

the wheels P O which operate the cutter, and the wheels Q Q' which rotate the nut K. 13th. The combination with the sliding cutter frame, of the overhanging brackets P, the yokes or stirrups O, the sprocket shafts O' and the chains Q. 14th. The combination with the cleaner chains Q', of the loops Q' attached to the links of said chains.

No. 12,704. Process for Treating Copper Ores Containing Precious Metals. (*Procédé de traitement des minerais de cuivre contenant des métaux précieux.*)

Paul G. L. G. Designolles, Paris, France, 27th April, 1881; for 15 years.

Résumé.—1e. L'application aux minerais, on autres matières contenant du cuivre, des sels de cuivre ou des sulfures antimoniers, arséniers de cuivre, etc., d'un procédé d'amalgamation électro-chimique c'est à dire, par la trituration des minerais pulvérisés avec le bi-chlorure de mercure, additionné de chlorure de sodium, le tout en présence de fer métallique. 2e. Dans l'adjonction dans la masse après l'amalgamation commencée d'une quantité voulue de mercure métallique, afin de compléter l'amalgamation et de rendre l'amalgame pâteux et susceptible de s'agglomérer et de se fixer sur les plaques amalgamées destinées à le recueillir. 3e. Le système sus-indiqué de séparation préalable par décantation et filtrage de la majeure partie de l'amalgame produit. 4e. Le mode de séparation des métaux précieux contenus dans un amalgame de cuivre, complexe, par simple distillation ou soutirage du dit amalgame, mettant à profit le phénomène de liquation. 5e. Le système d'appareil broyeur à cylindres métalliques tournant librement dans un tambour rotatif. 6e. Le genre d'appareil d'amalgamation à cylindres avec cannelures à cylindres tournant librement dans un tambour rotatif. 7e. Le système d'appareil malaxeur à deux corps superposés et munis d'agitateurs pour la séparation directe de la majeure partie de l'amalgame obtenu. 8e. Le genre d'appareil de distillation de l'amalgame ou retorte à double enveloppe, avec creusets métalliques à galets de forme tron-conique mobiles sur rails, permettant la manutention facile et le déplacement des dits creusets.

No. 12,705. Improvements on Gates for Railway Crossings. (*Perfectionnements aux barrières pour les traverses des chemins de fer.*)

Jean B. Emond, Quebec, Que., 27th. April 1881; for 5 years.

Résumé.—1e. La combinaison des roues dentées A A mises en mouvement par la manivelle au moyen du pignon C. 2e. La transmission du mouvement descendant ou descendant de la barrière, de la boîte D à celle de la boîte E, par l'arbre de transmission F. 3e. L'excentrique pratiquée dans la pesée de la barrière, permettant son mouvement sans rencontrer d'obstacles par la manivelle.

No. 12,706. Improvements on Detaching Check Reins. (*Perfectionnements aux crochets des rênes.*)

James McLean, L'Etéité, N. B., 28th April, 1881; (Extension of Patent No. 6,052.)

No. 12,707. Improvements on Nut Locks. (*Perfectionnements aux serrures-écrous.*)

Edward T. Smith and James Ritchie, Ottawa, Ont., 28th April, 1881; for 5 years.

Claim.—A nut lock C of a folded sheet of metal, having an indented part D in the folding part I and bolt hole F.

No. 12,708. A Churn. (*Une baratte.*)

Charles H. Warren, Toronto, Ont., 29th April, 1881; (Extension of Patent No. 6,055.)

No. 12,709. Improvements on Boot and Shoe Counters. (*Perfectionnements aux contreforts des chaussures.*)

Levi R. Howe, New York, and Henry W. Shephard, Brooklyn, N. Y., U. S., 29th April, 1881; for 5 years.

Claim.—1st. A counter support composed of metal having its upper edges turned over and its sides corrugated. 2nd. The metal counter support A having its edges B turned over, combined with the corrugations C C in the sides of the support.

No. 12,710. Improvements on Reed Organs. (*Perfectionnements aux harmoniums.*)

The Mason and Hamlin Organ Company, (Assignee of George B. Kelly,) Boston, Mass., U. S., 29th April, 1881; for 5 years.

Claim.—1st. In a reed organ, the combination, with the obliquely arranged top board H having the bevelled front edge b, of the lid J having the bevelled edge a hinged to the bevelled edge of said top board, and provided with the flange d, the free edge of said lid being arranged to close on a level with the lower edge of said top board, whereby a triangular space is inclosed under said lid and board to receive the flange, and the bevelled edge of the rear top board forms the only support of the lid in its raised position. 2nd. A reed organ composed of a series of keys C, valves D, reeds E and their reed chambers, swell G, wind chests F, bellows G and exhausters H H', all combined and arranged in a manner to bring them within a casing B which is supported upon two uprights A A'. 3rd. The organ case composed of two uprights A A', projecting laterally and vertically above the movement box, and supporting said box endwise between them. 4th. The treadle N having its fulcrum at or near its centre, and so connected to the exhauster of the bellows, that the movements of the exhauster to exhaust the bellows will be controlled and operated in both directions by said treadle. 5th. The treadle N hinged to a cross bar between the upright supporting the box or casing B, said treadle having its fulcrum at or near its centre, and so connected to the exhauster of the bellows that the movement of the exhauster to exhaust the bellows, will be controlled

and operated in both directions by said treadle. 6th. In a reed organ, a key supported at its rear end by the key board or frame, said key being provided with a pin m rigidly secured thereto, which pin projects downwards from the key into an aperture in said supporting frame, whereby the key is guided in its movements.

No. 12,711. Improvements on Shingle Machines. (*Perfectionnements aux machines à bardeau.*)

Martin A. Bidwell, Sacramento, Ky., U. S., 29th April, 1881; for 5 years.

Claim.—1st. The combination of the horizontally reciprocating riving frame E having its middle parts recessed, and its forward end bevelled, and provided with the riving knife H, and the cross bar I provided with the stop-plate J secured to it, so as to receive the riving knife between it and the said bar, with the frame A, the bed F and the driving shaft B. 2nd. The bed F having its upper surface inclined from the centre toward each side, in combination with the reciprocating frame E and the knives i. 3rd. The combination, with the riving frame E and the bed F, of the pivoted bars R, the holding block V, the toothed plate W and the driving mechanism L M N Q for moving the shingle from the riving frame E to the bed F. 4th. The combination, with the riving frame E and the bed F, of the parallel knives t, the sashes g and their driving mechanism f c b r for smoothing and tapering the shingle. 5th. The combination of the arm M, frame N, spring T, connecting bars Q and hinged bars R supporting the serrated plate W, with the driving shaft B provided with the cam L. 6th. The combination of the rock-shaft A, lever r, connecting-rod b, shaft d, cross head e, arm c, bars f and sashes g carrying the shaving knives i, with the reciprocating riving frame E.

No. 12,712. Improvement in the Process of Brewing. (*Perfectionnement dans le procédé de brassage.*)

Henry Calcott, Ashburnham, Ont., 29th April, 1881; for 5 years.

Claim.—The manner of displacing and expelling the strong wort remaining in the hops after the wort is run off by applying water, or weak wort, in a gradual manner by sprinkling the hops by means of a sparger or watering can, or other similar means.

No. 12,713. Improvements on Feed Water Regulators for Boilers. (*Perfectionnements aux régulateurs de l'eau d'alimentation des chaudières.*)

Charles H. Kuhne, Butler, Pa., U. S., 29th April, 1881; for 5 years.

Claim.—1st. The chamber A connected by pipes a b to the boiler float B, cock f, pipe g, cylinders D E connected pistons h i, feed water pipes l m and waste pipe n. 2nd. In feed water apparatus, the combination of a cylinder receiving the water and connected to the boiler, a piston fitted for movement to cut off the connection to the boiler, a float positioned by the water level and a steam cock moved by the float to supply or cut off steam, whereby the piston is moved to cut off the water, or released from steam pressure according to the position of the float.

No. 12,714. Improvements in Clamp Skates. (*Perfectionnements aux patins à crampons.*)

William Wilkie, Guelph, Ont., 29th April, 1881; for 5 years.

Claim.—1st. A metal skate provided with adjustable clasp J for grasping the sole of the boot, an adjusting plate G suitably connected to the said clasp, and holding the heel clasp K, in combination with a nut E or its equivalent arranged to longitudinally adjust the plate G, for the purpose of simultaneously regulating the clasp J K. 2nd. A metal skate provided with a front plate A and heel plate B, for supporting the foot stationary clasp C at the back of the heel, in combination with the heel clasp K adjustably connected to the adjusting plate G, which is provided with a pin H fitting into diagonal slots, in the plates I forming parts of the front clasp J.

No. 12,715. Process for Manufacturing Insoling. (*Procédé de préparation des semelles intérieures.*)

John A. Gallie, Berlin, Ont., 29th April, 1881; for 5 years.

Claim.—The fence C arranged in combination with the blocks A and B or their equivalents, for the purpose of facilitating the manufacture of Panoake Insoling, or its equivalent.

No. 12,716. Improvements on Stovepipe Drums. (*Perfectionnements aux poêles sours.*)

William H. Packham, Dresden, Ont., 29th April, 1881; for 5 years.

Claim.—A stovepipe drum A having a central partition F to form a downward and upward flue, with ingress and egress openings I P in the head B of the drum, for connecting with stovepipe, and provided with through air ducts C and suitable dampers for cutting off and regulating the currents.

No. 12,717. Improvements on Elastic Gores. (*Perfectionnements aux pointes élastiques.*)

Simon Florsheim, Chicago, Ill., U. S., 29th April, 1881; for 5 years.

Claim.—1st. An elastic gore, gusset, or section for wearing apparel composed of a covering material, having tubes, spiral metal springs, inclosed by such tubes and not extending to the edges of the covering material, and stayed at their ends by such covering material, and elastic margins outside of the springs. 2nd. An elastic gore gusset, or section of the character described, the springs arranged in groups and made of a continuous length of coiled wire. 3rd. In an elastic gore, gusset or section of the character described, the metal fastenings C extending across the ends of the tubes, between the thicknesses of the covering material.