

No. 2048. JOSEPH WOOD, Red Bank, N.J., U.S., 12th February, 1873, for 5 years: "A Railway Frog." (Raccordement des rails de chemins de fer.)

The object of this invention is to relieve or prevent the lateral drag of the wheels in passing through the frog and also to give the frog proper stability and elasticity on the road-bed.

*Claim.*—1st. A railway frog having wooden middle pieces D, D, placed between the rails F, F, thereof and secured thereto in the manner described; 2nd. A railway frog with a tongue B, elevated above the side rails F, F; 3rd. The safety bars K, K, in combination with the side rails F, F.

No. 2049. SAMUEL CHURCHMAN, Wilmington, Del., Assignee of Gore Mitchell, Philadelphia, Pa., U.S., 12th February, 1873, for 5 years: "Mill for Grinding Hard Substances." (Moulin à triturer les corps durs.)

Relates to the mechanism for grinding quartz, guano, phosphates and other hard substances in such a manner that they shall first be reduced to a powdered state and then discharged by a blast of air.

*Claim.*—1st. In the combination of the grinding or pounding wheel *a*, adjustable hammers *h*, recesses *n*, fanning flanges *p*, inclosing casing *c*, segmental serrated or corrugated linings *d*, and the adjustable blast director *s*; 2nd. Combination with the pounding or grinding wheel *a*, recesses *n*, and the adjustable hammer *h*; 3rd. The grinding or pounding wheel *a*, constructed with the recesses *n*, and fanning flanges *p*; 4th. The combination of the grinding or pounding wheel *a*, removable segmental serrated or corrugated linings *d*, of the casing *c*, and the securing flanges *p*; 5th. The square or recessed hub or projecting *q*, in combination with the ring *q*, and recessed plates *q*, and forming the skeleton of a grinding or pounding wheel; 6th. The reversible hammers *h*, with their tongues *h*, and the L shaped keys *q*, in combination with the plates *q*, employed to prevent lateral motion of the hammers *h*, and the flanged knees *q*, employed as supports and packing for the hammers *h*; 7th. The combination of the grinding or pounding wheel *a*, reversible hammers *h*, with their keys *q*, fanning flanges *p*, inclosing casing *c*, serrated or corrugated linings *d*, and removable blast director *s*.

No. 2050. ANSELME H. LAROCHELLE, St. Anselme, Que., 12th February, 1873, for 5 years: "Machine for Making Bale Hoops." (Machine à faire les attaches d'emballage.)

The hoops or bands are made of iron perforated at one end and supplied with a hook at the other, the two ends meeting and fastening by compression.

*Claim.*—1er. L'instrument à faire le crochet, planches I, IV, V, c'est-à-dire les deux chassis H, H, B, B, les deux coussinets F, F, K, K, avec leurs rainures et saillies i, i, i, le couteau C, C, le distributeur D, D; 2nd. L'instrument à faire les collets, planches II, VI, c'est-à-dire la manivelle à tordre h, h, la mâchoire f, f, destinée à tenir la broche durant l'opération du tordage; 3me. L'instrument à terminer l'attache, planche III et VI, c'est-à-dire le traîneau b, b, les machines à ressort E, E la détente e, e, servant à faire agir le traîneau b, b, les couteaux d, d, la combinaison avec les roues p, p, la chaîne a, a, et le traîneau b, b, et finalement dans la fabrication des attaches 2, 1, 2, et 1, 3, 3, planches IV.

No. 2051. WILLIAM C. NUNN, Belleville, Ont., 12th February, 1873, for 5 years: "Sewing Machine Tucker, etc." (Lames à plisser, etc., de machine à coudre.)

*Claim.*—In combination with the adjustable gauge *f*, of the adjustable set-plate *n*.

No. 2052. MARTIN P. HAYES, Seaforth, Ont., 12th February, 1873, for 5 years: "Furnace for Heating Liquids in the Process of Evaporation." (Fourneau à chauffer les liquides pour l'évaporation.)

The furnace is of sheet metal having hollow sides and bottom or end, or either, to receive and heat the liquid before being passed to the evaporating pans; also, in combination with a furnace constructed of bricks or other materials, an internal hollow lining of sheet metal to contain the liquid and heat the same previous to its entering the evaporating pans.

*Claim.*—1st. The application to a furnace A, of the metal feed water-tank or heater K, surrounding the sides, end and bottom of the same, and arranged within the furnace walls, for heating the liquid or brine before entering the evaporating pans; 2nd. A furnace A, constructed of water tight hollow walls of sheet metal forming the combustion chamber to receive and heat the liquid while passing to the evaporating pans.

No. 2053. CHARLES H. KERMOTT, Barrie, Ont., 12th February, 1873, for 5 years: "Composition of Matter for Dyspepsia." (Composition médicamenteuse pour la dyspepsie.)

*Claim.*—A compound of cubebs, gentian and pepsine, mixed in the proportions and for the purpose set forth.

No. 2054. JOSEPH WILLIAMS, Hemmingford, Que., 12th February, 1873, for 10 years: "An Excavating Machine." (Machine à excavation.)

*Claim.*—1st. In excavating machines, the endless apron, composed of a series of close jointed horizontal leaves E, hinged together by pintles F, and provided with end lapping pieces J, K, and scoops D; 2nd. The polygon drum G, for operating the apron by the shaft B; 3rd. The arrangement and combination with the said apron and frame A, of an endless track H, and wheels G, journalled on the pintles F.

No. 2055. GEORGE N. GEDDES, Glen Morris, Ont., 12th February, 1873, for 5 years: "A Railway Frog (Rail Junction) Protector." (Un protecteur de raccordement de rails de chemin de fer.)

*Claim.*—The steel spring C, bolted to the lower flange of the rails *a, a*, in combination with open and close railway frogs as shown in figs. 1, 2, 3 and 4.

No. 2056. THOMAS W. BAXTER, Chicago, U.S., 12th February, 1873, for 5 years: "A Stone Dressing Machine." (Machine à tailler la pierre.)

*Claim.*—1st. The method of embedding and holding the diamond boast or carbon point or tool, in the metallic holder; 2nd. The combination of the diamond boast or equivalent cutter, the holder and the stock so that the diamond being mounted or bedded centrally in the end of a cylindrical holder, shall be capable of being turned about its axis without otherwise changing its position for the purpose of bringing either side or face of the point of the diamond, in the proper position to act as the cutting point, face or edge; 3rd. In combination with the holder in one end of which the diamond is embedded and held and the plate of the stock in which the holder is inserted the nuts *o* and *p*, by means of which the holder may be adjusted longitudinally to vary the depth to which the diamond is to cut, with relation to other diamonds in the same stock; 4th. In combination with the holder in which the diamond or equivalent cutter is embedded and held, and the stock in which two or more such holders are inserted, the eccentric *l*, whereby the lateral position of the diamond with relation to other diamonds in the same stock may be adjusted without otherwise changing the position of the cutting point; 5th. The arrangement of two or more diamonds or carbon points, embedded and held in holders and furnished with means of adjustment as described or their equivalents, in a head or stock, so that the cut of one diamond shall adjoin or overlap the cut of the next adjacent diamond; whereby a cut of any desired width or profile may be produced; 6th. In combination with a diamond or diamonds embedded and held in holders which are mounted in a rotating stock and provided with the adjustments described, the slide and guides and the devices for imparting motion to the said slides or their equivalents, whereby the stone and the diamond cutters are brought in contact, so as to reduce the stone to the shape and size required; 7th. The clamp or chuck consisting of the plate H, heat-blocks I and J, wedges *q*, *h*, *i*, and set screws *n*, *o*, *p*, or their equivalents, the whole being constructed and arranged as set forth; 8th. A machine for dressing or working stone, the combination with a rotating stock armed with diamonds, of the chuck or clamp, for holding and adjusting the stone; 9th. A machine for dressing stone, the combination of a table or carriage D, for holding or carrying the stone, and a rotating stock armed with diamonds, so that the feed motion by which the cutters are brought to operate on the stone is derived from the spindle on which the said stock is mounted.

No. 2057. JAMES R. SPENCER, Richmond, Ont., 12th February, 1873, for 5 years: "A Counterpoise Farm Gate." (Une barrière à contre-poids.)

*Claim.*—The counterpoise C, in the form of a box, and being loaded at the bottom; the pivot E, and socket F, upon which the gate turns; and also, the guards H, H, which pass on either side of pivot-post D, and are attached to the bottom of gate A, and counterpoise C.

No. 2058. EDWARD B. JACKSON, Orillia, Ont., 12th February, 1873, for 5 years: "A Washing Board." (Une planche à laver.)

*Claim.*—The application of the rubber face or sheet D, to a corrugated washing-board A, held thereon by the combination of the wires E, and copper-wire threads F.