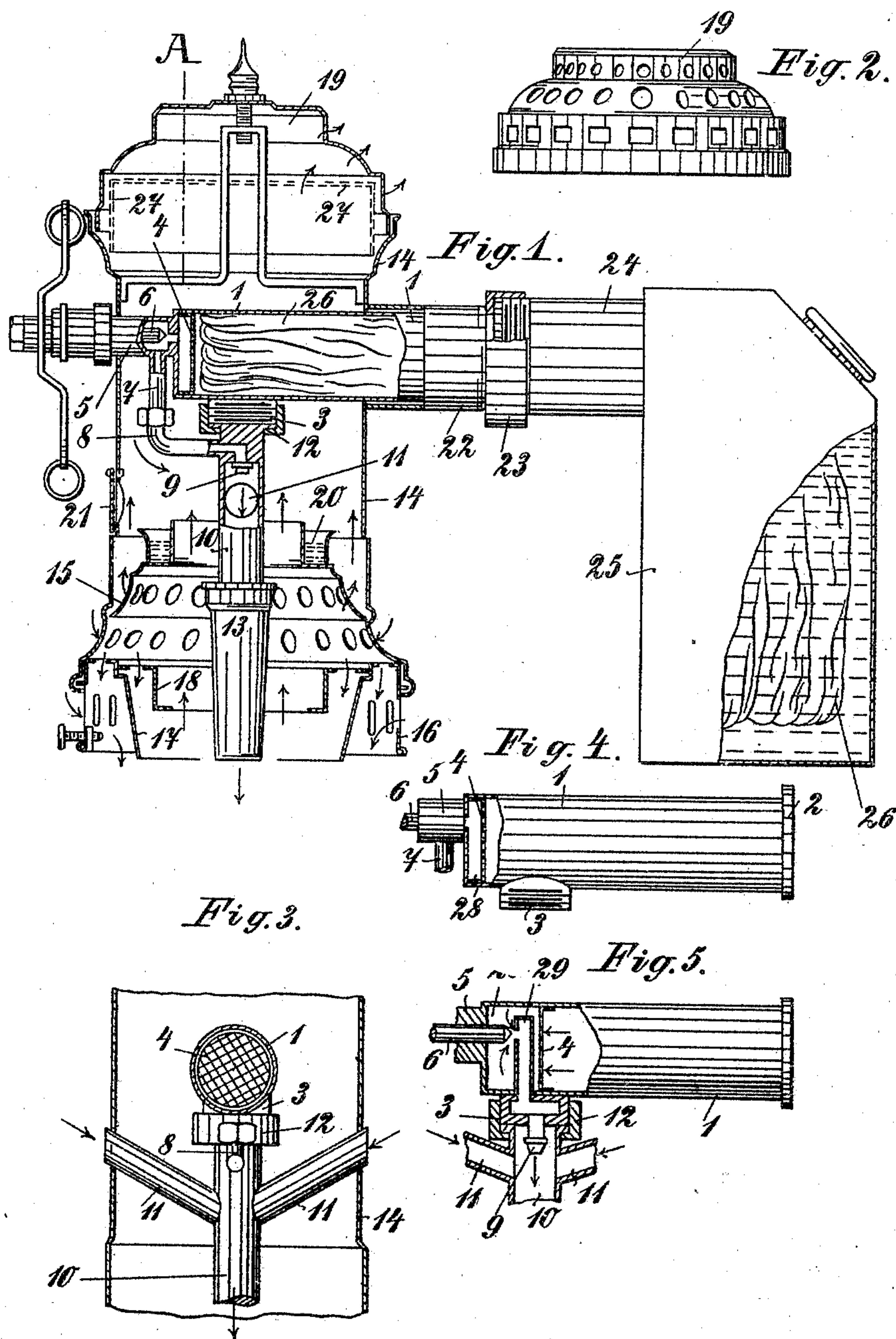


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 INVERTED INCANDESCENT LAMP FOR LIQUID COMBUSTIBLES.
 APPLICATION FILED APR. 8, 1908.

950,908.

Patented Mar. 1, 1910.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT GLINICKE, OF BERLIN, AND KARL ZEHNPFUND, OF FRIEDENAU, NEAR
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INVERTED INCANDESCENT LAMP FOR LIQUID COMBUSTIBLES.

950,908.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed April 8, 1908. Serial No. 425,869.

To all whom it may concern:

Be it known that we, ALBERT GLINICKE, residing at No. 92 Belle-Alliancestrasse, Berlin, and KARL ZEHNPFUND, residing at No. 14 Feurigstrasse, Friedenau, near Berlin, Germany, both being subjects of the King of Prussia, German Emperor, have invented a new and useful Improvement in Inverted Incandescent Lamps for Liquid Combustibles, of which the following is a specification.

The subject-matter of the present invention is an improvement in inverted incandescent lamps for liquid combustibles, to which lamps the liquid combustible, generally spirit, is supplied to a gasifier into which the liquid combustible is sucked by means of a wick passing horizontally through the casing of the lamp, the arrangement being such that the highest level of the combustible in the storage receptacle is preferably situated lower than the bottom edge of the gasifier, or at least lower than the gas-outlet in the gasifier. The gas-supply pipe is arranged in the passage of the gases of the burner, so that it is not exposed to cooling but kept warm by the hot burner-gases surrounding it and passing to the above outlet of the lamp.

The present invention also relates to the arrangement of a lamp-casing for the above described burner, for the purpose of conducting the heat rising from the flame of the burner to a definite part of the gasifier, as well as for keeping the heat together as much as possible around the gasifier and accordingly enabling an upward draft to be produced.

In order that the invention may be clearly understood, reference is made to the accompanying drawing in which several embodiments are represented by way of example, and in which:—

Figure 1 is an elevation, partly in section, through a lamp with its storage receptacle; Fig. 2 is a detail, Fig. 3 is a vertical section on the line A in Fig. 1, Fig. 4 is a detail, and Fig. 5 is a detail showing a modified form of the device for supplying gas to the nozzle.

Referring to the drawing, a gasifier 1 or the like, filled with wick 26 up to a perforated partition 4 has at its front end a closure-member 5 provided with a screw-valve 6 or the like. Between the perforated

partition 4 and the cover of the gasifier 1 is arranged a chamber 28 (Fig. 4) for collecting and superheating gas, and from this chamber an opening leads to the chamber of the closure 5, which opening can be closed or opened by the valve 6. On the part 5 there is arranged a short pipe or socket 7 to which a socket or short pipe 8 of a mixing tube 10 can be connected by means of a coupling. The short pipe 8 leads to a nozzle 9, and the mixing tube 10 has two air-supply pipes 11, which pass outward through the casing 14 of the lamp (Fig. 3). A burner head 13 is attached at the bottom end of the mixing tube 10. The latter is detachably attached to the screwed socket 3 (Figs. 1 and 4) of the gasifier 1 by means of a coupling 12 (Fig. 1).

In the constructional form represented in Fig. 5, the gas is conducted directly from the collecting chamber or superheater 28 by means of a pipe 29 to the nozzle 9 and to the detachable mixing tube 10. The gas-supply pipe 29 is thus no longer heated, or kept hot continuously, directly by the rising heat from the burner, but by conduction of heat from the casing of the gasifier or by the superheated gas surrounding it, and is protected from being cooled. The burner and gasifier connected in this manner are combined with a casing 14 which incloses them so that the combustion gases from the burner can flow upward, but the heat of the flame is however nevertheless kept together so that the gasifier can be well heated and gas can be developed. For this purpose the casing 14 is covered above with a cap 27 which has many small perforations. Over the cap there is arranged a suitable cover 19 (Figs. 1 and 2) having larger perforations. The casing 14 has many perforations at its lower edge, and an inwardly raised bottom 15 carrying or forming an igniting dish 20, which bottom likewise has many perforations for the purpose of allowing air or gases to pass through it. In the bottom edge of the casing there is arranged in addition an upwardly directed cap 16 having perforations for the passage of air, and two downwardly directed rims 17 and 18 which guide the downward current of air and the heated gases rising from the flame.

The part of the gasifier 1 projecting from the casing 14 is preferably prevented from cooling by means of a jacket 22 (Fig. 1) and

is detachably attached to a pipe 24 of a vessel 25 by means of a socket 23 or the like.

Liquid combustible is put into the igniting dish 20 through the opening 21 in the casing 14, and is ignited. Air for combustion enters through the perforations in the bottom of the cap 16. The products of combustion heat the gasifier, vaporizing the liquid fuel drawn therein by the wick 26 from the receptacle 25.

What we claim as our invention and desire to secure by Letters Patent is:—

1. In a lamp for burning combustible liquids, the combination with a gasifier, a vertical mixing tube attached to the same, and a burner on the bottom end of said mixing tube, a closure having a valve provided at one end of the gasifier, of a perforated partition separating the gasifier into two chambers, a gas-pipe adapted to connect one of said chambers with said mixing tube, a storage receptacle opening into the second of said chambers and arranged below the gasifier, and a wick passing from said storage receptacle into said second chamber.

2. In a lamp for burning combustible

liquids, the combination with a gasifier, a vertical mixing tube attached to the same, and a burner on the bottom end of said mixing tube, a closure having a valve provided at one end of the gasifier, of a perforated partition separating the gasifier into two chambers, a gas-pipe adapted to connect one of said chambers with said mixing tube, said valve being adapted to close said gas-pipe from said chamber, a storage receptacle opening into the second of said chambers and arranged below the gasifier, a wick passing from said storage receptacle into said second chamber and a casing inclosing said mixing tube, gas-pipe and part of said gasifier and provided with perforations around its lower edge and having a cover provided with perforations.

In witness whereof we have hereunto set our hands in presence of two witnesses.

ALBERT GLINICKE.
KARL ZEHNPFUND.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.