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INVENTIONS PATENTED.

NOTE—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 29,601. Process for Refining Coal Oil Containing Sulphur or Arsenic, or both. (*Procédé pour raffiner le pétrole contenant du soufre, ou de l'arsenic, ou les deux ensemble.*)

Carl V. Potraeus, Camden, N. J., U.S., 1st August, 1888; 5 years.

Claim.—1st. The herein described process of refining coal oil containing sulphur, which consists in treating the oil to be refined with salts of hyposulphurous or chloric acid, and then distilling the oil so treated, substantially as and for the purpose described. 2nd. The herein described process of refining coal oil containing sulphur or arsenic or both, which consists in treating the oil to be refined with salts of hyposulphurous or chloric acid, and then distilling the oil so treated, substantially as and for the purposes described.

No. 29,602. Bob-Sled. (*Traineaux accouplés.*)

Festus Chapin and William J. Edwards, Portage la Prairie, Man., 1st August, 1888; 5 years.

Claim.—1st. In a bob sled, the combination of the runners A, an oscillating beam or axle B journaled in the knees and held therein by screws b, the knees C secured upon the runners and formed with a partial journal bearing at the top completed by an attached cap G, said journal bearing adapted to carry the beam B and allow the same to oscillate therein, the roller D and tongue E connected by braces F by which said roller is pivotally coupled to the forward ends of the runners by means of the straps G, the rod H connected to the roller and tongue by means of the clevis I, and to the beam B by a forked strap J through which passes the king bolt, and having an eye f or coupling the rear bob thereto and the king bolt K, substantially as set forth. 2nd. In a bob sled, the combination of the runners A, the inner runner straps G having a loop g, and having their forward ends turned at a right angle and inserted and projecting through the runner, and secured at the other side thereof by a nut g¹, the tongue braces F secured to the tongue E and roller D, and having a hooked or eyed end f engaging the loop g pivotally, substantially as set forth. 3rd. In a bob sled, the combination of the roller D, clevis I having loop i, the draft rod H having eyed ends h, h¹ engaged by the clevis loop i, and strap L, the forked strap J having prongs j, j¹ clipping the beam, and an eyed extending tail end i¹ engaging the beam B and eyed projecting end i², and the king bolt K passing through the prongs j, j¹ and the beam B, substantially as set forth. 4th. In a bob sled, the combination of the runners A, the knees C each having a concave top c, outwardly sloping legs k with feet e, and inner tapering flanges e¹, circular caps C¹ secured to the tops of said knees by lugs e², and forming with the concave tops c circular bearings for the beam B, and the beam B supported in the bearings of the said knees and held therein by the screws b, substantially as set forth.

No. 29,603. Conveyor and Dumper for the Formation of Railroad Embankments and the Operation of the Quarry, etc. (*Tombereau pour faire les terrassements des chemins de fer et l'exploitation des carrières, etc.*)

James Faulkner, Toronto, Ont., 1st August, 1888; 5 years.

Claim.—In a conveyor and dumper constructed as described, the combination of the carriage D, with pulley d, checks E, E, pivot F, arms G, G, trip arm J and sliding trip L, as shown and described and operating as set forth.

No. 29,604. Door Mat. (*Paillasson.*)

Joseph Chattaway, Potoskey, Mich., U.S., 1st August, 1888; 5 years.

Claim.—1st. A mat, brush, or broom composed of a series of independently-removable sections, each section consisting of a central strip and two outside clamping-strips, the straw or other material being folded around the central strip and clamped in place by the two outside strips, substantially as described. 2nd. A mat composed of independently-removable sections, each section consisting of a central strip, and two outside clamping-strips for holding the straw which is folded around the central strip, the straw upon the outside sections being of less height than the middle sections, whereby ridges are formed for the purpose described. 3rd. A door mat composed of independently-removable sections, each section consisting of a central strip, and outside clamping-strips adapted to hold the straw between them, the central strip being of less height than the outside strips, whereby the material clamped between the strips is permitted to spread and to close up all spaces between the sections, substantially as described.

No. 29,605. Rubber Boot. (*Botte de caoutchouc.*)

Joseph D. Thomas, South Framingham, Mass., U. S., 1st August, 1888; 5 years.

Claim.—As an improved article of manufacture, a rubber boot having a rubber foot part, a leg formed of the inner and outer cloth layers c, d and intervening rubber layer f, and a fur guard k secured to the cloth layers at the top edge of the boot, and overlapping said edge and extending upon both the inside and outside thereof, substantially as described.

No. 29,606. Regenerative Gas Lamp.

(*Lampe à gaz à régénérateur.*)

Edwin Fallford and Henry T. Van Laun, London, Eng., 1st August, 1888; 5 years.

Claim.—1st. In regenerative gas lamps, the combination of the gas pipe a and burner b, transparent globe or bowl c and chimney e, with the air passages d, partly rotating tube n and handle o to turn the said tube, substantially as set forth and shown. 2nd. The combination of the gas pipe a and burner b, transparent globe or bowl c, with the tube f and rising and falling passages d and chimney e, substantially as set forth. 3rd. The combination of the hinged frame ic, lever or arm x and link, with the rising and falling air passages d and chimney e, substantially as set forth. 4th. The combination, with the tube f and burner b, of the perforated pipe p, and hole r, substantially as set forth. 5th. In regenerative gas lamps, the combination, with the burner b and air tube f, of the conical set of horizontal parallel plates l or l¹, substantially as set forth. 6th. The combination, with the gas supply pipe a and burner b having a ring of small holes, of the conical stopper f and inner gas pipe r, substantially as set forth. 7th. The combination, with the hinged frame ic and glass globe or bowl c, of the hinged lever A having a catch engaging with the slotted holding plate B and the balance weight C, substantially as set forth. 8th. In burners for regenerative and other gas lamps, the combination, with the gas supply pipe a¹, of the outer flanged tube B, the inner tube g¹, flange h¹ below the perforations l through the tube, notched or perforated flange i¹, inner cylinder or plug m¹, flange n¹, handle o¹ and screwed nut or cross bar r¹, substantially as herein set forth. 9th. The combination, with the cylinder or plug m¹, and screwed nut or cross bar r¹, of the spindle p¹ and nut or stop s¹, substantially as set forth. 10th. In combination, with the gas supply pipe a¹ and flanged tube B, the lower flange n¹, handle o¹, spindle p¹, cross bar r¹ and tube t¹, substantially as set forth and shown in figure 19.

No. 29,607. Manufacture of Butter and Apparatus therefor. (*Fabrication du beurre et appareil pour cet objet.*)

Carl A. Johanson, Stockholm, Sweden, 1st August, 1888; 5 years.

Claim.—1st. The mode of churning which is performed in a continuously working centrifugal apparatus, simultaneously with and during the separation of the cream from the milk, the cream being