

more of which are provided with an internal imperforate conduit through which liquid is forced while steam simultaneously therewith is forced through the external conduit for the purpose of heating said liquid, in combination with the connecting stand-pipes which are connected respectively to the ends of the internal and external conduits for receiving the liquids and steam separately and from whence the conduits are supplied, and into which the contents of the conduits are discharged separately, as described. 11th. The process of heating and evaporating liquids which consists in forcing the liquids through an internal heating-conduit and thus highly heating the same, then discharging it into a separator, then conducting the resulting steam through the external conduit exposed to the heat of the furnace and finally utilizing the steam thus superheated by conducting it through the heating conduits of an evaporating-pan for continuing the evaporation of the liquid discharged from the internal coils into the separator as described. 12th. In a device for heating liquids prior to the discharge and subsequent elimination of vapor therefrom, two connecting stand-pipes, one of which connects with all of the corresponding ends of one series of conduits which are placed one above another, while the other stand-pipe connects with a required number of the other ends of said conduits, whereby liquids are forced simultaneously and separately through two or more conduits and discharged therefrom from two or more of the lower ends of said series of conduits. 13th. In an apparatus for heating and evaporating liquids, a conduit or supply-pipe, a stand-pipe, a series of internal coils connected therewith at their induction ends and a separator connected with their eduction ends, in combination with connected external coils. 14th. In an apparatus for heating and evaporating liquids, a conduit or supply-pipe, a stand-pipe, a series of internal coils connected therewith at their induction ends and a separator connected with their eduction ends, in combination with connected external coils and an evaporating-pan and connecting devices for conducting steam from the external coils to the pan. 15th. The process of heating and evaporating liquids which consists in forcing the liquid between an external and internal coil of pipe in a furnace to near the middle portion of the coil, thence discharging the resulting steam or vapor through suitable opening into the internal pipe and conducting it therefrom to places of use and at the same time conducting the concentrated liquid to a suitable receptacle. 16th. In combination, with a conduit or conduits provided with an internal spray-conduit extending the entire length thereof and through which liquids are forced, the device for forcing liquids into said internal conduit from whence it is forced out in spray into the external conduit and the separator by which the vapor and liquid are divided in the manner set forth.

No. 17,569. Signal Lamp. (*Lampe à signaux.*)

Edward S. Piper, Toronto, Ont., 1st September, 1883; 5 years.

Claim.—1st. In a railroad car or coach, a lamp placed within a lamp-box having a signal lens or lenses and arranged in combination, with an opening in the side of the car for the purpose of admitting the light of the lamp into the car while utilizing the same light for signal purposes, substantially as and for the purpose specified. 2nd. A lamp box containing a lamp and attached to the outside of a car or coach having a hole through its side to communicate with the interior of the box, the said box being provided with a signal lens protected by a reflector formed in the shape of a frustum of a cone, in combination with the signal glass G detachably connected to the reflectory E, substantially as and for the purpose specified. 3rd. In a lamp-box containing a lamp and provided with a signal lens protector by a reflector formed in the shape of a frustum of a cone, a signal glass G contained within a frame provided with a hoop wire G, the combination with a hole or holes made in the reflector F for the purpose of forming a detachable connection between the signal glass and reflector, substantially as and for the purpose specified. 4th. In a lamp box containing a lamp and having a circular hole or holes pierced through it, a flanged ring G formed around each hole and having a thread cut on its inner surface to receive the screwed ring b, in combination with the flanged lens E and flanged reflector F for the purpose of protecting the hole in the lamp-box, as specified. 5th. In a lamp box containing a lamp provided with a chimney and a door to gain access to the interior of the box, the combination of a semi-circular hood H formed on the interior roof of the lamp-box around the mouth of the upper ventilator, substantially as and for the purpose specified. 6th. In a lamp containing coal oil or other burning fluid, a tube formed within the fluid reservoir and perforated so as to admit the fluid into the interior of the tube, in combination with a float fitting the tube and provided with a spindle extending through the top of the fluid reservoir, a flange formed around the aperture through which the spindle passes, substantially as and for the purpose specified.

No. 17,570. Apparatus for Generating Vapour and Gas from Liquid Hydro-Carbon. (*Appareil à produire la vapeur et le gaz de l'hydrocarbure liquide.*)

Henry F. Hayden, Washington, D. C., U. S., 1st September, 1883; 5 years.

Claim.—1st. A generator for hydrocarbon vapours having a vertical tapering body and a vertical central flue extending up through the same, substantially as and for the purpose specified. 2nd. A generator having a vertical tapering body, and a centrally arranged vertical tapering flue, the taper in the body of the generator and that in the flue being in reverse directions, substantially as and for the purpose specified. 3rd. A hydrocarbon generator having an external shell, and a central flue having a series of swells or enlargements at intervals so as to increase the fire surface of the generator, substantially as specified. 4th. In a hydrocarbon generator, the combination with the generator shell having a central flue, of a series of hollow conical frustra arranged within the shell and around the central flue, substantially as and for the purposes specified. 5th. In a hydrocarbon generator, the combination with the generator shell having a central flue, of two sets of hollow conical frustra arranged within the retort around the central flue and with the basis of the alternate cone in reverse direction, substantially as and for the pur-

poses specified. 6th. In a hydrocarbon generator, the combination with the body or shell of the generator, of a central flue having a series of swells or enlargements at intervals in its length, and a series of hollow conical frustra arranged around the central flue within the generator and between the swells or enlargements of the central flue, substantially as and for the purpose specified. 7th. In combination with a vertical generator or retort, two or more vertical pipes arranged to take the contents out through the bottom of said retort, substantially as and for the purpose specified. 8th. The combination, with the generator body and central flue, a stuffing box, arranged to operate, substantially as and for the purpose specified. 9th. The combination of the furnace having the ascending and descending flues, the superheater arranged in the partition walls between the flue, and the generator, all arranged to operate substantially as and for the purposes set forth. 10th. In combination, with a generator provided with a central heat flue and set vertically in the surrounding heat flue, of an annular receiving flue provided with posts leading into the generator flue, whereby the heat is made to impinge upon the exterior of the generator on all sides and pass down outside and up through the same, substantially as and for the purposes specified. 11th. In a generator for hydrocarbon vapours, the combination of the body or case, the central heat flue provided with swells or enlargements and the deflecting plates, said central heat flue being arranged to conduct the products of combustion from the furnace-flue up through the case or body of the generator its entire length, substantially as and for the purpose set forth. 12th. The combination in a generator, of the outer shell or body, the central heat flue provided with swells or enlargements, deflector plates arranged in the swells or enlargements of the central flue, and hollow conical frustra arranged within the generator around the central flues, substantially as and for the purposes specified.

No. 17,571. Threshing Machine.

(*Machine à battre.*)

Aaron Love, Whitechurch, Ont., 1st September, 1883; 5 years.

Claim.—1st. The combination, with a thrashing-machine, of an exhaust fan communicating with the interior of the machine between the thrashing cylinder and revolving beater and provided with a suitable discharge spout for conveying the dust produced by thrashing to a point remote from the machine. 2nd. The combination with a thrashing-machine, of an exhaust fan set within a casing placed above the thrashing machine and communicating with its interior between the thrashing-cylinder and revolving beater, substantially as and for the purpose specified. 3rd. In a thrashing machine provided with an exhaust fan for the withdrawal of the dust produced within the thrashing-machine, an outer casing arranged to contain the fan provided with a perforated or slotted bottom to prevent the grain or straw being drawn into the fan. 4th. In a thrashing-machine provided with an exhaust fan for the withdrawal of the dust produced within the thrashing machine, an outer casing arranged to contain the fan and communicating with the interior of the machine, the combination with a valve or valves placed in the outer casing for regulating the power of the suction, substantially as and for the purpose specified.

No. 17,572. Felly. (*Jante.*)

Ebenezer Danford, Geneva, Ill., U. S., 1st September, 1883; 5 years.

Claim.—1st. A felly composed of a metal tube continuous in periphery, and a filling of wood or equivalent material, substantially as and for the purposes described. 2nd. A felly composed of a metal tube and a filling of wood or equivalent material, and provided with a spoke-socket of a diameter, in its outer part, sufficient to receive the whole thickness of the spoke and abruptly diminishing to a diameter in its inner part sufficient only to receive the tenon, substantially as and for the purposes described. 3rd. A felly composed of the metal tube A provided with apertures D in its inner wall and opposite smaller apertures in its outer wall, and of the wood or equivalent filling B provided with corresponding apertures E passing quite through it, substantially as and for the purpose described. 4th. The described method of constructing a felly, consisting in forcing a filling of wood or equivalent material into a metal tube, and then bending and at the same time compressing the tube thus filled between the rollers for the purpose of making the tube and filling fit each other tightly.

No. 17,573. Cylinder for Grain Scourers.

(*Cylindre à nettoyer le grain.*)

Lyman Morgan, Port Washington, Wis., U. S., 1st September, 1883; 5 years.

Claim.—A cylinder for grain scourers, composed of staves cast with wedge-shaped ridges extending spirally around the interior, and rounded ridges falling short in height of the wedge-shaped ridges and running lengthwise of the cylinder, as set forth. 2nd. A cylinder for grain scourers, having ridges a and c that run in opposite directions to each other and encompass slots between them, as set forth. 3rd. A cylinder for grain scourers, cast with a series of ridges a, notched at a', raised portions c and slots d, as set forth. 4th. A cylinder for grain scourers, having ridges that extend spirally around its interior and form a spiral trough between them, and having slots extending through the troughs, as set forth.

No. 17,574. Manufacture of Material in Imitation of Leather &c. (*Fabrication de matériaux en imitation de cuir &c.*)

Henry Loewenberg, Wiesbaden, Germany, 1st September, 1883; 5 years.

Claim.—1st. The method or process of manufacturing material in imitation of leather, wool, fabrics or embossed or figured surfaces by first preparing a negative made by applying to the surface to be imitated a layer of molten composition and then applying to the negative