

No. 794,080.

PATENTED JULY 4, 1905.

L. S. BUFFINGTON.

CARBID HOLDER.

APPLICATION FILED FEB. 6, 1904.

Fig. 1.

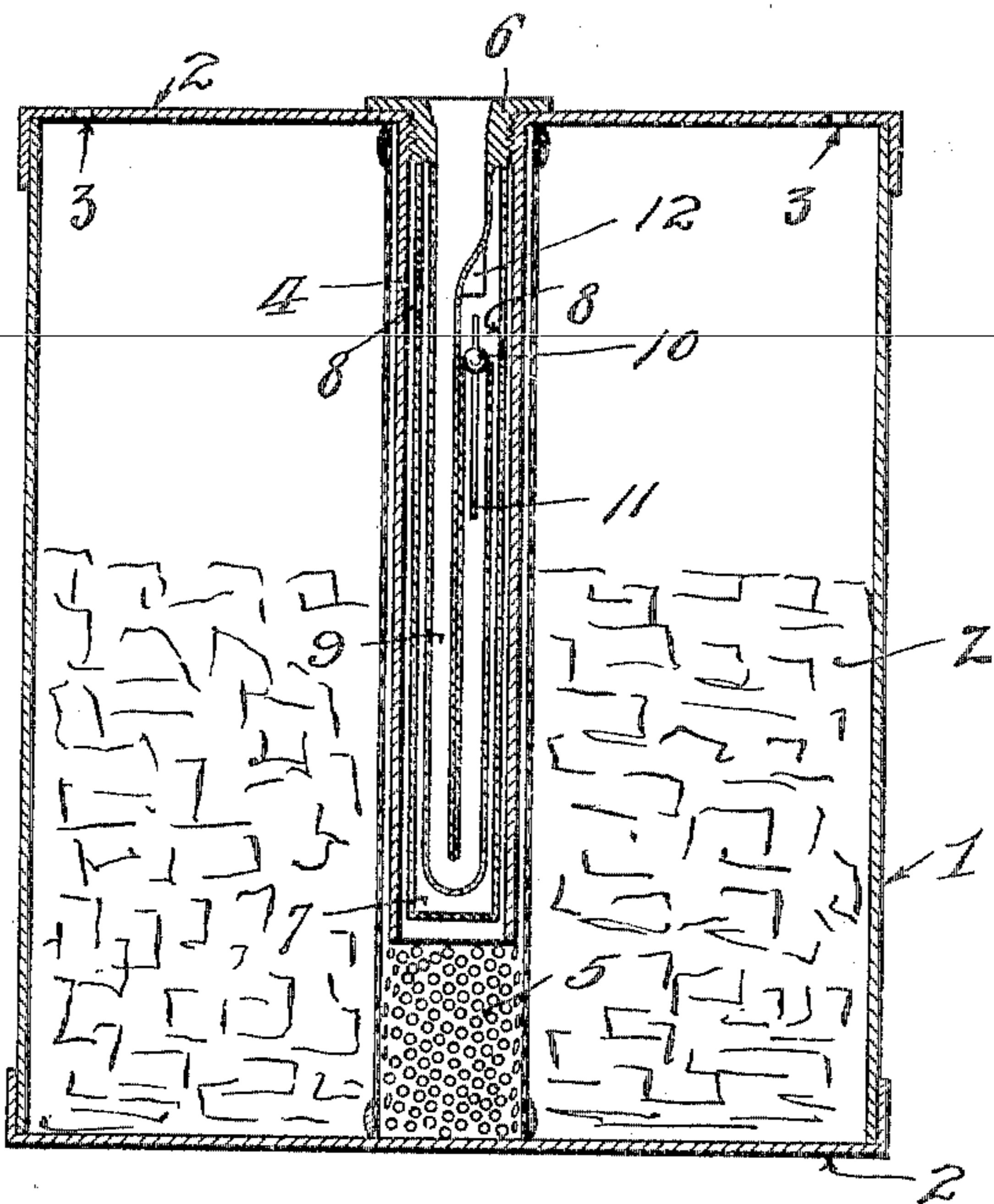
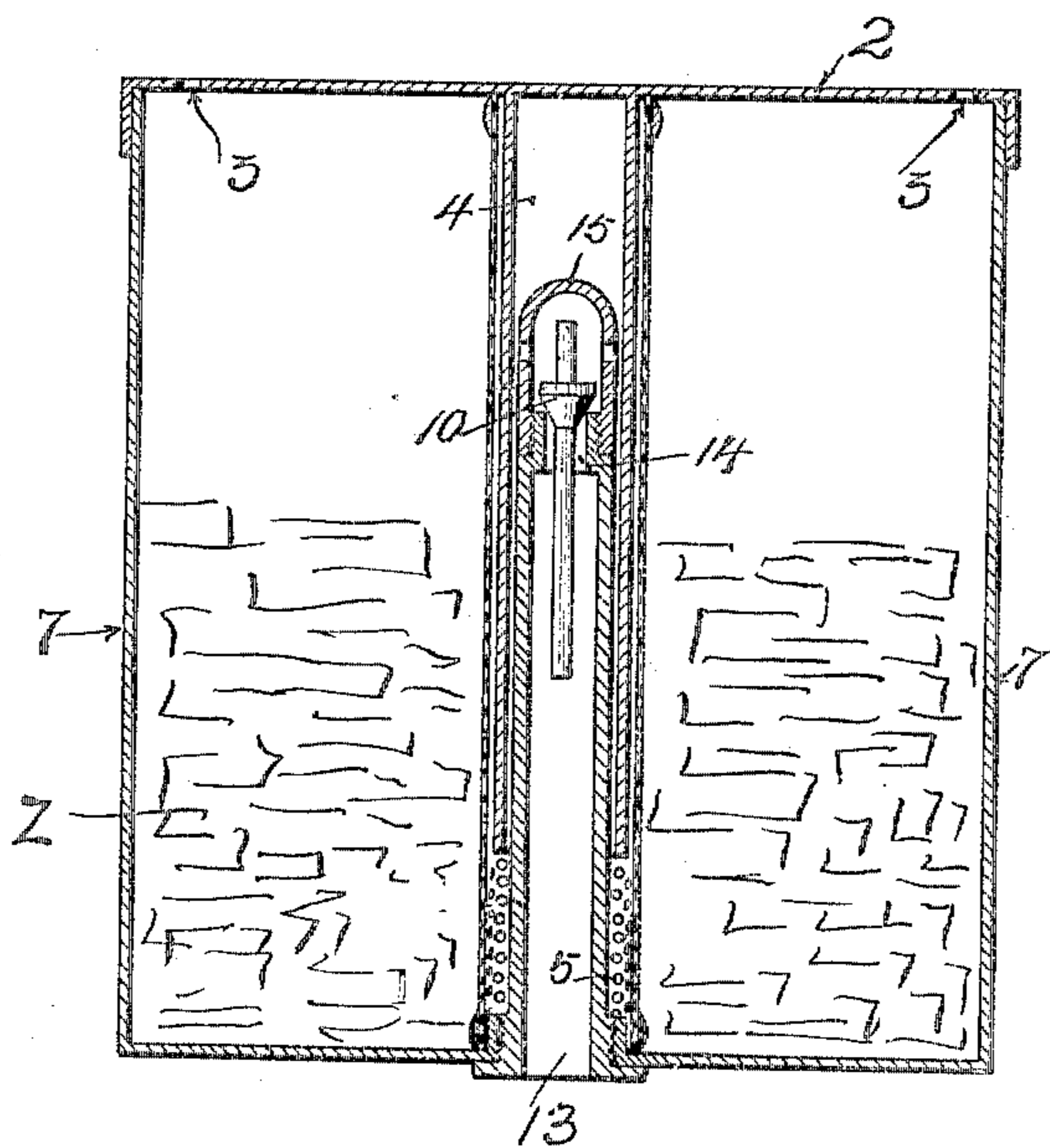


Fig. 2.



Witnesses,
H. D. Kilgore,
A. H. Osoahf.

Inventor,
Leroy S. Buffington,
By his Attorney,

Williamson & Merchants

UNITED STATES PATENT OFFICE.

LERROY S. BUFFINGTON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO THE
NORTHERN LIGHT COMPANY, OF MINNEAPOLIS, MINNESOTA, A CORPO-
RATION OF MINNESOTA.

CARBID-HOLDER.

SPECIFICATION forming part of Letters Patent No. 794,080, dated July 4, 1905.

Application filed February 6, 1904. Serial No. 192,349.

To all whom it may concern:

Be it known that I, LEROY S. BUFFINGTON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Carbid-Holders for Acetylene-Gas Generators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to acetylene-gas generators, and has for its object to provide an improved carbid-holder therefor.

To the above ends, the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view in vertical section, taken centrally through the carbid-holder designed in accordance with my invention; and Fig. 2 is a similar view illustrating a modified form of the carbid-holder.

Referring first to the construction illustrated in Fig. 1, the numeral 1 indicates the cylindrical body of the holder, which is provided with frictionally-held telescopically-removable heads 2. The upper head 2 is provided with gas-escape passages 3 and with a centrally-depending imperforate sleeve 4, which is open at its lower end. Perforate sleeve 5 loosely fits around the sleeve 4 and extends from the lower to the upper head. A flanged collar 6 is screwed into the upper end of the sleeve 4 and is provided with depending water-delivery tube 7, the lower end of which is closed, but which is provided near its upper end with water-escape passages 8. As shown in Fig. 1, one perforation 8 is located above the other, so that under an extreme rise of water the increased flow will be afforded to the carbid. Depending from the collar 6 within the tube 7 and forming the extension of the passage through said collar is a small tube 9, which extends downward nearly to the

bottom of said tube 7 and then is bent upon itself and extended vertically upward to a point slightly below the lowermost perforation 8. In this open delivery end of the bent return-tube 9 is a gravity-seated check-valve 10 afforded by a small ball, having a slender stem 11, that projects downward into said tube and also slightly upward above the ball. To prevent the valve from being forced from operative position by a sudden inflow of water through the tube 9, the receiving end of said tube is formed with a stop-lug 12, which overlies the said upper end of said valve-stem, so that the said valve can be removed only by pressing it laterally so as to bend its stem. This carbid-holder should be about two-thirds full of the carbid, (indicated at *c*), so as to leave room for the expansion of the carbid residue or solid products of the decomposition.

The carbid-holder illustrated in Fig. 1 is intended for use in connection with generators in which the water is supplied thereto from an overhead tube adapted to fit in the flaring perforation of the collar 6, as is the case, for instance, in my companion application, Serial No. 192,346, filed of even date herewith.

The carbid-holder illustrated in Fig. 2 is intended for use in connection with a gas-generator in which the water is delivered to the carbid from a tube leading thereto from a point below the carbid-holder, as illustrated in my companion application, Serial No. 192,348, filed of even date herewith. In this construction the body 1 of the holder is provided with a fixed bottom, but with a telescopically-removable frictionally-held head 2, having gas-escape passages 3 and a centrally depending sleeve 4, which sleeve is closed at its top. The water-delivery tube 13 opens centrally through the bottom of the body 1, telescopes into the sleeve 4, and is provided with a discharge-passage 14, that is normally closed by a gravity-seated check-valve 10, having a slender stem 11. Outward of the check-valve 10 the said tube 13 is provided with a removable perforated nozzle-cap 15. A perforate sleeve 5 surrounds the sleeve 4 and tube 13 and extends from top to bottom of the holder.

In both forms of the carbid-holder illustrated the perforate sleeves serve to hold the carbid out of contact with the interior tube and water-passages and prevent the latter from being clogged by the carbid residue. The said perforate tubes being removable may be easily cleaned, and as they may be removed from the holder with the carbid residue it is evident that the removal of the residue is made a comparatively easy matter. Again, in both forms of the device check-valves are provided for preventing the escape of gas through the water-feed passage and for preventing the water in the feed-tube from being forced backward under excessive pressure of the gas. These check-valves therefore insure more steady supply of feed-water.

From what has been said it will be understood that the carbid-holder described is capable of considerable modification within the scope of my invention as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A carbid-holder having applied thereto and removable therewith from a generator, a valved water-delivery tube and a surrounding protecting-sleeve, which sleeve is secured at one end to one head of said holder, and is open at its other end.

2. A carbid-holder having a valved water-delivery tube secured to one head thereof, an imperforate protecting-sleeve secured to one head of said holder and loosely surrounding said water-tube, and a perforate tube surrounding said imperforate sleeve, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

LEROY S. BUFFINGTON.

Witnesses:

ROBERT C. MABEY,
F. D. MERCHANT.