No. 16,815. Improvements on Catamenial Sacks. (*Perfectionnements aux sacs cataméniaux.*)

Inadilla G. Campbell, Chicago, Ill., U. S., 5th May, 1883; for 5 years.

Claim.—The soft rubber or other water-proof material enclosing sack with two straps at one end, and one at the other, and with a central longitudinal opening cut out from the rubber, for the insertion of the common cloth napkin.

No. 16,816. Improvement on Crozes.

(*Perfectionnement des jabloires.*)

James England, New York, N. Y., U. S., 5th May, 1883; for 5 years.

Claim.—1st. A combination croze so constructed and arranged that it may be adjusted to cut either large or small grooves. 2nd. In a combination croze, the tool-holder B of the form and shape indicated in Fig. 1 and provided with the slots c c^1 and o o^1, and set screw e e^1. 3rd. The combination, with the tool-holder B, of the handle or stem A, the gland n, head or block E and set screws W. 4th. The combination, with the tool-holder B provided with the slots c c^1 and o o^1, of the lances s, chisel or router h, handle or stem A and screw u e e^1. 5th. The tool-holder B provided with the ribs b extending lengthwise of its body, the cross ribs d, slots c c^1 and o o^1, in combination with the router or chisel h, lances s, handle or stem A, set screws u e e^1 w, gland n and head or block E.

No. 16,817. Improvements on Antimony Furnaces. (*Perfectionnements aux fours à antimoine*)

Arthur Hudson, Newton, Mass., U. S., 5th May, 1883; for 5 years.

Claim.—1st. The method of producing antimony consisting in, first, roasting the ore or its tersulphuret in a muffle a, conducting the volatile oxide of antimony and sulphurous acid through one or more condensing chambers e f g, where the oxide of antimony is deposited and the separated sulphurous acid conducted over the nitrate pot h^1, through the flue h to the condensing tower i^1, where it is converted and condensed into sulphuric acid and conducted to the acid chamber n. 2nd. The improved antimony furnace consisting of muffle a, furnace c, one or more condensing chambers e f g, nitrate pot or its equivalent h^1, the condensing tower i with its shelves or grates K K^1 K^{11}, coke or pumice stone l and water-pipe and sprinkler m m^1.

No. 16,818. Improvements on Grain Separators. (*Perfectionnements aux séparateurs des grains.*)

John E. Smith, Shilok, Ohio, U. S., 5th May, 1883; (Extension of Patent No. 8780.)

No. 16,819. Improvements on Copper Smelting Furnaces. (*Perfectionnements aux fourneaux de fusion du cuivre.*)

George H. Nichols, William H. Nichols and John B. F. Herreshoff, Brooklyn, N. Y., U. S., 5th May, 1883; for 5 years.

Claim.—1st. The combination of a smelting furnace having water jacket around the discharge opening a near its lower end, with the removable well or receiver F having inlet opening d near its upper end and with a water jacket having opening d^* attached to said well and forming, a continuous passage with opening d, so that it will be interposed between the well and water jacket on said furnace and continuous therewith, when said well is placed against said furnace. 2nd. The combination of a smelting furnace having tap hole a with a movable well F having inlet opening d, which is continuous with said tap hole a when the well is in position, said well being provided with a vertical water jacket in its outer side, said water jacket forming a passage d^1 contiguous to, and in line with the inlet opening d of the well.

No. 16,820. Improvements in Filtering Apparatus. (*Perfectionnements aux appareils de filtration.*)

John F. C. Farquhar and Walter Oldham, Paris, France, 5th May, 1883; for 15 years.

Claim.—The combination of the filtering chamber, the hollow cutter-head, the perforated bottom thereof, the tubular piston rod and the screw. The combination of the cutter head, the filtering chamber and the convex grid at the bottom of the filtering chamber. The combination of the cutter head, the filtering chamber and the convex grid at the bottom of said chamber constructed of less diameter than said chamber, so that a peripheral pocket is formed for filtering material around said grid. The combination of the filtering chamber, the grid and clamp ring by which the cloth is secured over the grid. The combination of the filtering chamber, the revolving cutter head, the screw, the screw nut, the cross-head which supports said screw nut, and the inclined uprights which combine said cross-head with the filtering chamber.

No. 16,821. Improvements in Roofing Compositions. (*Perfectionnements aux compositions à toitures.*)

Gustave H. Poschel, Union Hill, N. J., U. S., 5th May, 1883; for 5 years.

Claim.—1st. A rooffng composition made of a mixture of chalk, sulphur, asphalt, tar and pitch. 2nd. A compound roofing made of layers of paper alternating with layers of a mixture of chalk, sulphur, asphalt, tar and pitch.

No. 16,822. Improvements on Vent Pegs.

(*Perfectionnements aux faussets.*)

Henry A. Rayner, London, Ont., 5th May, 1883; for 5 years.

Claim.—The castings A C with interior spindle E D, and spring F for controlling the orifice G.

No. 16,823. Improvements in Universal Joints. (*Perfectionnements aux joints universels.*)

Peter Lord, Jean B. Vinet and Avila S. Vinet, Montreal, Que., 5th May, 1883; for 5 years.

Claim.—The combination of the elbow C, connecting branches A, bar D pivot connection and tightening screw.

No. 16,824. Clothes Drier. (*Séchoir à linge.*)

George W. Ainsworth, Montpelier, Vt., U. S., 5th May, 1883; (extension of Patent No. 2315.)

No. 16,825. Swinging Baby's Chair. (*Branle*)

William W. Butcher, London, Ont., 8th May, 1883; (extension of Patent No. 2342.)

No. 16,826. Improvements in the Manufacture of India Rubber, Gutta Percha and Analogous Gums.

(*Perfectionnements dans la fabrication du caoutchouc, de la gutta-percha et des gommes analogues.*)

Henry Gerner, New York, N. Y., U. S., 11th May, 1883; for 15 years.

Claim.—1st. The use and treatment of camphor or its chemical equivalent, in combination with india rubber, gutta percha or an analogous gum, and with sulphur or its chemical equivalent, without the admixture of metallic salts or other foreign bodies commonly used in the manufacture of rubber. 2nd. The use and treatment, in combination with mixtures of india rubber, gutta percha or an analogous gum, of the farinas of mustard seed, poppy seed, linseed or their equivalents, separated from their oils and husks. 3rd. The combined use of (*a*) camphor or its chemical equivalent, (*b*) india rubber, gutta percha or analogous gum, (*c*) sulphur or its chemical equivalent, (*d*) farinas of mustard seed, poppy seed, linseed, or their equivalents, separated from their oils and husks. 4th. The use and treatment of gum kauri or analogous resinous gum, in combination with camphor or its chemical equivalent, and with sulphur or its chemical equivalent. 5th. The combined use of (*a*) gum kauri or an analogous resinous gum, (*b*) camphor or its chemical equivalent, (*c*) sulphur or its chemical equivalent, (*d*) farinas of mustard seed poppy seed, linseed or their equivalents, separated from their oils and husks.

No. 16,827. Improvements in Coating Iron with Lead. (*Perfectionnements dans le mode de couvrir le fer avec du plomb.*)

James A. Graham, London, Eng., 11th May, 1883; for 15 years.

Claim.—The coating of iron with a covering of lead of any required thickness by treating the surface with what is commonly known as chloride of zinc, and then raising the temperature of such surface to or above the melting point of lead and applying a suitable quantity of lead thereto, and allowing it to remain thereon until it has solidified.

No. 16,828. Improvements on Secondary Batteries. (*Perfectionnements des batteries secondaires.*)

Joseph S. Beeman, William Taylor and Frank King, London, Eng., 11th May, 1883; for 5 years.

Claim.—1st. The formation of secondary or storage batteries of ribbons, or tapes of insulating material covered with metal combined with lead or lead salts, or ribbons or tapes of metal, in combination with an insulating ribbon or tape alone, or used to form a carrier for lead or lead salts. 2nd. The use, in combination with the improved plates, of powdered and inert material for covering the insulating ribbons for batteries, alone or in combination with lead or lead salts, and the use of such ribbons when coated with inert material on one side, and lead or lead salts on the other. 3rd. The use in combination with the improved plates, of the mode of connecting the plates, the hook attachment connection, the ventilating valve, the distance studs and supporting rods or their respective equivalents, and the insulated tray stand or support for cell.

No. 16,829. Improvements on Fire-Escapes

(*Perfectionnements aux sauveteurs d'incendie*)

Henry E. Braumfeld, Philadelphia, Penn., U. S., 11th May, 1883; for 5 years.

Claim.—1st. A fire-escape composed of the box A, the pulleys B and the rope C, said box having an eye D at each end, and the removable ring or loop D^1 which is formed with a flat side d and a journal c. 2nd. The fire-escape box having at opposite ends eyes D D, each with an opening b, in combination with the ring or loop D^1, which is formed with a journal c and flat side d, and adapted to be fitted to either side of said eyes D.

No. 16,830. Improvements on Traction Engines. (*Perfectionnements aux machines de traction.*)

John H. Elward, Polo, Ill., U.S., 11th May, 1883; for 15 years.