No. 646,052. Patented Mar. 27, 1900.

W. C. HOMAN.

ACETYLENE GAS LAMP.

(Application filed June 9, 1899.)

(No Model.)

Fig. 1.

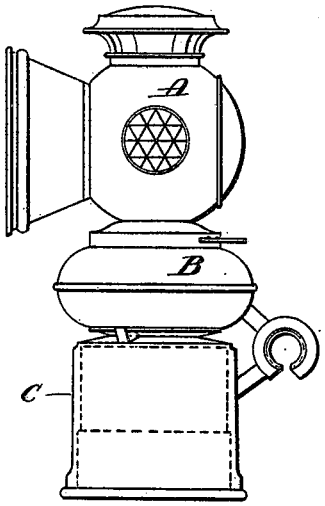


Fig. 4.

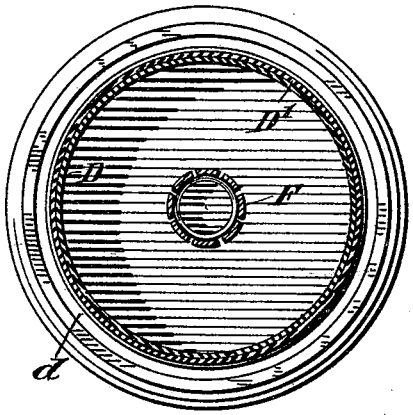


Fig. 3.

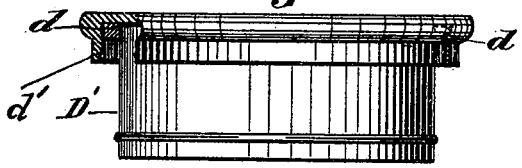
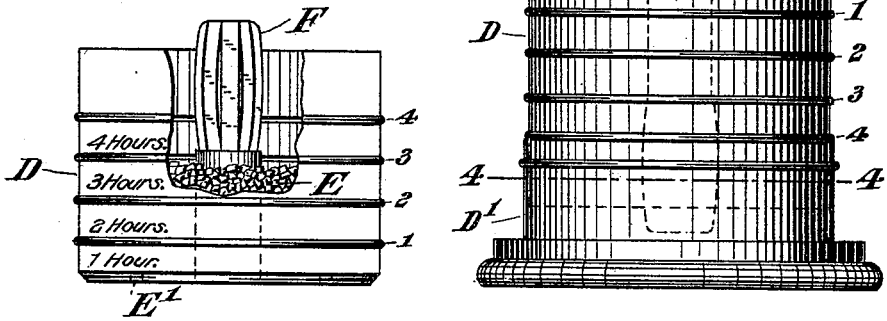


Fig. 2.



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ACETYLENE-GAS LAMP.

SPECIFICATION forming part of Letters Patent No. 646,052, dated March 27, 1900.

Application filed June 9, 1899. Serial No. 719,873. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HOMAN, a citizen of the United States, residing at Meriden, New Haven county, State of Connecticut, have invented certain new and useful Improvements in Acetylene-Gas Lamps, of which the following is a full, clear, and exact description.

My invention relates to acetylene-gas lamps; and it consists in the novel mechanical features hereinafter fully described.

The chief object of my invention is to improve the gas-generating portion of the apparatus, and to that end, therefore, I have so constructed the same that attachment and detachment are effected in a simple and effective manner, thus permitting the operator to quickly cleanse or recharge the lamp. Incidentally the lamp may be used to the most economical advantage by reason of certain features hereinafter described.

In the drawings, Figure 1 is a side elevation of one form that the lamp may take. Fig. 2 is a side elevation of the carbid-chamber into which the gas is generated, removed from the chamber shown in Fig. 1 and relatively enlarged. Fig. 3 is an elevation of the carbid-chamber inverted, the parts thereof being open. Fig. 4 is a section on the line 4 4, Fig. 2.

A is the body of the lamp carrying the reflectors and in which the burner is located.

B is the water-reservoir, from which water is supplied to the carbid.

C is an outer casing surrounding the carbid-holder, which latter is removably carried within said casing in the manner hereinafter described. The carbid-holder is formed principally of two parts D D', said parts being telescopic to the extent that one section fits snugly into the other, as shown in Figs. 2 and 3. The line upon which the parts D D' may be separated is preferably near the lower part of the carbid-holder, so that carbid E contained within the holder serves to seal the joint against the escape of gas through other than the proper channels. The proper outlets for the gas from the carbid-holder are indicated at E' E' in the top of the holder.

F is what may be termed the "water-distributing" tube, connected at one end to the section D of the carbid-holder. The sides of this tube F are suitably perforated or slotted, so that water fed into the tube F from the reservoir B will be conducted to the carbid which surrounds said slotted portion of the tube F when the parts are in their operative position, as shown in Figs. 1 and 2. The bottom of the section D' is screw-threaded, for example, as at *d'*, and the lower edge of the casing C is also threaded in a corresponding manner, so that the said parts may be screwed together.

d is a yielding packing in the form of a washer by which a gas-tight joint is formed.

In one of the sections D of the carbid-holder are formed a series of graduations 1 2 3 4, so placed relatively to the top of said holder as to indicate when the user is charging the lamp the time (for example, the hours) that given quantities of carbid will generate an illuminating-gas.

Operation: After removing the holder bodily from the outer chamber C, I am enabled to separate the sections D D'. In charging the lamp with carbid the telescopic section D is inverted temporarily, as shown in Fig. 3, forming a cup-like receptacle into which the calcium carbid is placed. If the user desires that an illuminating-gas should be generated for, say, three hours, he fills the receptacle D to the level of the graduation 3. The section D' is then slipped into place, closing the section D. Then the said parts are again inverted to the position indicated in Fig. 2, in which position the section D will be held either by frictional engagement with the section D' or by any other desired means. Then the holder is secured to the lamp, and the section D' not only serves to close one end of the carbid-holder, but also the lower end of the gas-space around the holder and inside the casing B. When the holder is turned right side up, the carbid falls to the opposite end, so that when it becomes moistened by the water it seals the joint between the sections D and D' to a sufficient extent to prevent the escape of gas. As the gas is generated by the decomposing carbid it is forced through the openings E' E' in the holder and into the chamber C, from where it is carried by a suitable pipe (not herein shown) to the burner.

Other features of this lamp (not herein necessary to explain in detail) may be found in another application filed by me, serially numbered 719,183; but a sufficient disclosure of the apparatus is contained above to enable any one skilled in the art to fully understand the subject-matter of the following claims.

What I claim is—

1. In a gas-lamp, a carbid-holder, a generator-casing, the side walls of said carbid-holder being graduated, means for securing the carbid-holder within the generator-casing and simultaneously closing the open end of said generator-casing.

2. An invertible carbid-holder for an acetylene-gas lamp consisting of two cups arranged to telescope one within the other, one of said cups being provided with an imperforate bottom, the other cup being provided with gas outlets or perforations near its top and also being provided with indicating-marks around its circumference so arranged that said cup may contain different determined amounts of carbid between said marks and the perforated end.

Signed at Meriden, Connecticut, this 29th day of May, 1899.

WILLIAM C. HOMAN.

Witnesses:
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