No. 21,636. Process for Polishing Celluloid, Xylonite, Zynolite, Chrolithium Pyroxylin, etc. (*Procédé pour Polir la Cellulose, Xylonite, Zylonite, Chrolithium Pyroxiline, etc.*)

William C. Zeidler, Toronto, Ont., 11th May, 1885; 5 years.

Claim.—1st. The within-described process for polishing celluloid and like material, which consists in placing the cleaned surface of the celluloid or like material upon a hand polished surface which is heated and the celluloid submitted to pressure against it, substantially as and for the purpose specified. 2nd. The within-described process for polishing and hardening celluloid and like material, which consists in placing the cleaned surface of the celluloid, or like material, upon a hard polished surface which is heated and the celluloid submitted to pressure against it, after which the plate and celluloid are cooled off, substantially as and for the purpose specified.

No. 21,637. Thermostat or Heat Regulator.

(*Thermostat ou Régulateur de la Chaleur.*)

John L. Campbell, West Elizabeth, Pa., U.S., 11th May, 1885; 5 years.

Claim.—1st. In a heat regulator, the combination of a wooden bar, with two straps, rods or wires attached to the opposite side thereof, with the lever which is operated by the expansion and contraction of the straps, substantially as shown. 2nd. In a thermostat, the combination of the wooden rod, with the two straps, wires or rods attached to opposite sides thereof, the set screw for springing the rod upon one side, and the lever which is operated by the movement of the strap, spring or rod upon the other side of the wooden bar, substantially as described. 3rd. The combination, in a thermostat, of the wooden bar, the two straps, wires or rods attached to opposite sides thereof, set screw for springing the wooden bar upon one side, a suitable spring which is placed between the wooden bar and the strap upon the opposite side of the bar from the set screw, and a lever which is operated by the movement of the strap which has the spring applied thereto, substantially as set forth. 4th. In a thermostat, the combination of the wooden bar and the two straps, wires or rods attached to opposite edges thereof, one of the straps being provided with a screw and nut for regulating the tension of the strap, substantially as specified. 5th. The combination, in a thermostat of the wooden bar, the two straps, wires or rods attached to opposite sides thereof, a set screw for springing the wooden bar coiled spring which is placed between the side of the bar and the inner side of one of the straps, the pivoted lever, a revolving bar and a mechanism for moving the revolving lever, operating the valve and shutting off and turning on the heat, substantially as shown. 6th. The combination, of the wooden rod or bar, the straps, wires or rods attached to opposite sides thereof, a set screw for springing the bar upon one of its sides, a coiled spring, a pivoted lever and a regulating screw which is connected to the lever, a spring for bearing against the lever upon one side, and revolving lever and the clock-work for operating the valve and turning on or shutting off the heat, substantially as described. 7th. In a thermostat, the combination of the lever which is moved at its lower end by the expansion and contraction of a metallic strap, rod or wires, a spring for bearing against the side of the lever and forcing it towards the strap, wire or rod, a revolving lever, a mechanism for revolving the lever, a valve which is placed in a suitable opening, and a mechanism which is attached to the source of heat, substantially as set forth. 8th. The combination of a lever, which is moved at its lower end by the expansion and contraction of the strap, rod or wire, a spring for bearing against the side of the lever, a revolving lever having arms of different length, a mechanism for revolving the lever and which is provided with a crank, a valve which is connected to the crank and a lever which controls the heat, the valve and the lever being operated at the same time, substantially as specified. 9th. The combination of a thermostat, substantially as shown, a lever which is connected thereto, a revolving lever having arms of different lengths, a mechanism for revolving the lever, and which is provided with a crank connecting rods which are attached to this crank and extending in opposite directions, a valve provided with a crank and a lever which turns on and shuts off the heat, substantially as shown. 10th. The combination of a thermostat and a vertical lever which is connected to and operated thereby, and which has its upper end to project through the opening in the top of the frame, with a pivoted lever Y for controlling the flame, and a suitable connection between the ends of the two levers, whereby the movement of one controls the movement of the other, substantially as set forth. 11th. The combination of a thermostat, a pivoted lever Y and a lamp burner provided with two leaves or reducers, and suitable pivotal wires which are connected together one of which is provided with a counter weight, substantially as set forth.

No. 21,638. Refrigerator Car.

(*Char Frigorifique.*)

Charles F. Pierce, Chicago, Ill., U.S., 11th May, 1885; 5 years.

Claim—1st. The combination, in a refrigerating car, of an elevated ice-pan and a drip trough located between said pan, with one or more lower reservoir cooling chambers located within the car, in position to receive the contents of the ice-pan, substantially as described. 2nd. The combination, in a refrigerating car, of an elevated ice-pan and a drip-trough located below said pan, with one or more reservoir cooling chambers connected by a spout or spouts with the elevated drip-trough, where the water from the pan will flow into and accumulate in the cooling chamber, substantially as described. 3rd. The combination, in a refrigerating car, of an elevated ice pan, with a reservoir cooling chamber located alongside the wall of the car, and means, substantially as described for discharging accumulated water from the cooling chamber. 4th. The reservoir cooling chamber D located alongside one of the car walls, in combination with a trap located in the top of the car, as and for the purpose described. 5th. The combination, in a refrigerator car, of an elevated ice-pan, with a reservoir cooling chamber which receives the drippings from the ice-pan, and the stand pipe I which connects with the cooling chamber, substantially as described. 6th. The combination, with the reservoir cooling chamber and stand pipe, of chamber F^1 into which the stand pipe and a spout pass, the cooling chamber being open at its top end, and means being provided for conducting off the water from said chamber F^1, substantially as described.

No. 21,639. Apparatus for Filling Bottles.

(*Appareil pour Emplir les Bouteilles.*)

John B. Metzger, Williamsport, Penn., U.S., 11th May, 1885; 5 years.

Claim.—1st. In an apparatus for transferring liquids, the combination, with a reservoir containing the liquid, of the cylinder A provided with an upwardly curved neck *c*, and the vertical discharge-pipe C detachably secured to said neck, the said pipe C being contracted at its lower end to form a valve-seat and provided therein with a ball valve and cage, substantially as shown and described. 2nd. In an apparatus for transferring liquids, the combination, with the discharge-pipe, of the nozzle D having a flaring hood, provided with the spouts *d* and slide-valve d_1, substantially as shown and described. 3rd. In an apparatus for transferring liquids, the combination of a reservoir for containing the fluid, a cylinder having a piston and base B secured to the lower end of said cylinder, in the manner described, said base provided with the upwardly curved neck *c*, the pipe C attached to said neck and provided with a ball valve and cage and contracted at its lower end, whereby is formed the valve-seat and the nozzle D secured to the upper end of pipe C, and having one or more spouts, all substantially as set forth. 4th. In an apparatus for transferring liquids, the combination of the reservoir having head 2, and head having the removable portion 3, of the construction, substantially as herein described, the cylinder having a piston and provided with the base B with its respective accessories, the discharge pipe C provided with a ball valve and connected to the base, and the nozzle D terminatingin the hood and having one or more spouts, said hood provided with a slide valve, all substantially as and for the purposes set forth.

No. 21,640. Manufacture of Paper Pulp and Apparatus Therefor. (*Fabrication de la Pâte à Papier et Appareil pour cet objet.*)

Isaac S. McDougall, Irk Vale, Eng., 11th May, 1885; 5 years.

Claim.—1st. The process of producing sulphurous acid gas for manufacturing paper pulp, which consists in burning sulphur, spent oxide of iron, or pyrites, in suitable vessels, and forcing air therein or drawing air through in such a manner, so as to drive the gas into vessels containing alkaline solutions, substantially as and for the purpose described. 2nd. In a boiler for manufacturing paper pulp, the combination, with the boiler shell or casing A and lead lining B, of a number of bolts or similar devices C passing through said casing and lining and serving to hold same together, the heads of said bolts or fastenings projecting towards or into the interior being protected by lead coverings *b*, joined to said lead lining B, for the purpose described.

No. 21,641. Piston Packing.

(*Garniture de Piston.*)

Edmund Suckow, Buffalo, N.Y., U.S., 11th May, 1885; 5 years.

Claim.—1st. In a piston packing, the rings or sections of rings a^2, having projections b^4, in combination with one or more valves b^2, set in grooves a^7 opposite the inlet openings, for admitting steam to the interior of the piston, and from thence to the perforations b^4 to the peripheral space *c*, so as to act as a lubricant to the cylinder and to preserve an equal pressure within the piston, substantially as described. 2nd. A piston packing, consisting of the rings a^2, a^4, in combination with a piston follower and connecting bolts, the rings a^2 being provided with the wave line springs, substantially as specified, and the grooves b^4, for the purposes described. 3rd. A piston, provided with packing ring openings b^3, spring a^5, a spring or springs for forcing the rinks apart when required, and openings for admitting steam or water to the space *c*, for the purposes described.

No. 21,642. Machine for Sewing Books.

(*Machine à Brocher les Livres.*)

Edward Cheshire and Elizabeth Cheshire, Cincinnati, Ohio, U.S., 12th May, 1885; 15 years.

Claim.—1st. In a book sewing machine, the combination, with a reciprocating signature feed carriage, of a reciprocating needle carriage, both carriages being mounted within a suitable frame in such a manner that they are adapted to advance toward each other, and at the point of meeting perform the sewing operation by means of a shuttle and suitable driving mechanism, the said feed carriage being retracted from each signature as soon as sewered, and leaving it suspended against the previously sewed signature in book form, substantially as herein set forth. 2nd. In combination, with the needle frame O, of needle frames P mounted upon ways or bars within frames O, and adapted to reciprocate alternately therein to form the "kettle" stitch at the ends of the signature, substantially as herein set forth. 3rd. The combination with the feed-carriage G, of a toothed or channelled plate J, adapted to support each signature in an open condition, and to receive the needles on the needle-frames between the teeth of said plate during the sewing operation, substantially as herein set forth. 4th. In a book sewing machine, the combination, with the shuttle race-ways 1, 1, of the compression or lock pins 5_1, 6_1 mounted upon bars 4 and adapted to catch and hold the shuttle at the ends of its stroke by the pressure of either lever 3, brought to bear against it by means of plate P on either "kettle" stitch frame, substantially as herein set forth. 5th. In a book sewing machine, the laterally adjustable race-ways 1, 1, having a gap or intervening space between them, which is capable of being lengthened