

No. 5216. GEORGE W. COPELAND, Malden, Mass., U. S. (Assignee of F. D. Ballou), 5th October, 1875, for 5 years: "Boot and Shoe Wax Thread Sewing Mechanism." (*Machine à coudre les chaussures au fil ciré.*)

Claim.—The shaping of the table A, which supports the work at the place where the feeding and sewing mechanism operates as a mere elevated projecting exterior and interior work support B, not continued beyond the exterior wall a, of the throat in which the stitching and feeding mechanism operates sufficiently to impede the turning of a shoe horizontally, in stitching round the outside of the upper, an elevated work-support B, located at or near the edge of the work plate A, and forming a thin wall a, to the needle-throat higher than the depth of the channel in the sole with or without the shield a² and of such size, in plan, that the work of the machine it is lap to the depth of the channel by the sides of the channel, the presser foot G, when constructed and arranged, and used as a guard or guards and gauge, the combination of the presser-foot G, with the elevated projecting work-support B, when arranged to guard and guide the work as the sewing and feeding proceeds, the combination of a sewing and feeding mechanism working in a throat surrounded by an elevated projecting work-support B, a short and narrow exterior work-support forming the exterior wall a² of the needle-throat extended beyond the throat merely sufficiently to connect the exterior work-support with the fixed parts of the machine, and so shaped as not to interfere with the turning of the shoe horizontally or inclining the same in stitching around and through the outer margin of the sole and an interior work support, forming the interior wall of the elevated throat the arrangement, combination and location of the presser-bar H, and foot G,awl E, and awl bar needle F, and needle-ber, and feeding device in connection with an elevated projecting-throat B, and work-support A, in relation to each other and in relation to the work to permit the sewing around and through the outer margin of the sole, and the consequent turning and inclining of the shoe freely and without interference with the sewing-mechanism or frame work of the machine

No. 5247. ROBERT ALDRED, Glencoe, Ont., 5th October, 1875, for 5 years: "Rail-Road Track Lifting Machine." (*Machine à lever les voies de railroutes.*)

Claim.—A frame constructed of wrought iron in combination with two screws B, B, supported by two-pivoted-nuts C, C.

No. 5248. SAMUEL R. SMITH, and JOSEPH SIMPSON, Manchester, Eng., 5th October, 1875, for 5 years. "Improvements on Production and Manufacture of Iron, Steel, and other Metals, and on the Apparatus and Compounds employed therein." (*Perfectionnements dans la production et la fabrication du fer, de l'acier et autres métaux, et dans les appareils et les composés pour cet objet.*)

Claim.—1st. The production purification and refining of iron, steel, and other metals. 2nd. The process called our Great Force process; 3rd. The apparatus to carry out our Great Force process; 4th. The process called our Liquid process; 5th. The apparatus to carry out our Liquid process; 6th. The process called our Retort Generating process; 7th. The apparatus to carry out our retort generating process; 8th. The refining of iron and other metals, and the manufacture of steel in our trunnion ladle; 9th. The apparatus called our Trunnion Ladle; 10th. The refining of iron and other metals and the manufacture of steel in our metal receiver; 11th. The apparatus called our metal receiver; 12th. The pipe or pipes descending into the metal; 13th. The smelting and melting of iron and other ores by means of our vacuum or exhaust furnace; 14th. The furnace called our vacuum or exhaust furnace; 15th. The smelting and melting of iron and other ores, and the purification thereof as well as the manufacture of steel by means of our vacuum or exhaust furnace when combined with the chamber and descending pipes; 16th. The furnace called our vacuum or exhaust furnace when used not only for the smelting and melting of iron and other ores, but also for the purification thereof as well as for the manufacture of steel; 17th. The combination of our great force process either with our trunnion-ladle or our metal receiver or our vacuum or exhaust-furnace; 18th. The combination of our liquid process (with or without the retort-oven used as a heater) either with our trunnion-ladle or our metal-receiver or our vacuum or exhaust-furnace; 19th. The combination of our retort generating-process either with our trunnion-ladle or our metal-receiver or our vacuum or exhaust-furnace; 20th. The apparatus called our heating annealing and balling retort-oven furnace; 21st. The apparatus called our retort puddling-furnace; 22nd. The refractory-materials decomposed; 23rd. The several modes of using gaseous-compounds as purifier; 24th. The several modes of using gaseous compounds for heating-purposes.

No. 5249. FRANÇOIS X. BELLEFEUILLE et ACHILLE BELLEFEUILLE Trois-Rivières, Qué., 5th Octobre 1875, pour 5 ans: "Grain Thrashing Machine." (*Machine à battre les grains.*)

Résumé. 1. La charpente A; 2o. Le lit E; 3o. La combinaison avec la charpente A la toile G; 4o. La combinaison avec le porte-paille L, de la toile G; 5o. Le soufflet K; 6o. La combinaison de la charpente A, tambour B, lit E, toile G, porte-paille L, soufflet K, et porte-passe M.

Claim.—1st. The frame work A; 2nd. The bed E; 3rd. The combination of the framework A, with the sheet G; 4th. The combination with the straw carrier L, G, the sheet G; 5th. The blower K; 6th. The combination of the frame work A, drum B, bed E, sheet G, straw carrier L, blower K, sieve frame M.

No. 5250. LORENZO DILL, Greenville, Ohio, U. S., 5th October, 1875, for 5 years: "Car Coupling." (*Atelage de wagons.*)

Claim.—The combination of the coupling bar D, the pivoted and forked swing-bar E, and the draw-head A.

No. 5251. ROBERT D. ROBBINS, Port Perry, Ont., 5th October, 1875, for 5 years: "Improvements in Mowing and Reaping Machines." (*Perfectionnements dans les faucheuses-moissonneuses.*)

Claim.—1st. In constructing a reaping and mowing machine in which the cutter-bar O, is placed in the centre-line of the axle C; 2nd. The shaft G, and spur mitre pinion I, in combination with the spur mitre pinion L, and shaft L; 3rd. The crank-wheel M, with wrist-pin J, in combination with the slotted-heel R, and knife Q; 4th. The swing-bar J, with branched ends hinged on to the over hanging-box H, and pin d, in combination with the shaft L, and cutter bar O, with all the gearing connected thereto; 5th. The shoe P, hinged on the swing-box N, and bracket T, in combination with the keeper-plate p, and cutter bar O; 6th. The tongue X, hinged on the axle C, and passing through a vertical slot in the frame A, so as to allow the machine to work independently of the tongue, and thus permit the automatic raising and depressing of the cutter-bar O.

No. 5252. EDWARD D. HARGREAVES, Sarnia, Ont., 5th October, 1875, for 5 years: "Railway Car Ventilator." (*Ventilateur de voiture de railroutes.*)

Claim.—The combination and arrangement of belting or gearing B, axle A, pipes E, openings F, exhaust fan D, with the railway car.

No. 5253. THOMAS HARVEY, and ALEXANDER HARVEY, London, Ont., 5th October, 1875, for 5 years: "Dumping Wagon." (*Wagon à bascule.*)

Claim.—1st. The wagon-box G, C, with movable bottom pieces A, A, pivoted at ends B, B; 2nd. In combination with the above the bars F, H, pin J, chain K, handle L, brace D, and tie-rod E.

No. 5254. PARLEY J. AYRES, Lindsay, Ont., 5th October, 1875, for 5 years: "Portable Buggy Top." (*Soufflet de voiture mobile.*)

Claim.—The arrangement of the tapered-socket B, in combination with the tapered pin, the connection of the anvil rib by the socket E, and elastic band and brace F.

No. 5255. HUGH SELLS, Vienna, Ont., 5th October, 1875, for 5 years: "Cider Mill." (*Moulin à cidre.*)

Claim.—1st. The combination of the pinion and lever K, K₁, the standards L, L, plate d, and wedge e, with the press-bar l, provided with the rack b, and its guide j, on the cross-piece A₁, 2nd. The revolving face-plate D, of iron with the wooden-disc E attached and with metal studs, or teeth as a grinder, in combination with the hopper, so arranged as to force the apples against the revolving wooden-disc E.

No. 5256. SAMUEL L. PORTER, and DUANE PECK, Rochelle, Ill., U. S., 5th October, 1875, for 15 years: "Railway Rail Support." (*Coussinet de railroute.*)

Claim.—1st. A metallic railway tie constructed of symmetrically arranged bed-pieces or supports connected by diagonal braces; 2nd. The bed plate or rail support A, provided with lugs or ledges D, at both sides of the rail in combination with locking plate E, key F, set screw f, and the rails C; 3rd. The bed plate having slotted bolt orifices in combination with the rail and fastening screw bolts having projecting disc heads and nuts to be tightly applied to the rail base; 4th. The bed plate provided with bolt orifices, having a square nut orifice and diagonal extension slot.

No. 5257. NIKOLAS YAGN, St. Petersburg, Russia, 5th October, 1875, for 5 years: "Improvements on Feeding Apparatus of Steam Boilers." (*Perfectionnements aux appareils d'alimentation des chaudières à vapeur.*)

Claim.—1st. The self-acting apparatus for feeding steam boiler with water consisting of two reservoirs H, and K₁, placed one above the other and separated one from the other by an intervening non-conductor