

which mass is inclosed one or a series of hollow suitably-shaped tubes of sheet metal, paper, or the like, and which is covered by a layer or other covering of artificial stone or kindred material which completes the enclosure of the mass. 3rd. A continuous seamless pipe formed of a walled layer or trough of artificial stone or kindred material, which contains a continuous mass, layer stratum, or bed of hardened plastic fluid, semi-fluid or kindred material, which mass encloses one or a series of hollow suitably-shaped tubes or sheet metal, paper, or the like, and also encloses one or a series of connecting wires imbedded in such position and relation therein as it is desired that said wire should assume, and which is covered by a layer or other covering of artificial stone or kindred material, which completes the enclosure of the mass.

No. 13,543. Improvements on Hand Trucks.

(*Perfectionnements aux camion à bras*)

Noble J. Waterman, Detroit, Mich., (Assignee of William May, Birmingham, N. Y.) U. S., 13th October, 1881: for 5 years.

Claim.—1st. The combination, with the frame A, of the hinged double hook G. 2nd. The combination, with the rigid toe H, of a hinged double hook G. 3rd. A hand truck consisting of the frame A, the sliding rotating hook E, the double hook hinged on cross plate G, the toe H and wheels B. 4th. The combination, with a cross plate G and fixed double hook supporting toe H, of the hinged double hook G.

No. 13,544. Improvements on Electric Batteries.

(*Perfectionnements aux batteries électriques*)

Julius M. Stebbins, New York, U. S., 13th October, 1881: for 5 years.

Claim.—1st. A battery inner cell having a contracted upper portion enclosed by a porous wall, and an enlarged lower non-porous reservoir in communication with said upper portion. 2nd. The combination, with the outer cell and the inner cell composed of the enlarged lower reservoir, and the upper contracted porous cup having its bottom opening into said lower reservoir, of the battery plates arranged in close proximity to each other, and to the walls of said porous cup. 3rd. The combination, with a battery porous cup, of an adjustable non-porous sheath. 4th. A two fluid electric battery having an outer non-porous cup, an inner cup having its lower portion non-porous and its upper portion porous, the battery plates or elements arranged adjacent to the upper porous portion of the inner cup, and the exciting fluids properly filling said cups, respectively.

No. 13,545. Improvements on Spring Tooth Harrows.

(*Perfectionnements aux herse à dents élastiques*)

Charles La Dow, Albany, N. Y., U. S., 13th October, 1881: for 5 years.

Claim.—1st. The combination of the two frames hinged together, vibratory spring teeth attached to each frame, and mechanism for supporting and balancing each frame and adjusting the penetration and vibration of the spring teeth. 2nd. The combination of the tooth supporting bars, cross bars maintaining the tooth bars at suitable distances apart, spring teeth mounted on the tooth bars at their point of vertical attachment to the cross bars and mechanism independent of the teeth in regulating their penetration and vibration without altering their position on the frames. 3rd. The combination of the frames hinged together, spring teeth thereon, mechanism for regulating the vibration of the teeth and the distance between the frames and the ground, and a draft bar connected to each section. 4th. The combination of a frame, spring teeth thereon and runners for adjusting and balancing the frame, each runner having screw threaded shanks passing through a stationary nut arranged to hold the runner from veering in opposite directions.

No. 13,546. Improvements on Smoothing Irons.

(*Perfectionnements aux fers à repasser*)

Wendelin Sauer, Guelph, Ont., 13th October, 1881: for 5 years.

Claim.—A smoothing iron having a hollow body A and a hinged top B, a grate E fitted within the body A and supported on feet b, in combination with the damper F arranged to admit cold air below the grate E, and the perforations d arranged around and a little above the grate E, for permitting the escape of the heated gases.

No. 13,547. Improvements on Window Blinds.

(*Perfectionnements aux persiennes*)

Alexander C. Gibson and William W. Gibson, Toronto, Ont., 13th October, 1881: for 5 years.

Claim.—1st. The roller B having notches J, in combination with a blind hung therefrom by means of chains C. 2nd. The chains C in combination with the slats D. 3rd. The staples F and rings E, in combination with slats D and chains C. 4th. The staples F stamped from steel metal having two pointed and bent ends a, tongue b, perforation d and connected by bar portion c, the ends and tongue bent to form prongs.

No. 13,548. Electro-Galvanic Battery for Medical Purposes.

(*Batterie électro-galvanique pour des fins médicales*)

Joseph M. Downing, Bristol, Pa., U. S., 13th October, 1881: for 5 years.

Claim.—An electro-galvanic medical battery composed of a copper ring surrounding a central zinc disc, said copper ring having radial arms, the spaces between which are filled up with zinc annular sections, and the whole enclosed within a horse-shoe rim.

No. 13,549. Pulverizing Machine.

(*Machine à broyer*)

Richard Cook, Sheffield, Eng., 19th October, 1881: for 5 years.

Claim.—The steel or other hard metal ring E made either in separate segments or in one piece, and either adjustable or unadjustable in the case, the said ring when made in segments being surrounded by a

metal hoop F. 2nd. The driver or propeller consisting of the two plates or arms H H, between whose ends the rollers or balls G G are placed, by which the latter are carried around, in combination with the central piece L, to which the said plates or arms are secured in such a manner that they may be readily detached therefrom. 3rd. The curved blades or fans J arranged upon the driving arms in such a manner that they agitate the pulverized material and project the same against the sieves K, and also create a current of air for cooling the same. 4th. The stirrers or fans J for agitating the material and creating a powerful current of air for cooling the same. 5th. In a machine for pulverizing or crushing ores or similar substances, in the presence of water or other liquid, by means of rotating rollers or balls, the upper chamber N provided with a number of apertures N one above another, in combination with a spout or curved pipe N, and with stopper N' for the apertures required to be closed. 6th. The combination of the arms or carriers H with the spindle G carrying inclined blades instead of the rollers or balls, to adapt a pulverizing machine, when supplied with mercury, to be used as an amalgamator for mining purposes. 7th. The curved drivers or carriers H so arranged upon the driving shaft D that the two rollers G of each set are caused to rotate in different vertical planes. 8th. The fans or blades P P P for cooling the material being ground or pulverized, and for moving it forward and out of the machine.

No. 13,550. Improvements on Plough Beams.

(*Perfectionnements aux axes des charrues*)

Abssalom Merner, Waterloo, Ont., 19th October, 1881: for 5 years.

Claim.—1st. A plough beam composed of a flat horizontal bar A supported by bars D D bolted at the ends to intervening blocks E F bolted to bar A. 2nd. The head g of the standard I provided with a slot and secured to bar A by bolts h h, whereby a pivoted adjustment is obtained.

No. 13,551. Improvements on Grave Fences.

(*Perfectionnements aux clôtures tumulaires*)

Jesse Kinney, Detroit, Mich., U. S., 19th October, 1881: for 5 years.

Claim.—1st. The combination, with a cemetery fence, of yielding canopy frames sprung into position, and their opposite ends secured to the corners of the fence. 2nd. A hollow fence post provided with a flower vase at its upper end, and an inverted mouth piece at its lower end, in combination with a wick located within the hollow fence post, and adapted to supply moisture from the ground to the flower vase, by capillary action.

No. 13,552. Improvements on Cake and Confectionary Machines.

(*Perfectionnements aux machines des pâtisseries-confiseurs*)

James H. Mitchell, Philadelphia, Pa., U. S., 19th October, 1881: for 5 years.

Claim.—1st. In a cake and confectionary machine, the combination with a material box of a pan supporting table, and mechanism for vertically moving one towards and away from the other, whereby, when the machine is in operation, the material flows from the nozzles upon the pan, and when the deposit is made, the connection between the deposit and box breaks. 2nd. The pan conveyor G, in combination with the latchet D and operating mechanism, said latchet having differential teeth. 3rd. The base of the material box, in combination with pendant stops R which are longer than the nozzles. 4th. The feeding chamber having a cylinder or roller eccentrically mounted and provided with movable feeding wings. 5th. The press chamber having a rising and falling nozzle plate frame with depressing spring, in combination with the rising and falling table. 6th. The rake frame with nozzle plate chamber with rim and springs. 7th. Two interchangeable hoppers with feeding devices and discharge outlets, one for shaping cakes, &c., and the other for ornamenting the same, both connected to the frame and disconnected from each other, and having their feeding devices adapted to be operated by the same means as the machine. 8th. A hopper with a feeding device and discharge nozzles, in combination with a secondary hopper having a feeding device and discharge nozzles, both connected to the frame of the machine, whereby either may be brought into service. 9th. The hopper, in combination with the arms V having supporting feet.

No. 13,553. Improvements in Pipe Clamps for Oil Wells.

(*Perfectionnements aux mordaches à tuyaux pour les puits d'huile*)

Claude Héme, South Bay City, Mich., U. S., 19th October, 1881: for 5 years.

Claim.—1st. The combination of the base A and connecting bars C, with the standards b and projecting guides c. 2nd. The lever guides f secured at their ends to the base A and intermediately spanning over the axles of the friction wheel c. 3rd. The use of two wheels in each of the outer ends of the lifting levers F, and having the lever guides f passing between said wheels, so as to guide the wheels in their travelling on the base.

No. 13,554. Improvements on Carriage Baths.

(*Perfectionnements aux baignoires à voitures*)

Claudius Tidey, Norwich, Ont., 19th October, 1881: for 5 years.

Claim.—The abluent or bath A made semi-circular and of the diameter and width required, and having recesses C E on each side for the hub to revolve in, and straps or strings H to attach abluent to wheel while placing the wheel in position.

No. 13,555. Improvements on Car Wheels.

(*Perfectionnements aux roues des chars*)

James Rigby, Montreal, Que., 19th October, 1881: for 5 years.

Claim.—1st. In a car wheel having a vulcanized fibre tire, the combination of the body portion A, the fibre tire rings B made in sections b with the securing bolts D. 2nd. In combination with the body portion, the fibre rings made in sections, the intermediate metal rings, and the securing bolts.