

Claim.—1st. A polarized electro-magnet for releasing in a step by step motion the type wheel impelled by mechanical power, by passing currents alternating in their polarity rapidly through it, in combination with an electro-magnet controlling the printing mechanism and placed in the same circuit with the polarized electro-magnet and excited by the same currents, and arranged to attract and hold its armature until a sufficient interval between the pulsations occurs to release the same and allow the press mechanism to operate and effect an impression; 2nd The combination with the printing mechanism and the type wheel mechanism of the one main spring actuating both; 3rd. The arrangements of springs X, X¹, of brass or other non-magnetic material of suitable strength or thickness on each side of the polarized armature X; 4th. The sliding unison bar B, having serrated edges, in combination with the latch a, pivoted spring lever f, and spring e, all arranged and operating as described.

No. 4025. EDMUND C. TOZER, New Castle, N. B., 7th November, 1874, for 5 years: "Freezing Apparatus." (Appareil congélateur.)

Claim.—1st. The arrangement and combination with the preserving chamber of trough E, the vertical tubes F, and horizontal tubes G; 2nd. The cylinder I, arranged centrally within the freezing chambers; 3rd. The pipes H, arranged horizontally under the coiling, in combination with the trough E; 4th. The water pipes J, K, arranged between the inner and outer floors, and receiving waste water from the cylinder L, and tube G; 5th. The combination and arrangement of the troughs E, pipes F, tubes G, central cylinder I, and pipes J, K, with a preserving chamber having inner and outer walls, ceiling and floor as set forth.

No. 4026. LOUIS A. DESSAULLES and WILLIAM MURPHY, Montreal, Que., 7th November, 1874, for 5 years: "Boot and Shoe Eyelets." (Œillet de chaussures.)

Réclame.—1o. La combinaison des œilllets a, F, H, avec les sections des tubes courbes B, B; 2o. La combinaison de l'œillet tubulaire et courbe B, avec la languette d, et les griffes f, e; 3o. La combinaison de l'œillet à roue fixe J, avec les gardes k, l, et griffes m, n; 4o. La combinaison de l'œillet à roue mobile K, avec la crampe plate o; 5o. La combinaison de la crampe plate L, avec la marge d'une chaussure pour former un œillet; 6o. La combinaison des œilllets B, Fig. 2, B, Fig. 4, B, Fig. 6, B, Fig. 8, J, Fig. 10, K, Fig. 12, L, Fig. 14, construit tel que décrit, avec les lacets D, pour lacer les chaussures ainsi que E, Fig. 16.

Claim.—1st. The combination of the eyelets F, H, with the sections of the bent tubes B, B; 2nd. The combination of the tubular and bent eyelet B, with the tongue d, and the claws f, e; 3rd. The combination of the eyelet on the fixed wheel J, with the guards k, l, and claws m, n; 4th. The combination of the eyelet on the movable wheel K, with the flat cramp L; 5th. The combination of the flat cramp L, with the edge of a shoe to form an eyelet; 6th. The combination of the eyelet B, Fig. 2, B, Fig. 4, B, Fig. 6, B, Fig. 8, J, Fig. 10, K, Fig. 12, L, Fig. 14, constructed as described with the lace D, to lace the shoe as at E, Fig. 16.

No. 4027. WILLIAM SHAVER, Kemptville, Ont., 7th November, 1874, for 5 years: "Improvements on Sewing Machine." (Perfectionnements aux machines à coudres.)

Claim.—1st. The whorl A, soldered to the roller-bolt B; 2nd. The combination of the rubber balls H, H¹, with the whorl A; 3rd. The combination of the whorl A, soldered to the roller bolt B with the pintle E, rod F, and slotted guide G, as set forth.

No. 4028. ALEXANDER D. MCKENZIE and OWEN G. HUGHES, Toronto, Ont., 7th November, 1874, for 5 years: "Dump Waggon." (Wagon-tombreau.)

Claim.—1st. The application to waggons, trucks, and carts for carrying earth work or other material, of a hinged bottom B; 2nd. The strap C, attached to the wagon bottom B, with cylindrical ends C, in combination with the pivoted spring latches D; 3rd. The spring latches D, bar D¹, in combination with and connected to the pivoted lever F; 4th. The pivoted lever H, standard H¹, in combination with the connecting ropes I, and I¹, friction rollers, and wagon-bottom B, arranged as described.

No. 4029. GEORGE D. THORNHILL, Xenia, Ohio, U. S., (Assignee of W. Coulter), 7th November, 1874, for 5 years: "Car-coupling." (Attelage de wagon.)

Claim.—1st. The combination of the pivoted treadle D, provided with weighted arms h, with the spring coupling pin C, and bumper head A, constructed to operate as specified; 2nd. The link support E, to slide directly back, and be shielded by the bumper head A, and to be drawn simply forward to support the coupling link in combination with the bumper head A, and coupling link B, as specified.

No. 4030. JAMES BRADLEY, Akron, Ohio, U. S., 7th November, 1874, for 5 years: "Spark-arrester." (Arrête-flammèches.)

Claim.—The combination of the inverted cone E, supported above the tapering pipe D, and the lifting pipe B, located at the base of the smoke stack C, when the surfaces of all are provided with alternately arranged studs a, in the manner specified.

No. 4031. JOHN GREGORY, Wingham, Ont., 7th November, 1874, for 5 years: "Middlings Purifier." (Épurateur des gruaux.)

Claim.—1st. The revolving reel B, dipping at one end from the horizontal, supported on the friction rollers D, and covered with one or more grades of bolting cloth, and having the circular toothed rack B¹ attached in combination with the revolving toothed wheels C; 2nd. The revolving wheel B, with inwardly projecting ribs B², in combination with the fixed angle boards C, and spout H, and suction fan I; 3rd. The revolving fluted rollers G¹, in combination with the angle boards G; 4th. The air spout H, consisting of the peculiarly constructed leaders H¹, and H²; 5th. The conveyor H³, in combination with the leader H¹; 6th. The air tight ca-o B³, attached to the frame A, and enclosing the upper part of the reel B; 7th. The construction and arrangement of the frame A, with driving attachments, revolving reel B, and attachment suction fan I, and air chamber H⁴, purified middlings spout J, arranged as described.

No. 4032. JOHN S. ROBINSON, Canandaigua, N. Y., U. S., 7th November, 1874, for 5 years: "Process for Chilling, Carbonizing and Toughening Plough Mould Board and other Castings." (Procédé pour tremper, carboniser et durcir la fonte des charrues et autre.)

Claim.—1st. The process for hardening and toughening the surfaces of cast iron mould boards for ploughs; 2nd. The employment of charcoal and the application of the same, to heated surfaces of cast iron when the latter is in such a condition as to produce combustion of said charcoal in the manner specified.

No. 4033. FRANCIS SNOWBALL and JOHN C. NICHOL, Montreal, Que., 7th November, 1874, for 5 years: "Artificial Marble and Stone." (Marbre et pierre factices.)

Claim.—1st. A composition of artificial marble consisting of Keen's cement, French chalk, sulphate of potassium, chloride of sodium and alum, with or without any colouring ingredient or ingredients mixed in the proportions described; 2nd. A composition for artificial stone consisting of any suitable cement, French chalk, sulphate of potassium, chloride of sodium and alum, with or without colouring matter, as described.

No. 4034. JOHN B. ARMSTRONG, Guelph, Ont., 7th November, 1874, for 5 years: "Steel Tempering Furnace." (Fourneau à recuire l'acier.)

Claim.—1st. The process of tempering steel or other metals the said process consisting in heating steel within a close retort or oven to a specified degree previous to immersion in water or other liquids for the purpose of hardening, and in the letting down or tempering of steel to a specified degree within a close retort or oven, and lastly in the application of the pyrometer to retorts, ovens, or furnaces, in which steel is placed to heat in tempering, for the purpose of gauging the heat within the same; 2nd. The furnace A, with ash pit B, beneath close retort D, with alternately arranged flues E, arranged and operating as described; 3rd. The blast pipe F, consisting of the inner pipe F¹, perforated with the spirally arranged holes f, in combination with the outer pipe F², perforated with the holes f, arranged and operating as described; 4th. The cut-off dampers G, G, placed at the exit ends of the flues E, in combination with the blast pipe F, arranged and operating as described; 5th. The doors H, consisting of the frames H¹, constructed to leave a margin of brickwork between the inner edge of the furnace and retort openings and the rim door H², fitted in with fire brick h, arranged and operating as described.

No. 4035. JOHN ABSTERDAM, New York, U. S., 7th November, 1874, for 5 years: "Process for the Manufacture of Illuminating Gas." (Procédé de fabrication du gaz d'éclairage.)

Claim.—1st. The process of producing illuminating gas by injecting a current of steam under pressure into the interior of a closed vessel or still containing rosin, petroleum or other hydrocarbon capable of liquefaction, and after having thus carbonized said steam, decomposing the same in retorts heated red hot as set forth, in the process of manufacturing illuminating gas by passing hydro-carbon fluids through retorts charged with metallic ore as described.