

Claim.—1st. The combination of the bottom part of a ladder and an upper extensible portion, with a travelling gage, sets of hoisting chains and barrels for both the gage and the extensible portion of the ladder operating-shaft, and devices, substantially as described, for throwing said shaft into gear with either set of hoisting devices. 2nd. The combination of a fire-escape ladder, with a platform L mounted thereon, and levers on said platform for holding hose-jet-pipes, all substantially as set forth.

No. 18,873. Art of Extracting or Obtaining Aluminum from Aluminous Ores and Earths. (*Art d'Extraire ou d'Obtenir l'Aluminium des Minerais et des Terres Alumineux.*)

Frederick J. Seymour, Wolcottville, Ct., U.S., 14th March, 1884; 5 years.

Claim.—The improvement in the art of extracting or obtaining aluminum from aluminous earths and ores, consisting in mixing aluminous ore or earth and an ore of zinc with carbonaceous matter and a flux, and subjecting the mixture to heat in a close retort, whereby the zinc is caused to produce or assist in the casting down of the aluminum in a metallic state, and an alloy of zinc and aluminum is obtained, substantially as herein described.

No. 18,874. Machine for Straightening or Bending Railroad Rails. (*Machine pour Redresser ou Plier les Rails des Chemins de Fer.*)

Peter Fréchette, Sheridan, Cal., U.S., 14th March, 1884; 5 years.

Claim.—1st. In a machine for straightening or bending rails, a frame consisting of the plates A placed in angle-shaped pairs, separated and secured by intervening blocks and braces to form a central passage a, and horizontal and vertical guides, consisting of the separated slotted plates E, the plates G passing through them, plates H extending to them, and the horizontal and vertical screw jacks I secured to the plates A, and extending toward the centre in the guide plates E and H, and having pressure rollers c upon their inner ends, all arranged substantially as and for the purpose described. 2nd. In a machine for straightening or bending rails, the frame consisting of the plates A, separated to form a central passage a, and open top, bottom and sides, the horizontal slotted guide-plates E, and vertical bearing plates G, and guide plates H, the threaded strips J, the screw jack I, each consisting of the bracket i, having a roller c extending within the passage a, bearing plate d, operating screw f, having a headed shank e with a shoulder g and yoke g, secured upon the threaded strips J, substantially as herein described. 3rd. The screw jack I, consisting of the two-part bracket i, pressure roller c in one end, and perforated bearing plate a in the other end, the screw f having a headed shank e, with a shoulder g and the stationary yoke g, all arranged and operating substantially as herein described. 4th. In a machine for straightening or bending rails, the frame consisting of the plates A, and other parts arranged and secured together, as shown, to form a central passage a, and the screw jack I, operating as described, the end plates B, frames L on each end, having power mechanism for forcing the rail through passage a, and the longitudinal tribolts K, securing the frames and bracing the machine, substantially as herein described.

No. 18,875. Washing Machine. (*Machine à Laver.*)

John St. Onge, North Adams, Mass., U.S., 14th March, 1884; 5 years.

Claim.—1st. In a washing machine, the heads G adapted to be reciprocated from the crank H, in combination with wash-board D, placed in the body A, substantially as set forth. 2nd. The reciprocating heads G provided with the pins h, substantially as and for the purposes set forth. 3rd. The combination, with the reciprocating heads G, of the pendent board F, arranged substantially as and for the purposes set forth. 4th. The washing machine herein shown and described, consisting of the body A, having wash-board D, rod E and double crank shaft H, in combination with the boards F and heads G, attached to the rod E, the heads G being connected to the cranks of the crank-shaft by the connecting rods h, substantially as and for the purposes set forth.

No. 18,876. Nut Lock. (*Arrête-Ecrou.*)

Jonathan H. Ransom, Jr., Boston, Mass., U.S., 14th March, 1884; 5 years.

Claim.—1st. The bolt and nut, either of which is provided with a key seat or groove, in combination with a scored in contra distinction to a threaded engaging device, and a key to force said engaging device into engagement with the threads of the other, substantially as described. 2nd. The bolt and nut, one grooved or provided with a key seat, and the serrated engaging device provided at its under side with a spreading device, combined with the split wedge or key to operate, substantially as described. 3rd. The key g, having the two bevel faces 7, 8 and the bolt and nut, combined with the engaging device, bevelled at its underside in cross section, to be acted upon by the faces 7, 8, of the said wedge or key, substantially as described.

No. 18,777. Milk Cooler and Strainer Combined. (*Garde-Lait et Couloir Combinés.*)

Johile S. Rombough, Osnabrock Centre, Ont., 14th March, 1884; 5 years.

Claim.—1st. A combined strainer and cooler consisting of the rectangular box-shaped vessel shown in the annexed drawings, divided into the chambers A, B and C, by the partitions D and E, and provided with the cooling pipe F, having the funnel a and the opening b, substantially as shown and described. 2nd. A milk cooler and strainer having the gauze or perforated partition D, the inner bottom d and the outlet pipe G, in combination with the cooling pipe F, substantially as shown and described and for the purpose set forth.

No. 18,878. Shifting Rail for Buggy Tops. (*Barre de Déplacement pour Soufflets de Voitures.*)

John Bell, Springfield, Ont., 14th March, 1884; 5 years.

Claim.—1st. The combination of the three wooden sections A, A, A, with the corner irons B, B, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the wooden sections A, A, with the goose-necks D, D, substantially as and for the purpose hereinbefore set forth.

No. 18,879. Machine for Forming Paving Blocks. (*Machine pour faire les Blocs de Pavage.*)

Donald G. Ross, Hatton, Mich., U.S., 14th March, 1884; 5 years.

Claim.—1st. A series of dies or circular cutters stationarily secured in a bed plate, in combination with a reciprocating gate or plunger, substantially as and for the purposes described. 2nd. In a machine for sizing or trimming paving blocks, the combination of the following parts:—A series of dies or ring cutters, a gate or plunger reciprocating in the axis of the ring cutters, and suitable belts for carrying off the finished paving blocks and the debris, all arranged and combined, substantially as and for the purposes described. 3rd. The combination of the frame A, standards B, B, gate C provided with a re-inforced head K, ring cutters I, bed plate H, crank E, pitman D, main drive shaft F and driver G, all combined and operating substantially as described.

No. 18,880. Machine for Screening Ashes, Gravel, &c. (*Machine à Cribler les Cendres, le Gravier, &c.*)

Angus McKenzie, Toronto, Ont., 14th March, 1884; 5 years.

Claim.—In a screen or separator, as described, the combination of the disturber I with the wire screen B, casing A and reverse apron H, as shown and for the purpose specified.

No. 18,881. Manufacture of Ligneous Compound and of Articles Moulded Therefrom in Imitation of Wood. (*Fabrication de Composé Ligneux et d'Objets de Composé Ligneux comme Imitation du Bois.*)

Bruno Harrass, Böhlen, Germany, 14th March, 1884; 5 years.

Claim.—1st. The herein described manufacture of ligneous compounds resembling wood, consisting of from two to six parts of ground wood, from four to twelve parts of saw-dust and four to twelve parts of either blood, albumen, glue, resin or starch paste, to which mixture is then added from one-fourth to two parts of glutinous flour or other similar material such as potato flour, albumen, fibrine, caseine or dextrine, the compound being then dried and, when required for use, mixed with from one and a half to six parts of blood, animal or vegetable fat or wax. 2nd. The herein described method of producing moulded articles of ligneous compound with a backing of pasteboard or papier-mâché, by impregnating pasteboard or papier-mâché with glue, and after coating the one side thereof with glue and laying thereon the ligneous compound in a cold plastic condition, subjecting the same to the pressure of a mould having a cutting edge until the latter has cut into the pasteboard in order to compress the confined compound and produce a sharp outline thereon. 3rd. The manufacture of moulded articles resembling wood from the ligneous compound, consisting of cellulose or woody fibre intermixed with small portions of starch and glutinous flour in an unboiled condition, with or without the combination of a coating of veneer, substantially as set forth.

No. 18,882. Attachment to Windmills. (*Disposition aux Moulins à Vent.*)

George W. Miller, Clarinda, Iowa, U.S., 14th March, 1884; 5 years.

Claim.—1st. The combination of the rotary shaft T connected with the stop mechanism and carrying the ratchet wheel, the pawl to hold the latter, the pitman, the rock shaft having the crank end carrying the pivoted loop that engages the ratchet wheel, the lever connected with the pawl and loop, the tank, the float in the tank and the line connecting the float with the said lever, for the purpose set forth. 2nd. The combination of the pitman, of the wind wheel mechanism, the rock shaft having the crank ends and operated by the pitman, the loop arranged on the end of the rock shaft, the rotary shaft carrying the ratchet wheel and drum, the stop rod having the chain arranged to wind on the drum, the pawl, the lever connected with the pawl and loop, the float and the line connecting the float with the lever, as set forth.

No. 18,883. Furnace. (*Fourneau.*)

Lyman P. French, Boston, Mass., U.S., 14th March, 1884; 5 years.

Claim.—1st. In a locomotive fire-box, a bridge wall or arch extending from the flue sheet at the lower front portion of the fire-box rearwardly and upwardly, and having a passage over its upper edge for the products of combustion, combined with a deflecting wall depending from the crown sheet and set in contact therewith, and inclined forward and downward and approaching the bridge wall, its lower edge being nearest to the surface of the bridge wall, whereby a contracted throat is formed causing the products of combustion to sweep over the upper surface of the said arch, substantially as set forth. 2nd. The combination of the bridge wall or arch extending from the lower front portion of the fire-box rearward and upward, with the deflecting wall inclined forward and downward from the crown sheet in front of the upper end of the said arch, having an in-