No. 646,051. Patented Mar. 27, 1900.

W. C. HOMAN.

ACETYLENE GAS LAMP.

(No Model.) (Application filed June 3, 1899.)

Fig. 1.

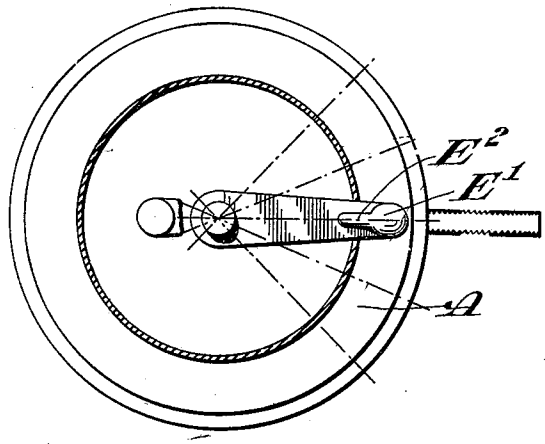

Fig. 4.

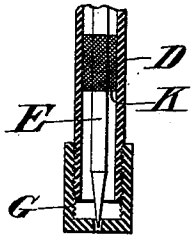

Fig. 2.

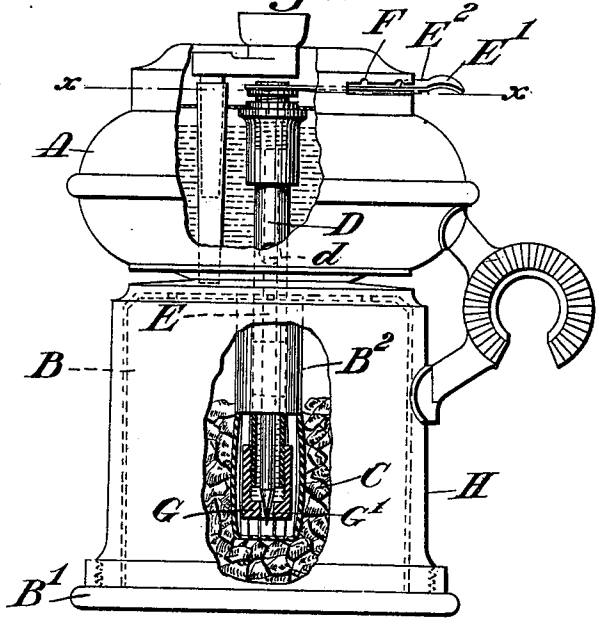

Fig. 3.

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WILLIAM C. HOMAN, OF MERIDEN, CONNECTICUT, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE EDWARD MILLER & COMPANY, OF SAME PLACE, AND WILLIAM P. CRARY, OF NEW YORK, N. Y.

ACETYLENE-GAS LAMP.

SPECIFICATION forming part of Letters Patent No. 646,051, dated March 27, 1900.

Application filed June 3, 1899. Serial No. 719,183. (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 improvements in acetylene-gas lamps; and it consists in the novel construction, arrangement, and combination of parts thereof hereinafter described.

The chief object of my invention is to provide a water-valve—that is, a valve to regulate the flow of water to the carbid—that may be simple, effective, and durable and that may readily be adjusted and also taken apart, so as to compensate for wear or permit cleansing of the part, as desired.

Referring to the drawings, Figure 1 is a plan view of the lower portion of one form of acetylene-gas lamp to which my improvement may be applied. Fig. 2 is a side elevation of such a portion of a lamp as is shown in Fig. 1, portions of the body being broken away and parts of the internal mechanism being shown in vertical section. Fig. 3 is a view of the under side of one of the details. Fig. 4 is a vertical section of a detail.

A is a water-chamber.

B is the gas-chamber, in which a suitable amount of carbid C may be placed.

D is a pipe leading from the water-chamber into the gas-chamber, water being permitted to enter the pipe D through the opening *d*. Preferably at the upper end of the pipe D is a screw-threaded opening, into which an elongated valve E, which is correspondingly screw-threaded at said point, is projected. At one end of the valve E is carried a regulating-handle E′, by which said valve is turned. This handle E′ may have a projection E^2, by which the valve-handle may be frictionally held at any desired position by means of a notched rack F. The lower end of the elongated valve E is preferably tapered toward a point, and this end forms the valve proper.

Mounted upon the tube D and adjacent the tapered end of the valve E is an adjustable seat G, adjustability being effected in any desired manner, but preferably by screw-threaded engagement between the parts D and G. The part G is provided with an opening G′ in line with the valve E, but preferably of slightly-smaller diameter than the greatest diameter of said valve. A screw-driver slot G^2 may also be provided in said part G to afford one means for readily turning the said part to adjust it longitudinally with respect to the valve and its related parts.

In getting the first adjustment the handle E′ may be turned so as to throw the valve inwardly to its greatest extent. The part G is then screwed onto the lower end of the tube D until it engages the end of the valve E to an extent sufficient to effect a water-tight union. By then moving the regulating-handle E′ in a direction to withdraw the valve E from tight engagement with the seat a sufficient opening is afforded to permit a proper amount of water to be supplied to the gas-chamber. Should the valve-seat become corroded or should in any other way the water-passage become clogged, it may be corrected by simply removing the single part G. Should the parts become worn at the vital point, so that the water-supply could not be entirely shut off, this defect may be instantly corrected by readjusting the parts, as previously described.

The specific construction by which in this particular form of lamp I am permitted to gain access to the part G is described in detail in another application filed by me, serially numbered 719,873, (Case A;) but, briefly stated, it is as follows: The gas-chamber B is an internal removable chamber carried by the screw-base B′, which takes onto the outer casing H. The gas-chamber carries the water-distributing tube B^2, in which suitable openings are formed and within which the water-valve mechanism is located. To gain access to the part G, it is therefore necessary in this particular form of lamp to unscrew the base B′, by which the gas-chamber B and the tube B^2 are removed bodily, thus exposing the said part G.

It is manifest, of course, that the improved mechanism may be employed in other forms of lamp-bodies.

In Fig. 4 I have illustrated one means whereby an undue supply of water is prevented when the lamp is subjected to severe concussion, as is frequently the case in use upon a bicycle. This end I accomplish by the addition of a gauze filling K between the valve E and the water-supply tube D. The presence of this filling K will not prevent the descent of the water; but in the event of concussion it will offer a resistance to the quick passage downwardly of said liquid, and in experience I have found it to be one satisfactory means for accomplishing the desired end.

What I claim is—

1. In an acetylene-gas lamp, a water-chamber, a gas-generating chamber, a water-supply pipe depending directly from said water-chamber, an elongated valve controlling an opening in said water-supply pipe, a valve-seat in said opening adjustably mounted in line with said valve, and a water-distributing pipe around said valve and valve-seat and within said generating-chamber.

2. In an acetylene-gas lamp, a water-chamber, a gas-generating chamber, a water-supply pipe, a valve controlling an opening in said supply-pipe, a valve-seat adjustably mounted with respect to said opening, and in line with said valve, and a slitted water-distributing pipe around said valve and valve-seat and within said generating-chamber.

3. In an acetylene-gas lamp, a water-chamber, a gas-generating chamber, said chamber being made up of a plurality of sections, a water-distributing pipe carried by one of said sections, a water-supply pipe projecting into said distributing-pipe and connected with the water-chamber, an outlet in said supply-pipe, a valve for controlling said outlet and a valve-seat to coöperate with said valve.

4. In an acetylene-gas lamp, a water-chamber, a gas-generating chamber, the casing for which is formed in sections, a water-distributing pipe having slots in its side, said pipe being bulged adjacent said slots and means to feed water from the water-chamber into said distributing-pipe.

5. In an acetylene-gas lamp, a water-chamber, a gas-generating chamber, the casing for the latter being separable, a distributing-pipe having openings in the sides thereof projecting into said generating-chamber, a water-supply pipe projecting into said distributing-pipe and means for controlling said water-supply comprising a longitudinally-adjustable valve and a controlling-handle therefor attached directly to said valve, and a graduated holding-rack for said controlling-handle.

6. In an acetylene-gas lamp, a gas-generating chamber and a distributing-pipe projecting into said chamber, said distributing-pipe being provided with slots and being bulged adjacent said slots, in combination with a water-supply and means for regulating the same.

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

WILLIAM C. HOMAN.

Witnesses:
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