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INVENTIONS PATENTED.

No. 9804. Acid Pump and Syphon. (*Pompe et siphon pour les acides.*)

Francis Nichols, New London, Ct., U. S., 31st March, 1879. (Extension of Patent, No. 3269) for 5 years.

No. 9805. Process for the Manufacture of Steel. (*Procédé de fabrication de l'acier.*)

Ogden Bolton, Canton, Ohio U. S., 3rd April, 1879. (Extension of Patent, No. 9753) for 5 years.

No. 9806. Process for the Manufacture of Steel. (*Procédé de fabrication de l'acier.*)

Ogden Bolton, Canton, Ohio U. S., 4th April, 1879. (Extension of Patent, No. 9752) for 5 years.

No. 9807. Fuel, Gravel and Macadamizing Material. (*Matériau combustible, gravier et empierrement.*)

Thomas F. O'Brien, Montreal, Que., 4th April, 1879, for 5 years.

Claim.—1st. The fuel composed of a base of blue clay containing the component elements, and having one fifth part of its bulk in coal or an amount of inflammable material, to produce corresponding results, mixed therewith; 2nd. The material for roofing gravel, macadam or walling composed of the clay base and inflammable substance aforesaid, with admixture of one twentieth part (1/20) of sand and treated as set forth. 3rd. The substitute for stone composed of the clay base inflammable compound and one twentieth (1/20) part of cement with or without admixture of sand. 4th. The material for plastering composed of the clay base, worked to the proper consistency, and one twentieth (1/20) part of lime cement or other plaster.

No. 9808. Improvements on Propelling Apparatus. (*Perfectionnements aux appareils de propulsion.*)

Joseph Gooderich, Henry, Ill., U. S., 4th April, 1879, for 5 years

Claim.—1st. Blades arranged to turn freely, or without undue friction, upon central axial pivots, and to be borne by carriers through a resisting fluid, or to be acted upon by said fluid. 2nd. Blades arranged to turn without undue friction on central axial pivots having bearings, in flexible endless carriers arranged upon pulleys or chain wheels, and the said pulleys arranged to be rotated so as to cause the blades to move through a resisting fluid. 3rd. Blades arranged to turn on central axial pivots having bearings in endless flexible carriers arranged upon pulleys and provided with longitudinal guides, as shown, for feathering the blades upon the return side, while they are permitted to turn freely on their axis, without mechanical constraint on the working side. 4th. The combination of the shafts B B, pulley D D, endless, flexible carriers E E and pivoted blades F F, when so arranged that the axis of the blades are perpendicular to the water or nearly so. 5th. The curved feathering guards d d arranged to guide the blades, as they pass from the working to the return side. 6th. The flexible carriers bearing the axially pivoted blades, arranged to move in guides or keepers b b. 7th. The device for assisting to maintain the returning blade with its edge opposed to the resisting fluid consisting of a rib in the keeper b arranged to take into a groove in the lower part of a of the blade. 8th. The arrangement of the endless carrier, pulleys or chain wheels, axially pivoted blades free to rotate on their axis without restraint on their working side and the casing or trunk adapted to form a blower

No. 9809. Improvements on Pumps. (*Perfectionnements aux pompes.*)

Philip Grant, Guelph, Ont., 4th April, 1879, for 5 years.

Claim.—1st. The combination of the check valve seat I, with the chairs J J and the cross piece K; 2nd. The combination of the block E, with the slot F.

No. 9810. Apparatus for Grinding Reaper-Knives. (*Appareil à rémouler les coupeuses des moissonneuses.*)

Isaac Shupe, New-Market, Ont. (Assignee of James Wilber, New York, U. S.) 4th April, 1879, for 5 years

Claim.—1st. The holder A, with suitable clamping devices to hold the sickle bar and the two hinged plates or sections h i so connected with the holder as to allow proper joint action of the holder. 2nd. The combination with the holder A, provided with the notch g of the longitudinal wires c, the clamps d and the cam f.

No. 9811. Electric Induction Apparatus.

(*Appareil d'induction magneto-électrique.*)

John L. LeConte, Philadelphia, Penn., U. S., 4th April, 1879, for 5 years.

Claim.—1st. An apparatus, for producing induced currents of electricity, at different points along the circuit of the current of dynamo electric or other electric machine, which is composed of two long bands of metal wrapped with two interposed layers of insulating material, each of said bands of metal being provided, at both ends, with a conducting wire, said bands of metal and layers of insulating material being spirally rolled into cylindrical form around a small hollow cylinder; 2nd. A broad band of metal and a series of narrower strips of metal together with interposed layers of insulating material, the whole wrapped in helical form, and the band and strips respectively provided near their several extremities with conducting wires, those of the band being for the main current and those of the strips for the several induced currents. 3rd. A broad band of metal and a series of narrower strips of metal together with interposed layers of insulating material, the whole wrapped in helical form upon a central hollow cylinder, adapted to receive a soft metal core, and the bands and strips respectively provided near their several extremities with conducting wires, those of the band being for the main current and those of the strips for the several induced currents.

No. 9812. Machine for Dressing Staves.

(*Machine à tailler les douves.*)

Horace H. Miller, Lyndonville, Vt., U. S., 4th April, 1879, for 5 years.

Claim.—1st. The lever G, having the spring pawl K, in combination with the ratchet or tooth wheel F upon the shaft of the cylinder or vessel rotating belt, and the cam H upon the plane arm f. 2nd. The supports or standards J J having the sockets r r, in combination with the eyes or sockets J J; and set or adjusting screws J J. 3rd. In the stave holding device or clamp composed of a frame with axes or trunnions q q, stationary and movable jaws m m and mechanism for operating the movable jaw. 4th. The stave holding device or clamp I, in combination with the supports or standards J J having the upper and lower sets of sockets r r; 5th. The device or clamp I, for holding the stave, in combination with the standards or supports J J having the socket- r r, and the plane K having upper and side bite.

No. 9813. Improvements on Fifth Wheels.

(*Perfectionnements aux ronds d'avant train.*)

William H. Morrison, Aymer, Ont., 4th April, 1879, for 5 years.

Claim.—1st. A "fifth wheel" constructed with the upper half A having flanges a a on its two edges and shaped to accommodate the V-shaped upper side of the lower half B and in combination therewith. 2nd. In combination with the described "fifth wheel" the adjustable clips C C passing through curved sockets in lugs D D to connect same to axle bed E, the bolts e attaching the device to the head block G, and the circle keep H H attaching it to the reach I.