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ACETYLENE GAS GENERATING LAMP.
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949,349.

Patented Feb. 15, 1910.

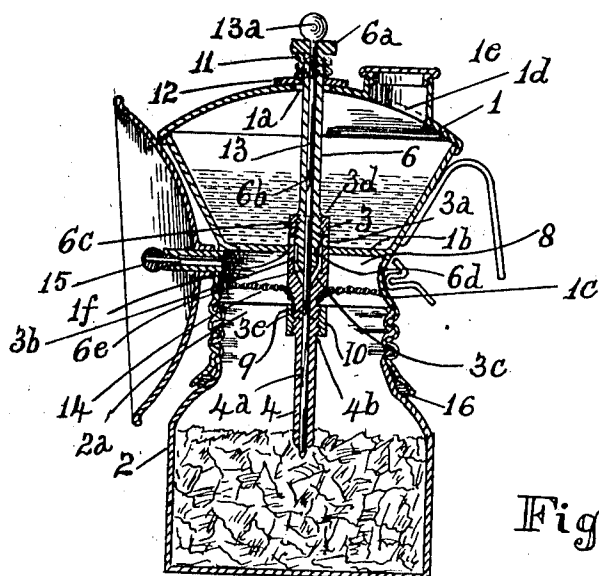


Fig. 2.

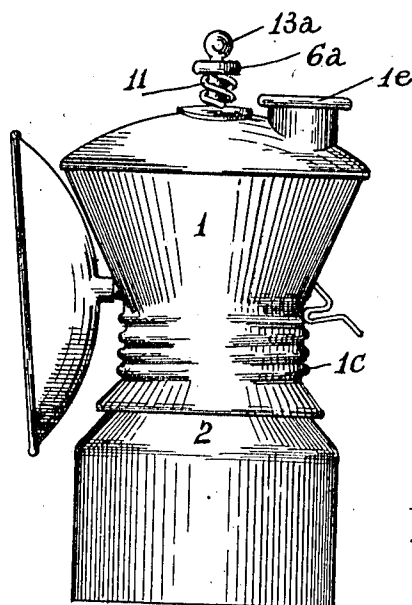


Fig. 1.

Witnesses.

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UNITED STATES PATENT OFFICE.

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ACETYLENE-GAS-GENERATING LAMP.

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Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, JACOB BLESER, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Acetylene-Gas-Generating Lamps, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use my said invention.

My invention relates to an acetylene gas generating lamp, such as are used by miners, prospectors, hunters, etc., giving a much brighter, cheaper and cleaner light than oil.

The purposes of this invention are to provide a valve body of improved construction, to provide a valve stem easily removable for the purpose of cleaning the valve, to provide means for connecting the feed-tube with the valve-body, to provide means for cleaning the feed-tube without detaching the valve or the valve stem; to provide a screen of improved construction and to provide means to prevent the escape of water from the reservoir.

With these ends in view my invention consists in the novel features of construction and combinations of parts shown in the annexed drawing to which reference is hereby made, and hereinafter particularly described and finally recited in the claim.

In the drawings Figure 1 is a side view of the complete lamp and Fig. 2 is a vertical axial section through the lamp.

The main structure of the lamp comprises a water reservoir 1 having a downwardly extending part 1^a and a carbid box 2 having an upwardly extending neck 2^a screwing into the downwardly extending screw-threaded part 1^a of the water reservoir substantially as shown. A gasket 16 between the members 2^a and 1^a forms a gas-tight connection between the reservoir 1 and the box 2. The reservoir 1 has in its upper part an opening 1^a of suitable size to permit easy insertion or removal of the valve stem 6, and also has a diaphragm 1^b forming the bottom of the chamber containing the water. A removable cap 1^c covers an opening 1^d through which water is poured into the reservoir. In the center of the diaphragm 1^b is a hole 1^e in which the valve body 3 fits tightly. The valve body 3 has internal threads 3^a, openings 3^a, a central chamber 3^b, a tapered valve seat 3^c, at the bottom of the chamber 3^b, a

downwardly extending reduced screw-threaded member 9 and a central vertical hole 3^e in which the needle 13 fits loosely. The feed tube 4 has a central bore 4^a in which the needle 13 fits loosely and has at its upper end a screw-threaded part 4^b. A coupling 10 screws onto the member 9 of the valve body and the screw 4^b of the tube 4 and connects the tube with the valve body. The valve stem 6 has a central bore 6^a, a screw-threaded part 6^c screwing into the screw 3^a of the valve body, a reduced part 6^a within the chamber 3^b of the valve body and having its lower end 6^a tapered to fit on the valve seat 3^c; and has at its upper end a knurled handle 6^a by which the valve stem may be turned to screw it into the valve body, or to unscrew it from the valve body. The washer 12 fits around the valve stem and covers the opening 1^a. A coiled spring 11 surrounds the valve stem between the handle 6^a and the washer 12 and acts to hold the washer firmly over the opening 1^a, so as to prevent the escape of water through the opening. The needle 13 fits loosely within the bores of the valve stem, the valve body and the feed tube and has at its upper end a knob 13^a for convenient handling of the needle. A screen 14 of wire cloth, fits on and extends entirely around the lower tapered part of the valve body and extends entirely across that part of the reservoir which is below the diaphragm 1^b, so as to form a gas chamber 8 above the screen, and the screen prevents ashes and dust from entering the gas chamber. The lamp has a burner 15 in communication with the gas chamber 8. The burner may be of any approved construction.

When the parts are assembled and the valve-stem is screwed down so that its tapered lower end 6^a rests on the tapered seat 3^c and water is supplied within the reservoir and carbid is supplied within the box, the water will flow through the openings 3^a into the chamber 3^b, and upon unscrewing the valve stem to the necessary extent water will flow downward along the needle 13 and through the tube 4 and will be applied within the carbid mass, in an obvious manner.

If the tube becomes clogged the valve stem 6 may be screwed down to close the valve and the needle 13 may then be slid upward and downward to clean the tube 4 and remove any obstruction at the end thereof. When that is done the valve may be opened

to the desired extent to permit the water to again flow downward along the needle and through the tube. In case the valve seat becomes clogged the water will be poured out
5 from the reservoir and the valve stem will be unscrewed from the valve body and withdrawn through the opening 1^a and the valve seat may then be properly cleaned or ground and the valve stem may then be replaced.

10 It will be seen that the needle may be easily moved without disturbing any of the other parts and that the spring 11 adds to keep the washer 12 in place over the opening 1^a when the valve is opened as well as when
15 it is closed.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

20 The combination of a carbid box; a water reservoir connectible with the carbid box and having a diaphragm; a valve body

fixed centrally on the diaphragm of the reservoir and having a central chamber, a tapered valve seat, inlet openings and a downwardly extending member; a feed tube
25 connected with the downwardly extending member of the valve body; a valve stem screwing into the valve body and having a central bore, also having a downwardly extending member provided with a tapered
30 end fitting on the tapered valve-seat of the valve body; and a needle extending through the valve-stem, the valve-body and the feed-tube.

In witness, whereof I have hereunto subscribed my name at Springfield, Ill., this
35 20th day of September, 1908.

JACOB BLESER

Witnesses:

G. R. BIGLER,

HENRIETTA BERGNER.