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INVENTIONS PATENTED.

NOTE—Patents are granted for 15 years. The term of years for which the fees have been paid, is given after the date of the patent.

No. 20,457. Spool Holder. (Porte-Bobine.)

Alexander A. Murphy and Feodor Boas, Montreal, Que., 3rd November, 1884; 5 years.
Claim.—1st. A spool holder, formed of a tube cut away at its lower end, as and for the purpose specified. 2nd. A spool holder, composed of a series of tubes, cut away at their lower ends and held between end plates, substantially as and for the purpose specified. 3rd. The combination, in a spool holder, of the tubes A having openings a at their lower ends, the division plates, or platforms B1, and end plates, substantially as and for the purpose set forth.

No. 20,458. Mechanism and Process for Concentrating Ore. (Machine et Procédé de Concentration du Minerai.)

The Golden Gate Concentration Company, Augusta, Me. (assignee of H. P. Pobe, Wareham, and G. B. Thayer, Boston, Mass.) U. S., 3rd November, 1884; 5 years.

Claim.—1st. The lever a having two arms, and the table, combined with means for connecting one arm of the lever, with a steady or uniform service of power, such as the shaft a, and its other end with and reciprocate the table, whereby the speed of rotation of the lever is made to vary during different portions of each stroke, substantially as described. 2nd. The shaft a, provided with the crank and crank-pin, the sliding box a5, the lever a6 and its attached eccentric ring and the adjustable box and stud a7, combined with the table and the connecting rod, whereby the table may be reciprocated from the said eccentric, substantially as described. 3rd. The table and the lever a6, and the adjustable eccentric ring, combined with the connecting rod. 4th. In an ore concentrator, the ore distributing trough arranged transversely with relation to the table and its agitator, combined with a reciprocating table to operate, substantially as described. 5th. The ore distributing trough, having an agitator therein and provided with an opening in its bottom for the discharge of waste mercury and amalgam, substantially as described. 6th. The ore distributing trough, having an agitator therein, and provided with a curtain arranged between the delivery edge of the trough and the trough below the delivery edge thereof, substantially as described. 7th. The reciprocating bed or table, combined with the stirring frame provided with pins, and with means to reciprocate the said frame transversely, substantially as described. 8th. In an ore concentrator from water current, and an inclined washing compartment continuous therewith, and a vessel to supply water to the washing compartments, combined with means, substantially as described, for removing the gangue and water at or near the junction of the said compartment, as specified, and for reciprocating the said bed to effect both the stratification and travel of the said ore, substantially as described. 9th. The reciprocating ore bed upon which the mineral is settled and over which it travels, and a protecting plate, combined with means for removing the gangue and water from the upper side of the said plate, substantially as described. 10th. In an ore concentrator, the table and protecting plate, combined with an exhaust apparatus located above the said plate to remove the gangue and water, as set forth. 11th. In an ore concentrator, an inclined washing compartment, provided with a basin or depression,

and a protecting apron above it to receive the impact of the water supplied to the said bed, substantially as described. 12th. In an ore concentrator having an inclined washing compartment, a water-supply vessel h1, arranged transversely to the said compartment and provided with a continuous slot, whereby water in the said vessel may be supplied to the end compartment from side to side as a continuous sheet, substantially as described. 13th. In an ore concentrator, a float collector adapted to take the float mineral from the surface of the water substantially as described. 14th. In an ore concentrator, a table provided with a bottom composed of slats separated from each other, and provided with dowel pins and having a covering sheet c2 to operate, all substantially as described. 15th. The inclined washing compartment, combined with a water-supply and with a stirring frame provided with pins, and having a transverse movement in the said compartments, substantially as described. 16th. In a process for concentrating ores, the following continuous steps, viz.: stratifying the ore by settling the same in the presence of water having a current or flow sufficiently slow to permit the fine particles of the mineral to settle upon the ore bed, removing a portion of the lighter gangue and water from the strata of ore settled upon the ore bed, passing the mineral and remaining gangue while yet in stratified condition into a washing compartment, and washing the ore to effect the removal therefrom of all or any desired portion of the remaining gangue, substantially as described.

No. 20,459. Spinning Machine. (Machine à Filer.)

Oscar Hanna, Hiram W. T. Earnshaw, Dover, Ky., James W. Womeldorf, Charles F. Corben, Middleport, Ohio, and James Earnshaw, Dover, Ky., U. S., 3rd November, 1884; 5 years.

Claim.—1st. The combination of the rail A having screw, or worm B, the upright frame swivelling thereabout and having pulley p and throat t, the gear wheel J and shaft J1, the gears H, H1, H2, drum F, gears G1, G2, G3, and the mechanism for laying on the yarn consisting of cross-grooved shaft L and vibrating eye d, or their equivalents, as described. 2nd. The combination of the arm E, with worm I, shaft 3, with gears 2 and 4, the gear 5, pitm in 9 and vibrating bar 10, with eye in its upper end, and as and for the purpose described.

No. 20,460. Nail Machine. (Machine à Clou.)

John A Coleman, Providence, R.I., U. S., 3rd November, 1884; 5 years.

Claim.—1st. The method, herein described, of forming nails, the same consisting in punching b blanks from a bar of iron with the heads alternately in opposite directions, and then turning one set of blanks so as to direct them head downwards to the shaping and finishing rollers, substantially as and for the purposes specified. 2nd. The method, substantially as described, of forming nails, the same consisting in cutting the blanks from a bar of metal, then turning the blanks by suitable mechanism, so as to present their edges to a set of shaping rollers, then turning the blanks again, so as to present their flat sides to a second set of rollers, whereby they are finally shaped, substantially as and for the purposes specified. 3rd. The method, herein described, of manufacturing nails by punching blanks from a bar of iron, and afterwards pressing, squeezing and shaping the same in directions at right angles to each other, substantially as and for the purposes specified. 4th. The method, herein described, of forming nails, the same consisting in punching a series of blanks with heads alternately in opposite directions, then turning one set, so as to direct the whole heads downward to a pair of shaping rolls, then directing the blanks to a pair of finishing rollers, and finally removing the protuberance of metal from the blank to form the finished nail, substantially as and for the purposes specified. 5th. In a machine for manufacturing nails, the combination, with the dies and punches and their operating mechanism the conduits provided with obstructions, whereby both set of blanks are directed head downwards into the conduits in order to be properly presented to the shaping rollers, substantially as specified. 6th. In a machine for manufacturing nails, the combination, with the dies, the punches and their operating mechanism, of the conduits having yielding backs adapted to operate a suitable alarm, or to stop the machine in the event of the crowding of the blanks, substantially as specified. 7th. In a machine for the manufacture of nails, the combination, with the dies