

**No. 33,611. Feed Trough for Pigs.***(Auge à cochons.)*

John Jackson, Rockton, Ont., 7th February, 1890; 5 years.

*Claim.*—1st. A feeding trough A, provided with a series of arched guards, arranged substantially as specified. 2nd. A feeding trough A, provided with a series of arched guards C, in combination with end pieces D, back board E and slanting board F, arranged substantially as specified.

**No. 33,612. Fire Ladder. (Echelle d'incendie.)**

Andrew J. Sutherland, Battle Creek, Mich., U. S., 7th February, 1890; 5 years.

*Claim.*—1st. The combination of the ladder, fulcrumed at its base, to rise edgewise, the levers, having the half-wheels fulcrumed, as shown, a truck, having a suitable foundation and a windlass and ropes or cables for operating said levers, substantially as set forth. 2nd. The combination of the truck, having the foundation beams, a ladder fulcrumed at its base to said beams, the levers having the half-wheels, the shaft forming a fulcrum to said levers, the posts extending upward from the foundation beams and supporting said shaft, a windlass having bearings forward of the lever fulcrum pulleys in the rear of said fulcrum, and ropes or cables attached to the lever half-wheels passing around the pulleys and attached to the windlass, substantially as set forth. 3rd. The combination of a ladder, fulcrumed at its base, levers fulcrumed in the rear of the ladder-fulcrum for raising said ladder, a windlass between the said fulcrums, pulleys in the rear of the lever-fulcrum, ropes or cables attached to the windlass and levers and passing around the pulleys, and a rope attached to the ladder and windlass for pulling the ladder down when the levers are lowered, substantially as set forth. 4th. The outer ladder, provided with the recessed lug and with the swinging-ladder rests, having the projection to fit into the recess of said lugs, substantially as set forth. 5th. The combination of a truck, provided with suitable foundation beams, the ladder-base fulcrumed at its rear edge to said beams, said base consisting of the internal gear and the centrally-pivoted plate above said gear, the ladder hinged to said plate, a frame attached to the plate and parallel with the upright ladder, said frame having a crank-shaft, and a shaft gear connected with said crank-shaft, and the lower end passed through the plate, and provided with a pinion meshing with the internal gear, substantially as set forth. 6th. The combination of the rotatable plate of the ladder base, the ladder hinged thereto, the frame attached to the plate and provided with the shaft bearing the spools, the crank-shaft below said shafts being gear-connected, and a rope or cable attached to the spools and looped around the ladder, substantially as set forth. 7th. The combination of the upright frame, provided with a crank-shaft and pinion, and a ladder hinged to tilt down and provided with the pivotally connecting rack engaging said pinion, substantially as set forth.

**No. 33,613. Chill. (Coquille de fonderie.)**

Jacob N. Barr, Milwaukee, Wis., U. S., 7th February, 1890; 5 years.

*Claim.*—1st. A contracting chill, having the chill blocks or segments separated by slits or spaces, in combination with a hardened filling of sand and flour in said slits. 2nd. The contracting chill, consisting of the outer ring, and the separated chill blocks extending inward therefrom, in combination with a hard compressible filling, substantially as described, seated between the chill blocks and flush with their inner faces. 3rd. The contractible chill, having the separated chill blocks and the groove at the shoulder, in combination with the compressible filling between the blocks and the sand in the groove.

**No. 33,614. Grinding Mill. (Moulin à blé.)**

James Jones and Aldred J. Jones, Thorold, Ont., 7th February, 1890; 5 years.

*Claim.*—1st. In a grinding mill, a revolving roller having longitudinal ratchet-shaped furrows cut around its surface, substantially as and for the purpose specified. 2nd. In a grinding mill, a revolving roller having longitudinal ratchet-shaped furrows cut around its surface, in combination with a grooved or corrugated roller B, substantially as and for the purpose specified. 3rd. In a grinding mill, a revolving roller having longitudinal ratchet-shaped furrows cut around its surface, in combination with a grooved or corrugated roller B and a stationary grooved or corrugated plate D, substantially as and for the purpose specified. 4th. In a grinding mill, a revolving roller having longitudinal ratchet-shaped furrows cut around its surface, in combination with a grooved or corrugated roller B, a stationary grooved or corrugated plate D, and a perforated skirt E, substantially as and for the purpose specified. 5th. In a grinding mill, a revolving roller having longitudinal ratchet-shaped furrows cut around its surface, in combination with a grooved or corrugated roller B, a stationary grooved or corrugated plate D, a perforated skirt E and a spout F having a perforated side a, substantially as and for the purpose specified. 6th. In a grinding mill, a stationary grooved or corrugated roller A, in combination with a revolving roller having longitudinal ratchet-shaped furrows cut in its surface, and the revolving roller C having longitudinal grooves or corrugations cut in its surface, substantially as and for the purpose specified.

**No. 33,615. Wheel Barrow Wheel.***(Roue de brouette.)*

David K. Strachan, Goderich, Ont., 7th February, 1890; 5 years.

*Claim.*—A wheel-barrow wheel consisting of a hub made in two corresponding parts, spokes and rim, all formed and combined as shown and described.

**No. 33,616. Carbureting Gas Lamp.***(Lampe-carburateur à gaz.)*

Arthur Kitson, Philadelphia, Penn., U. S., 7th February, 1890; 5 years.

*Claim.*—1st. In a gas lamp, a carbureting vessel sectionally constructed in two parts, the lower part being connected to the upper part by a swinging yoke pivotally attached to the upper part, said yoke containing a screw or similar device arranged to bear against the lower part of the lamp, and force the parts together and form a gas tight joint between them, substantially as described. 2nd. In a carbureting gas lamp, a hydrocarbon reservoir or vessel, containing an absorbent wick, in combination with the vaporizing and carbureting chamber placed above the reservoir, said wick communicating with said vaporizing chamber by means of which the liquified hydrocarbon is conveyed by capillarity from the reservoir to the chamber, and means for admitting gas into the vaporizing chamber and conducting it therefrom to the burners, as described. 3rd. In a carbureting gas lamp constructed in two parts, the shell of the vessel having in its upper edge a ring of soft metal, in combination with the upper part or lid of the vessel containing a groove adapted to receive the edges of the shell and having at its bottom a sharp edged rib for bearing upon the lead ring to form a tight joint, as described. 4th. In a carbureting gas lamp, the shell of the vessel having a thickened upper edge containing a ring of metal, in combination with the lid having a groove cut in its rim, and an annular sharp edged rib formed in the bottom thereof, whereby the thickened edge of the shell may be fitted in the groove of the lid, and the sharp edge of the rib made to bear upon the ring of soft metal for making a tight joint, as described. 5th. The carbureting vessel having a ring of soft metal or its equivalent in its top, in combination with the cover having an annular sharp rib or bead for making a tight joint, as described. 6th. In combination with a gas lamp, a cartridge for containing the charge of hydrocarbon material having a tube extending from bottom to top thereof and perforated at the lower end, a shallow pan and perforated cover forming a vaporizing chamber arranged at the top of the cartridge and its tube, and an absorbent wick extending through the tube and over-tapping into the vaporizing chamber, as and for the purpose described. 7th. In a carbureting gas lamp, the combination of a gas supply pipe and a gas burner with burner support containing a compound valve, arranged to open and close the passage ways leading respectively from the supply pipe to the carbureting vessel, and from the vessel to the burners, simultaneously. 8th. In a carbureting gas lamp, the combination of a supply pipe, a gas burner, a carbureting vessel and a burner support containing passage ways leading respectively from the supply pipe to the vessel from the supply pipe to the burners and from the vessel to the burners, with a compound valve arranged to open and close all three passage ways simultaneously, and with the operating devices, substantially as described. 9th. In a carbureting gas lamp, a burner support having a conical valve seat near its top, and having at its lower edge formed as a valve seat, in combination with an internal pipe 17 having a conical valve and openings at its top, and having a disc valve secured to it below the burner support, and means for raising and lowering such tube and its valves for admitting gas to the carbureting chamber and burners, or shutting it off therefrom, as described. 10th. In a carbureting gas lamp, the burner support containing a valve seat near its top and having its lower end formed as a valve seat, in combination with a movable pipe having a valve and openings at its top, a disc secured to it below the burner support and a lug at its lower end, and an eccentric arranged between the disc and lug and having an operating shaft extending out through the rim of the lid, whereby the pipe with its valves may be raised or lowered, as described. 11th. In a carbureting gas lamp, the burner support having two conical valve seats in its upper portion, the burners connected below the lower valve seat and having its lower end formed as a valve seat, in combination with the movable tube arranged in the burner support and having the double conical bearing surfaces at its top so that it may be seated on both of the conical valve seats, and having a disc secured to it below the burner support, and means for raising and lowering the tube and its valves, whereby the gas may be passed directly from the supply pipe to the carbureting vessel, and the burners and carbureted gas may be passed from the carbureting vessel to the burners, and whereby gas may be simultaneously shut off from the supply tube and the carbureting chamber, as described. 12th. In a carbureting gas lamp, a capillary hydrocarbon conductor leading from the carbureting vessel into the gas supply pipe to which the burner is connected. 13th. In combination with the carbureting vessel, a supply pipe delivering gas into it above the contained hydrocarbon, a burner pipe extending downward from the top of the vessel, a connected burner, and a capillary conductor leading from the vessel into the burner pipe. 14th. In combination with the carbureting vessel having a gas supply pipe, the burner pipe extending downward from the top of the vessel, the burner, and a diluting gas pipe connecting with its lower end, and a three-way valve placed at the junction of the two pipes and burner. 15th. In combination with the carbureting vessel, the gas supply pipe extending up through it and having its upper end screw threaded, and a clamping screw extending through the cover of the vessel and engaging with the upper end of the supply pipe for securing the cover to its seat. 16th. In a carbureting gas lamp, the combination of the carbureting reservoir with a carbureting and vaporizing chamber situated directly over the burner and communicating therewith, and containing a wick or absorbent which extends from said chamber into the reservoir, whereby the naphthaline is conducted from the reservoir into the chamber, substantially as described. 17th. The combination of the tube T, pipe 16, three-way valve 18, pipe 16, burner pipe 11 and capillary conductor L, with the reservoir 4, substantially as described. 18th. The combination of the supply pipe 14 with the surrounding casing 26, bell-mouthed shade holder 24, tripods 25 and 27, upper bell 28, locking-nut 30 and spiral ribbon z.