

tracting spring and the eccentric connected to said bar, and means for operating the eccentric, substantially as shown and described.

No. 22,707. Grist Mill. (*Moulin à Blé*.)

Miscel Provost, Roxton Falls, Que., 2nd November, 1885, 5 years.

Claim.—1st. In a flour milling apparatus or grist mill, the combination of the concavely dressed stones D, E, cone P and hoppers A and Q, with elevators M, G, conveyor K and separator I, as above described and for the purposes set forth. 2nd. In a flour milling apparatus or grist mill, the combination of the graduated inclined separator I, doors S, F, V, W and conveyor K, with the elevators M, O, choots L, N, little hopper Q and cone P, as above described and for the purposes set forth.

No. 22,708. Steam Boiler. (*Chaudière à Vapeur*.)

Edward S. T. Kennedy, New York, N. Y., U. S., 2nd November, 1885, 5 years.

Claim. 1st. The combination, with a boiler, constructed substantially as herein specified, with water and steam tubes radiating from an upright central cylinder, of a water jacket or shell, as D, set about the boiler and connected therewith by water and steam tubes, as S, S', substantially as shown and described. 2nd. The combination, with a boiler, constructed with water and steam tubes, radiating from an upright central cylinder, as set forth, of a water jacket set about the boiler and connected therewith by bent water and steam tubes, substantially as herein shown and described, said connecting tubes being bent that they may expand and contract without injury to their joints, as set forth.

No. 22,709. Sharpener for Reaper Knives, etc. (*Machine à Aiguser les Couteaux des Moissonneuses, etc.*)

James Houghton, Waterford, Ont., 2nd November, 1885, 5 years.

Claim.—A sharpener, composed of a stick of emery composition, preferably of a triangular shape A, formed in a metal rod B projecting beyond the end of the stick A, and having a handle C fixed on it at each end, as indicated, substantially as and for the purpose specified.

No. 22,710. Machine for Cutting, Bundling and Tying Firewood. (*Machine à Abâtrer et Fagoter le Bois de Chauffage*.)

Frank Kingston, St. Johns, Eng., 2nd November, 1885, 5 years.

Claim.—In a machine for cutting, bundling and tying firewood, the combination of the intermittently moving feed chains b, b', the clamping check k, the obliquely moving slicing knife k', the chains l, l', the reciprocating knife K, chains a, a', the bundling cylinder C with its plunger C', its slide c, sluice diaphragm c', guide blades c' and shakers c', its segmental mouth c'', with the means of contracting it and causing it to revolve the tying arm F, with its clamping bosses t, t', and their cutters, and the tying wire arranged and operating substantially as herein described.

No. 22,711. Butter Worker. (*Pétrin à Beurre*.)

Levis W. Murch, Racine, Wis., U. S., 2nd November, 1885, 5 years.

Claim.—A butter-worker, comprising frame A, having legs a, a', tray B, provided with openings c, c' and plug a', a follower B' hinged to frame A by rings b, b', and having cross-pieces b', handle B' supporting leg c' provided with brace-hook c' and clamp C, and cover A', with handle a', and a suitable lock, all constructed and arranged substantially as described and for the purposes set forth.

No. 22,712. Sheet Metal Can. (*Boîte Métallique*.)

Francis A. Walsh, Milwaukee, Wis., U. S., 2nd November 1885, 5 years.

Claim.—The combination, with the body of a sheet metal can, of a suitable cover and a ring encircling the top of the can body, with its upper edge having an inwardly turned rim over the cover and clamping it down upon the rolled upper edge of the can body, as set forth for the purpose set forth.

No. 22,713. Pillow Sham Holder and Remover. (*Porte Garniture d'Oreiller*.)

Charles F. Percival, Barton, Vt., U. S., 2nd November, 1885, 5 years.

Claim.—1st. The combination of the brackets C, C', secured to the side posts of the head of the bedstead wheels D, D', and endless cord E running around the head of the bedstead, whereby the pillow shams F attached to the cord may be drawn to the front and rear, as set forth for the purpose set forth. 2nd. The tubular clip G, having a central longitudinal slot and applied as set forth, for the purpose specified.

No. 22,714. Thill Coupling. (*Arçon de Limonière*.)

Benjamin Fahrney, Hegerstown, Md., U. S., 2nd November, 1885, 5 years.

Claim.—A thill-coupling, consisting of the axle clip A, thill socket B, and a for reception of pin or bolt b, cushion C actuated by right-angled plate D recessed for reception of clip A, which guides it, and threaded screw E, engaging with coincident female screw E', in D, A, substantially as shown and for the purpose described.

No. 22,715. Stove Drum. (*Poêle Sourd*.)

George Stevenson, Kingsville, Ont., 2nd November, 1885, 5 years.

Claim.—The combination, in a stove drum, of the cold air flue A,

receiving smoke flue B, provided with inlets F, smoke flue C, with damper D, the whole arranged as shown and described for the purpose set forth.

No. 22,716. Gas Engine. (*Machine à Gaz*.)

William L. Tobey, East Boston, Mass., U. S., 2nd November, 1885, 5 years.

Claim.—1st. The engine-cylinder and valve-chest, and inlet and exhaust ports leading to and from the said valve-chest, and ports connecting it with the ends of the cylinder, combined with the valves arranged in said valve-chest with relation to said ports, as shown and described, and valve-actuating mechanism, whereby communication is alternately established and cut off between the inlet port and portions of the said valve chest adjacent to each end of the cylinder, and one end of the cylinder is connected with the exhaust-port, while communication is established between the adjacent portion of the valve-chest and the inlet port, and also between the other end of the cylinder and the portion of the valve-chest adjacent thereto, which is then cut off from the inlet port, substantially as set forth. 2nd. In a gas engine, the engine cylinder and a tank or reservoir for an explosive gaseous mixture, and an intermediate chamber and valve mechanism, whereby the said chamber is alternately placed in communication with the said tank and cylinder without at any time establishing direct communication between the said tank and cylinder, substantially as described.

No. 22,717. Numbering Attachment for Printing Presses. (*Appareil à Paginer pour Preses d'Imprimerie*.)

Albert R. Baker, Indianapolis, Ind., U. S., 2nd November, 1885, 5 years.

Claim. 1st. In a cylinder printing press, the combination of a rotary cylinder, a series of numbering heads placed therein and arranged in one or more rows, and a series of independently-supported trips arranged in one or more rows, extended in the direction of the rotation of the said rotary cylinder and corresponding to the position of the numbering heads, substantially as shown and described, whereby each trip of a given row shall act upon the numbering-head or all the numbering heads of its corresponding row, for the purpose specified. 2nd. In a cylinder printing press, the combination of the ordinary impression cylinder, a second cylinder, bars mounted thereon, numbering heads mounted on said bars and arranged in one or more rows extended in the direction of rotation, and trips mounted on suitable supports within said second cylinder and arranged in rows, extended in the direction of rotation and corresponding to the position of the numbering-heads and adapted to engage with and operate said numbering heads, whereby the numbers in said numbering heads are advanced in successive order, and the forms being numbered are numbered consecutively without reference to the number of heads, substantially as set forth. 3rd. In a cylinder printing press, the combination of the ordinary impression cylinder, a revolvable numbering-cylinder, bars mounted on said cylinder, numbering-heads mounted on said bars and arranged in rows extended in the direction of rotation, and trips mounted on a stationary support within said revolvable cylinder, and arranged in rows extended in the direction of rotation and adapted to engage with and operate said numbering-heads, substantially as described and for the purposes specified. 4th. In a cylinder printing press, the combination of the ordinary impression-cylinder, a revolvable numbering-cylinder, bars mounted in suitable bearings therein, numbering heads mounted on said bars and arranged in rows extended in the direction of rotation, a stationary cylinder located within said numbering-cylinder, and a number of trips sufficient to do the work to be performed adjustably mounted in said stationary cylinder and arranged in rows corresponding to the rows of numbering-heads and adapted to engage with and operate said numbering-heads, whereby the numbers in said numbering heads are advanced successively, and the forms being numbered are numbered consecutively without regard to the number of heads employed, substantially as set forth. 5th. The combination, in a cylinder printing press, of the ordinary impression cylinder, a rotary numbering cylinder mounted on a stationary shaft, numbering-heads mounted therein, a stationary cylinder mounted on the same shaft within said rotary numbering cylinder, said stationary cylinder being provided with rods, and trips mounted on said rods in rows extended in the direction of the movement of said rotary numbering cylinder, and adapted to engage with, and operate the numbering heads of said numbering-cylinder, substantially as set forth. 6th. In a cylinder printing-press, a rotary numbering cylinder having bars D' mounted therein said bars being secured to the cylinder-heads by means of radially adjustable supports substantially as described and for the purposes specified. 7th. In a cylinder printing-press, the combination, with a rotary numbering cylinder having a segmental slot in its head of the bar D' having solid end f, notched block f', having recess f₂ and catch f₃ and the socket piece f₄, having screw f₅ carrying said block, and having lug g fitted to slide in said slot, and means for locking the same in the slot, substantially as shown and described, whereby said bar is rendered both circumferentially and radially adjustable, as set forth. 8th. In a cylinder printing press, a rotary numbering-cylinder having bars, D' mounted therein, said bars being secured to the cylinder heads by means of radially adjustable supports, and being provided with longitudinal slots d₅, rod numbering-heads mounted on their shafts between the flanges or ribs of said bars, whereby said numbering-heads are adapted to be adjusted both radially and longitudinally of the cylinder, substantially as set forth. 9th. In a printing-press, a trip-cylinder rigidly mounted within a numbering cylinder, said trip cylinder being provided with rods bearing to the other, said heads being provided with radial slots in which said shafts are mounted, whereby said trips are adapted to be radially adjusted, substantially as described and for the purposes specified. 10th. In a cylinder printing-press, the trip-cylinder E, provided with rods E' adjustably mounted in the heads thereof, said rods having trips e mounted thereon, and said trips being provided with cam-faced projections, which are adapted to partially rotate the disks