H. C. ALBRECHT.

HYDROCARBON LAMP.

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1,170,722.

Patented Feb. 8, 1916.

Fig. 1.

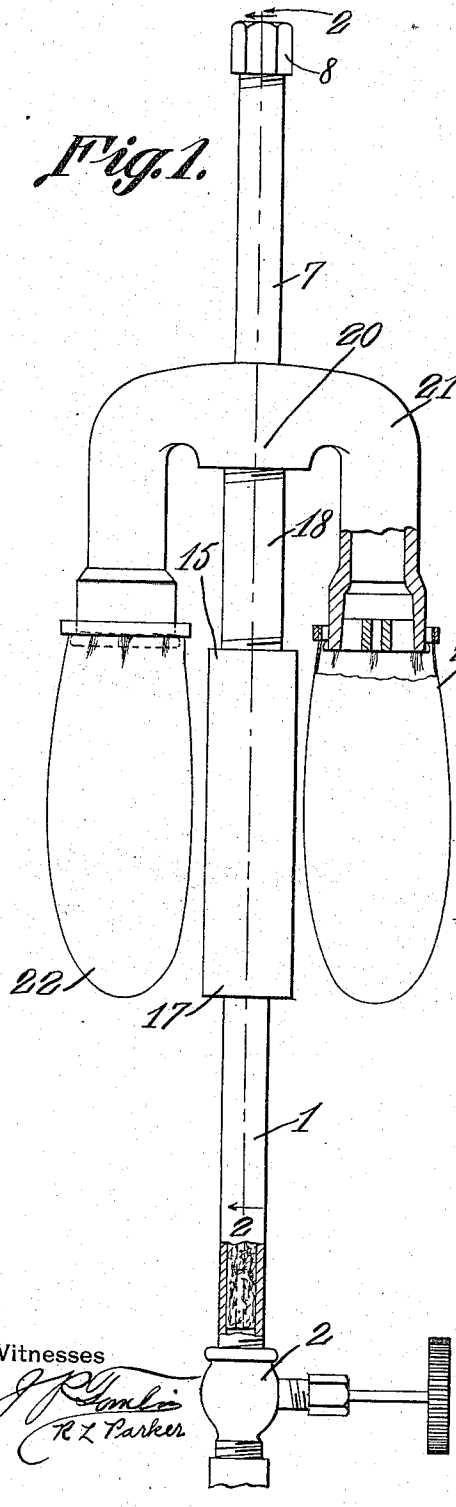


Fig. 2.

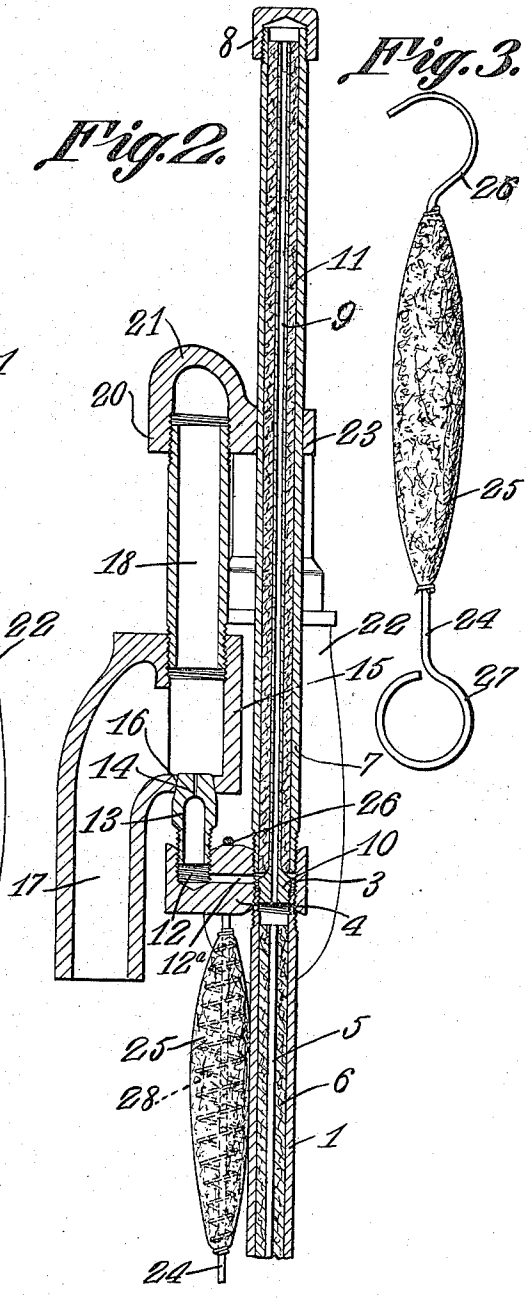


Fig. 3.

Witnesses

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HYDROCARBON-LAMP.

1,170,722. Specification of Letters Patent. Patented Feb. 8, 1916.

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To all whom it may concern:

Be it known that I, HENRY C. ALBRECHT, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented a new and useful Hydrocarbon-Lamp, of which the following is a specification.

The present invention appertains to hydrocarbon lamps, and aims to provide a novel and improved vapor lamp.

It is the object of the invention to provide a hydrocarbon lamp having a novel assemblage of the component parts, and improved generally in its construction and details, to enhance the utility and efficiency thereof, the structure having novel means for generating the gasolene or other vapor, and the device also being comparatively simple and inexpensive in construction.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a side elevation of the lamp, portions being broken away. Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1. Fig. 3 is a front elevation of the primer for starting the lamp.

In carrying out the invention, there is provided a vertical pipe or tubular member 1 threadedly engaged to a suitable controlling valve 2 and threadedly engaged at its upper end in the threaded bore of a horizontal coupling 4. The bore 3 is arranged vertically, and the coupling 4 projects to one side from the pipe 1. The pipe 1 has a central rod or wire 5 therein, and asbestos or similar packing 6 around the rod or wire 5. A vertical pipe or tubular member 7 is arranged above the lower pipe 1 and in alinement therewith and has its lower end threadedly engaged into the bore 3 and projects upwardly from the coupling 4, the upper end of the pipe 7 being closed by a removable cap 8 threaded thereon.

Disposed axially within the pipe 7 is a vertical tube 9 of smaller diameter than the pipe 7, having its upper end terminating short of or spaced from the cap 8 or the upper end of the pipe 7, while the lower end of the tube 9 has an enlarged portion 10 threadedly or otherwise engaged into the upper end of the pipe 1. The lower end of the tube 9 is thus in communication with the pipe 1, while the upper end of the said tube is in communication with the upper end of the pipe 7, the enlarged portion or plug 10 providing a closure or barrier between the adjacent ends of the pipes 1 and 7. An asbestos or equivalent packing 11 is disposed within the pipe 7 around the tube 9. The tube 9 as well as the pipes 1 and 7 and coupling 4 are constructed of suitable metal.

The coupling 4 is provided adjacent that end remote from the pipes 1 and 7 with an upper socket 12, and the coupling has a duct 12^a between the socket 12 and bore 3, this duct 12^a communicating with the bore 3 between the adjacent ends of the pipes 1 and 7, so that the said duct is in communication with the lower end of the pipe 7. A nozzle or nipple 13 is threadedly engaged into the socket 12 so as to project upwardly from the coupling, and is provided with a restricted outlet duct 14 for the vapor, the free end of the nozzle or nipple 13 being tapered. An air chamber or casing 15 is provided at its lower end with an aperture 16 receiving the tip of the nozzle 13, and the chamber 15 is provided at that side remote from the pipe 7 with a depending tubular air inlet 17 projecting downwardly past the free end of the coupling 4.

The lower end of a mixing tube 18 is threadedly engaged to the upper end of the chamber 15 in alinement with the nozzle 13 to receive the jet of vapor discharged from said nozzle, and the upper end of the mixing tube 18 threadedly engages the intermediate portion 20 of an inverted U-shaped head 21 which is hollow, and which has its limbs arranged at opposite sides of the pipe 7 in a depending position. The mantles 22 are applied to the ends of the head 21 at the opposite sides of the pipe 7 to receive the vapor from the head.

In starting the lamp, a priming torch is employed, this torch embodying a wire or stem 24 having an asbestos or equivalent wick 25 embracing the same. The stem or shank 24 is provided at its opposite ends

with a hook 26 and finger ring 27 respectively, and a coiled wire 28 has its ends engaging the stem 24 and embraces the wick 25 for holding it in place on the stem. The wick 25 is soaked with alcohol or other equivalent priming fuel, and when lighted is hung upon the lamp, the hook 26 being readily engaged over the intermediate portion of the coupling 4, whereby the flames will heat the generating pipe 1. The valve 2 which is connected to a suitable source of gasolene or other fuel, is opened to allow the fuel to flow upwardly into the pipe 1, and the fuel is vaporized, due to the heating of the pipe 1 and wire 5 and asbestos 6 contained thereon. The asbestos 6 also serves to strain the fuel. The vapor then passes upwardly through the tube 9 into the upper end of the pipe 7, and then passes downwardly through the asbestos 11 within said pipe 7 to the lower end of said pipe. The pipe 7 and parts contained thereby being heated, will serve to superheat the vapor, whereby a lighter and more effective vapor is obtained. The vapor passes from the lower end of the pipe 7 through the duct 12^a into the socket 12 and thence is discharged through the duct 14 of the nozzle 13 through the chamber 15 into the mixing tube 18, air being sucked or drawn into the chamber 15 by way of the air inlet 17, and the air is drawn into the tube 18 to be mixed with the vapor. The mixture is blown into the head 21 and from there into the mantles 22 to support the flames which heat the mantles to an incandescent state. As soon as the mantle flames appear, the torch can be removed, since the heat from the mantle flames will continue the generation of the vapor by heating the pipes 1 and 7 and the parts contained therein.

By the arrangement of the pipes 1 and 7 and tube 9, vapor is generated in an effective manner, without a complicated generating device, and the appearance and compactness of the lamp is improved since the generator simply embodies upon its exterior, the pipes 1 and 7 connected by the coupling 4. The assemblage of the parts is also of advantage, to promote compactness, simplicity and cheapness. The pipe 1 is capable of supporting the other parts of the lamp and the coupling 4, chamber 15, mixing tube 18 and head 21 are assembled in a compact and desirable manner with the pipes 1 and 7. The intermediate portion of the head 21 has an outstanding apertured ear 23 embracing the pipe 7. By sliding the head 21 upwardly, the mixing tube 18 and chamber 15 are lifted therewith off of the nozzle 13, whereby said nozzle is readily accessible for purpose of cleaning, repair or replacement. The various parts may be readily assembled and taken apart.

The present appliance may be used as a table lamp, as a lantern, as a chandelier lamp, or the like, and a suitable shade or globe and its holder may be employed as usual.

Having thus described the invention, what is claimed as new is:—

A hydrocarbon lamp comprising a horizontal coupling having an upstanding nozzle, a lower pipe attached to said coupling, an upstanding tube attached to said pipe, a second upstanding pipe attached to the coupling, the tube extending into the second pipe, said coupling having a duct establishing communication between the respective end of the second pipe and the nozzle, an air chamber engaged to said nozzle, an upstanding mixing tube attached to said chamber to receive the jet from the nozzle, and a burner head attached to said mixing tube and engaged to said second pipe, said head being adapted to support a mantle at one side of said second pipe.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HENRY C. ALBRECHT.

Witnesses:

HERMAN SCHRIVER,

EDITH BAUR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."