thill-frame and connected with said sliding rods, whereby the lever on the rake-head may be moved to cause the engagement of the clutching devices, and a spring mounted upon the rake-head and pressing against the heel extension from the lever thereon, to restore it to its normal position and throw the clutching devices out of engagement. 11th. The combination of the oscillating rake-head, the draft wheels, the spur-gears upon the hubs of said wheels, the idle revolving spur-pinions meshing with said gears and supported by boxes on the rake-head, and shields or guards fixed to said boxes and covering or protecting the spur-gears and pinions.

No. 16,840. Machine for Peeling Potatoes. (*Machine à peler les patates.*)

Joseph A. Moffat, Hamilton, Ont., 11th May, 1883; for 5 years.

Claim.—1st. A potato-peeling machine in which the potato is held on a stationary fork, and the knife for peeling it is connected with a frame pivoted upon the spindle of the fork, the said knife being so supported that it will automatically traverse the surface of the potato upon the frame being caused to revolve upon its centre. 2nd. In a potato-peeling machine in which the potato is held on a stationary fork, the frame C journaled on the spindle of said fork and provided with the lugs H in which the vertical screw G is journaled, in combination with the knife-holding frame I arranged to carry the knife-holder and having pivoted upon it an arm K with a half nut cut in it to fit against the screw. 3rd. In a potato-peeling machine in which the potato is held on a stationary fork, the knife-holder M having fixed to one of its ends a curved knife O and pivoted at its other end to a vertically adjustable frame I, in combination with a spring H arranged to force the knife against the potato. 4th. The knife-holder M pivoted to the frame I and provided with a tail piece M₁ in combination with the arm K also pivoted to the frame I and having a half nut formed in it. 5th. The frame I having pivoted upon it the knife-holder M and being held to the frame C by the cross-head J fitting on to the guide J₁, and by the screw G pivoted in the lugs H and passing through holes in the frame I, in combination with the arm K pivoted to the frame I and having a half nut formed on it and arranged to come in contact with the screw G. 6th. The frame C pivoted on the spindle B of the fork D and having an adjustable cross-head E fitted into it, in combination with the stand A arranged to hold the spindle B stationary while the frame C revolves around it.

No. 16,841. Improvements on Fire-Escapes. (*Perfectionnements aux sautoyeurs d'incendie.*)

Robert A. Bush, Brockville, Ont., 11th May, 1883; for 5 years.

Claim.—A fire-escape, constructed of a flexible ladder E, one end attached to a spool D to roll thereon, and the other end secured to racks C C attachable to the sill of a window to suspend the ladder when unrolled, and to carry the spool when the ladder is wound thereon.

No. 16,842. Improvements on Wheelbarrows. (*Perfectionnements aux brouettes.*)

Peter Allard, Sherbrooke, Que., 11th May, 1883; for 5 years.

Claim.—The handles and frame being constructed in one continued length A with the guard C, the malleable iron wheel D, the circular brace G and the straight brace F.

No. 16,843. Improvements on Bag Fasteners. (*Perfectionnements aux attaches des sacs.*)

Walter G. Fraser, Campbellford, Ont., 11th May, 1883; for 5 years.

Claim.—A bag fastener plate A having flanges B B and slots C C, pin F, strap E, secured to plate by washer E₁ and pins D D.

No. 16,844. Improvements on Self-Closing Taps. (*Perfectionnements aux robinets automatiques.*)

Francis Hyde, Toronto, Ont., 11th May, 1883; for 5 years.

Claim.—1st. A self-closing tap A constructed with an upwardly closing valve *h*, a stem *b* and seat *h* with metallic washer *h*₂, button *a*, gland *c* and spiral spring *d*. 2nd. A percussion chamber B constructed with a compression ball *o* placed in the chamber proper *m*, and cover *n*. 3rd. A self-closing tap A, in combination with a percussion chamber B attached to the tap. 4th. A percussion chamber B constructed with a compression ball *o*, in combination with the ordinary taps in common use when so required.

No. 16,845. Improvements in Ointments. (*Perfectionnements dans les onguents.*)

Francis McKay, Lobo, Ont., 12th May, 1883; for 5 years.

Claim.—A compound composed of the following ingredients: fresh unsalted butter, two pounds, black wool cut from the sheep's breast at the full of the moon, one ounce, three fresh eggs and flower of sulphur, two table-spoonsfuls.

No. 16,846. Improvements in Churns. (*Perfectionnements aux barattes.*)

Benjamin F. Moore and Benjamin Moore, Heathcote, Ont., 12th May, 1883; for 5 years.

Claim.—In combination, the frame posts C C D D secured to base A and blocks E F, and to inclined plank G, and an elbow lever H fulcrumed to plank G and carrying pitman K, crosshead L and guide rod N sliding in a hole in blocks E F.

No. 16,847. Improvements on Truck Flangers. (*Perfectionnements aux camions nettoyeurs des bourrelets de rails.*)

Nicholas Watson, Summerside, P.E.I., 12th May 1883; for 5 years.