

ments on Heater-Furnaces." (Perfectionnements aux calorifères.)

*Claim.*—1st The provision of a curved blow-plate G, applied to the plate A; 2nd. The provision of a cover B, to the fire pot A; 3rd. The provision of a damper C, arranged to cut off the inflow of air through the passages D; 4th. The provision of plates E, combined with a tortuous arrangement of smoke flues I, forming air passages D; 5th. The provision of the tube F, to the fire pot for conveying cold air.

No. 5304. WILLIAM GOODWIN, Liverpool, Eng., 30th October, 1875, for 5 years: "Machine for facilitating the Transfer of Grain and Bulk Substances." (Machine pour faciliter le transbordement du grain et des effets en grenier.)

*Claim.*—1st. The combination of the elevator a, and movable platform l, m; 2nd. The construction and arrangement of the parts as illustrated and described; 3rd. The combination of the elevator and platform when each is made portable and independent of the other; 4th. The employment in combination with apparatus constructed as described of automatic weighing apparatus.

No. 5305. JAMES J. CATLING, London, Ont., 30th October, 1875, for 5 years: "Weather-Strip." (Bour-relet de porte.)

*Claim.*—The strips A, B, moving parallel to one another by means of the guides C, C', and the coil spring E, when attached to the bottom of a door.

No. 5306. THOMAS R. VENNERS and RICHARD ROWLEY, Cumberland, Md., U. S., 30th October, 1875, for 5 years: "Improvements on Machines for Rolling Tapered Bars." (Perfectionnements aux machines à laminier les barres effilées.)

*Claim.*—The combination of the sliding journal carriages d, that support the upper roll C, gibs f, pins E, and eccentrics E', revolving in yokes or straps G.

No. 5307. ROBERT WINDER, Bolton, Eng., 30th October, 1875, for 5 years: "Type Composer." (Composteur.)

*Claim.*—Under the first head: I. employing electro-magnets to control the motion of type ejectors; II. the parts 2, and 4. Under the second head: the construction, arrangement and combination of parts. Under the third head: I. arresting the motion of the receiving belt; II. the construction and arrangement of parts 19 and 20. Under the fourth: I. the construction, arrangement and combination of parts; II. the construction, arrangement and combination of the parts under Figs. 4, and 5. Under the fifth head: the construction, arrangement and combination of the parts 21, 23, 24 and 29; under the sixth head: the arrangement of the parts f, g, h, and i, as described under Fig. 6 and 7. Under the seventh head: the construction, arrangement and combination of the parts, whereby several types can be simultaneously ejected from a reservoir in proper order for words or sentences. Under the eighth: the arrangement and combination of parts as illustrated under Fig. 10.

No. 5308. DE WITT C. TAYLOR and ROBERT J. KIMBALL, Brooklyn, N. Y., U. S., 30th October, 1875, for 5 years: "Water-Meter." (Hydromètre.)

*Claim.*—1st. The valve J, fitted into the inlet pipe to be affected by the entire stream of water, and to regulate the sizes of two openings a, d, one of said openings allowing water to enter the registering part of the meter while through the other opening water passes through or past the meter without affecting the registering mechanism; 2nd. The combination of regulator f, with the inlet pipe E, which has an opening a, into the meter and with the valve J; 3rd. The combination of the regulator h, with the valve J, having the opening d, and with the inlet pipe E, of a water meter; 4th. In combination with a water meter containing the diaphragm G, the curtain or guard H; 5th. The tubular vertically movable valve J, constructed with the opening d, and combined with the inlet pipe E, which has the opening a.

No. 5309. JOSEPH W. BRANCH, Saint-Louis, Mo., U. S., 30th October, 1875, for 5 years: "Method of Inserting, Fitting and Securing Diamonds in Metallic Holders for Working in Stone." (Manière d'enfoncer, ajuster et assujettir les diamants dans des manches métalliques pour travailler la pierre.)

*Claim.*—1st. The process of inserting, fitting and securing diamonds into metallic holders by softening the holder or holders with heat and then pressing the diamond into the metal which afterwards in cooling contracts upon the diamond; 2nd. The described process of enveloping diamonds in heated metal and subsequently by any suitable means, such as grinding, removing the surplus metal and exposing the cutting point of the diamond; 3rd. A metallic diamond holder or tool having the diamond imbedded or inserted while the metal is softened by heat.

No. 5310. GEORGE D. BELCHER and JAMES A. STACY, Springfield, and GEORGE K. GRIFFIN and ALEXANDER McEACHARN, Holyoke, Mass., U. S., 30th October, 1875, for 15 years: "Apparatus for detaching Small Boats." (Appareil à démarquer les embarcations.)

*Claim.*—1st. The combination of levers g, g, with connection s, plunger v, and crank d, with suitable operating handle; 2nd. In combination with jaws g, g, the plunger v, operating to clear the tackle from the open levers.

No. 5311. GEORGE B. DIXWELL, Boston, Mass., U. S., 30th October, 1875, for 5 years: "Improvements on Steam Engines." (Perfectionnements aux machines à vapeur.)

*Claim.*—In combination with a steam engine cylinder A, the hot air jacket E, and air heating furnace C, connected therewith in combination with the steam engine cylinder A, hot air jacket E, and the furnace C, for heating the cylinder; a thermometer D, and the electrical alarm apparatus A', K, with their battery F, wires A', B', C', H, cup of mercury G, spring S, applied to such thermometer to indicate therewith the extremes of temperature to be maintained in the cylinder to prevent the formation of mist therein.

No. 5312. JOHN C. SPENCER and EDMUND ARCHAMBAULT, Montreal, Que., 30th October, 1875, for 5 years: "Stench Trap." (Trap d'égoût.)

*Claim.*—In the construction of a sewer-chimney the arrangement of a plate P, and outlet L, when taken in combination with belt B, rod R, grate G, and stone S.

No. 5313. ADAM OOT, Oswego, N. Y., U. S., 30th October, 1875, for 5 years: "Improvements in Churns." (Perfectionnements aux barattes.)

*Claim.*—1st. The combination of the receptacle A, and sliding plates G, with the axles C, D, having throw-cranks arranged, and connected by cross pieces L, with dashers F, attached; 2nd. The combination of the gear wheels H, by which the churn is operated with the axles C, and D, provided with the throw cranks of the cross pieces L, and dashers F.

No. 5314. WILLIAM A. STEVENS, Luccassuna Plains, N. J., U. S., and RICHARD E. CROSS, Montreal, Que., 30th October, 1875, for 5 years: "Furnace for making Wrought Iron direct from the Ore." (Fourneau de fabrication du fer forgé avec du minéral.)

*Claim.*—1st. The combination in a furnace for making iron of the lower arched chamber A, the fire place B, stack D, and the conical ore chamber C, superposed between the stack and the arched chamber, and communicating with the latter by passages c, c; 2nd. The combination with the arched chamber A, fire chamber B, stack D, and conical chamber C, superposed between the stack and arched chamber, and its upper end opening into the stack of the passages c, c, communicating with the arched and superposed chamber, the flues f, forming a continuation of the passages c, and communicating with the stack and the dampers E, g, and g, for closing and opening the flues f, and the open end of the chamber C; 3rd. The combination with the upper and lower chambers A, B, and stack D, of the passages d, d, communicating between the doors H, I, of the upper and lower chambers and with the stack.

No. 5315. THOMAS THORNTON, Saltburn, Eng., 30th October, 1875, for 5 years: "Apparatus for Closing Doors and Gates." (Appareil à fermer les portes et barrières.)

*Claim.*—1st. The novel combination of the two eccentric vertical wheels A, A, with the horizontal wheel D; 2nd. The combination of all the parts.

No. 5316. SAMUEL WALLACE, Seaforth, Ont., (Assignee of J. D. McEachern), 30th October, 1875, for 5 years: "Improvements in Cheese-boxes." (Perfectionnements dans les boîtes à fromages.)

*Claim.*—The two casings A, and B, arranged and forming a cheese box with the ends C, C, in combination with one or more partitions D.

No. 5317. GEORGE P. REEVES, Helena, Montana, U. S., 30th October, 1875, for 5 years: "Improvements on Lacers." (Perfectionnements aux ceillets de chaussures.)

*Claim.*—The shoe fastening A, provided with suitable prongs for securing it to the shoe, and having the central concavity b, the surrounding ridge or projection a, and the hook d, bent to fall within the ends of the curved portion.