No. 4426. EDWIN R. POWELL, Winooski, and FREDERICK C. KENNEDY, Burlington, Vt., U. S., 24th February, 1875, for 5 years: "Wheel-harrow." (Herse à avant-train.)

Claim.—1st. The combination with the sulky frame A, B, C, D, and harrow proper G, of the low truck E, F, adjustable clevises K, K, (in connection with the loose collars J, J, having perforated legs j, j,) draught rods H, H, (with adjustable links on one end,) and chains I, M, constructed and arranged as described; 2nd. The tooth g^2, composed of the cast or malleable head 1, steel mould board 2, and rebated and reinforced joint and shoulder 4, constructed and arranged as described; 3rd. The axle tree-A, wheels B, B, tongue C, c, seat D, pulley bracket and pulleys P, N, O, and hand lever L, l, the whole constituting an improved sulkey-frame, constructed, combined and arranged in the manner described; 4th. The peculiar form of the harrow tooth g_{11}, and the adjustable clevises K, K, constructed as set forth.

No. 4427. WILLIAM J. GARTON and WILLIAM WARD, Toronto, Ont., 24th February, 1875, for 5 years: "Wax Thread Heating Machine." (Machine à chauffer le fil ciré.)

Claim.—1st. The steam generating boiler A, in combination with the water supply tanks G, and H, and operated as set forth; 2nd. The steam drum L, with guides c, f, and spring g, as shown; 3rd. The guide p, in cistern B, in combination with the rubber cleaners N, as described; 4th. The vertical heater M, as described.

No. 4428. MOSES HUTCHINSON, Norfolk, N. Y., U. S., 24th February, 1875, (Extension of Patent No. 4298,) for 5 years: "Heating Drum." (Poële-sourd.)

Claim.—A heating drum in which the upper and lower sections or heads are provided with horizontal flues connected or united together by vertical pipes, the combination with such parts of the partitions arranged in the upper and lower heads for interrupting the passage of the gases on their way to the exit pipe, in the upper section, and causing them to circulate before escaping through the lower and upper flues as described.

No. 4429. ALEXANDER RODGERS, Muskegon, Mich., U. S., 24th February, 1875, for 5 years: "Improvements in Gang Saw-mills." (Perfectionnements aux moulins à scies multiples.)

Claim.—1st. The girt G, provided with a noddle pin p, forged from the same piece of metal as the girt, and forming a component part thereof; 2nd. The rock shafts H, provided with the slotted arm a, and arm b, with its wrist pin b_1, sleeve e, and jam nut g; 3rd. The girt constructed as set forth, in combination with the rock shafts H, pin n, and pitman F; 4th. The girts G and M, the latter being provided with the brackets N, carrying the blocks K, in combination with the shoulder pieces O, and P, and hollow columns L; 5th. The method of imparting an oscillatory movement to a saw frame by means of independent rock shafts acting upon the slide blocks, as described; 6th. The gauges T, or their equivalents, applied to the styles of a saw frame, as set forth.

No. 4430. ENOCH H. AYDON, Wantsworth, and EDWARD FIELD, London, Eng., 26th February, 1875, for 5 years: "Improvements in the Smelting of iron and other Ores, &c." (Perfectionnements dans le fondage des minerais de fer et autres, &c.)

Claim.—The described process of blowing, smelting furnaces, and reducing, carbonizing, or decarbonizing the iron or other ore, and removing deleterious substances therefrom, as described; 2nd. Constructing smelting furnaces in two (or more parts,) a, b, with contractions f, in such manner that the metal may be melted or fluxed in the upper part a, of the chamber, from whence it descends into the lower chamber (or chambers) b, to undergo such further treatment as may be requisite, as described; 3rd. The use or employment of superheated steam in combination with waste gases, heated air and other gases, petroleum and other ingredients for the purpose of blowing blast and other furnaces, and thereby enabling blast engines to be dispensed with, as described; 4th. The construction of injecting or feeding apparatus with flattened or elliptical orifice a_1, or adjustable outlets through which the steam issues in its passage towards the stream of liquid fuel to be projected into the furnace, as described; 5th. The use or employment of injecting or feeding apparatus constructed and placed, as shown; 6th. The construction of injecting or feeding apparatus with an annular space c, whereby the liquid fuel on its passage to the exit nozzle a_1, is protected from carbonization; 7th. The use or employment of a jet or jets of combined steam and liquid fuel according to the specification of Wise, Field & Aydon's, British Patent, No. 2661, dated 16th October, 1865, in conjunction with a jet or jets composed of superheated or other steam mixed or intermingled with air or other gases and disintegrated fuel or other material, in such manner that the jet or jets of combined steam and liquid fuel is or are met and projected into the furnace or combustion chamber by the jet or jets composed of superheated or other steam, mixed or intermingled with air or other gases, and disintegrated fuel or other materials, as described; 8th. The use or employment in combination with apparatus for injecting liquid fuels and other ingredients into furnaces of inclined walls, bridges, or boffles d, as shown and described, against which such liquid fuels and other ingredients are projected for decomposition and combination, as described; 9th. Constructing pipes of iron lined or coated with fire clay, plumbago mixture or composition, or of iron coated internally with Ransom's Patent Selicia Composition, as and for the purposes described.

No. 4431. WILLIAM JOHNSTONE and WILLIAM W. ROBERTSON, Montreal, Que., 26th February, 1875, for 5 years: "Plane Iron Adjustment." (Ajustage des fers de rabots.)

Claim.—1st. The plane A, having bars B, B, in combination with screw D, nut E, and plane iron C, having slits F, and F_1, as described; 2nd. In combination with the plane A, and plane iron C, the cam G, having handle i, projection k, and pin h, as described; 3rd. In combination with the plane body A, the carrying piece H, screw D, nut E, and plane iron C, having slits F, and F_1, as described.

No. 4432. HENRY M. CONVERSE and GEORGE S. CODD, Waterloo, Que., 26th February, 1875, for 5 years: "Apparatus for Blinds, Scenes, &c." (Ajustage des jalousies, décorations, &c.)

Claim.—1st. The combination of the blind or scene B, roller C, sheaves D, weights E, and cords f, as described; 2nd. The combination of cords g, and g_1, roller C, bearings h, and guide or guides a; 3rd. The combination of cords g, and g_1, with catch G, having guide b, holes c, and c_1, bar d, lever e, pivot i, guide j, and tassel E_1, as described.

No. 4433. JEAN B. TISON, (cessionnaire de P. E. Jay), Montreal, Que., 26 février, 1875, pour 5 ans: "Machine pour fermer les croisées." (Window Fastening Machine.)

Résumé.—1o. La combinaison des broches b, b, avec le disque c, par le moyen des bielles d, d, tel que décrit; 2o. La combinaison d, un cliquet g, au moyen du ressort i, et de la clef k, tel que décrit.

Claim.—The combination of the pins b, b, with the disc c, by means of the connecting rods d, d, as described; 2nd. The combination of a catch g, working by means of the spring i, and of the key k, as described.

No. 4434. PHILIPPE BEAUDRY, and GILBERT A. CHOQUETTE, Ottawa, Ont., 27th February, 1875, for 5 years: "Improvements on Motors." (Perfectionnements aux moteurs.)

Claim.—1st The combination of the T-shaped lever L, hung on the shaft D, with the trestles B_1, B, supported by the frame A; 2nd. The combination of the walking beam G, hung on the shaft D, the pitman H, H, with the T-shaped-lever L; 3rd. The combination of the fly wheel O, and pulley P, hung on the axle K, set in movement by the cranks or crank wheels I, I, connected to the pitman H, H, with the walking beam G; 4th. The combination of the rod E, and the arm F, with the T-shaped-lever L; 5th. The combination of the rod Q, and weight R, with the walking beam G; 6th. The combination of weights with the T-shaped-lever L, said weights being hung at the extremities of its cross-piece and at the foot of its pry g; 7th. The combination of water to be used as weight with a T-shaped-lever L, and fitting the hollow of its cross-piece, as set forth.

No. 4435. JOHN DEWE, Ottawa, Ont., 27th February, 1875, for 5 years: "Improvements on Mail or other Bags." (Perfectionnements aux sacs à lettres et autres.)

Claim.—1st. The combination of the string and metal bar c, and rings d and f, as set forth; 2nd. The reversible wood and leather label, and its combination with the string b, metal bar c, and rings d and f, as set forth.

No. 4436. HENRY J. YOUNG, LANSDOWN, Ont., 27th February, 1875, for 5 years: "Hay-Loader." (Elévateur à foin.)

Claim.—1st. The hinged tail-piece C, in combination with the frame A, and apron F; 2nd. The rake-head M, and arrangement of rake teeth curving under the endless apron in combination with the frame A, and tail-piece C; 3rd. The lever O, for elevating the tail-piece C; 4th. The toothed roller K, for clearing and delivering the hay from the apron E; 5th. The arrangement and combination of the pulleys S, T, U, V, for operating the apron and pulley's W, for driving the rollers K; 6th. The draft frame P, constructed and applied to the frame A, as set forth; 7th. Providing the frame P, with extension legs R, holding the machine in coupling position, as set forth; 8th. The bifurcated draft coupling bar S, applied and used in the manner set forth.