L. R. IRUZ.

CARBID HOLDER FOR ACETYLENE GAS GENERATORS.

APPLICATION FILED JULY 9, 1910.

1,003,047. Patented Sept. 12, 1911.

Fig. 1.

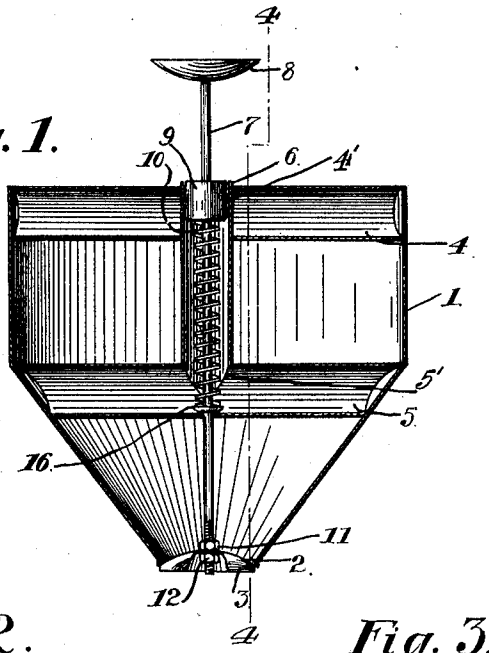


Fig. 2.

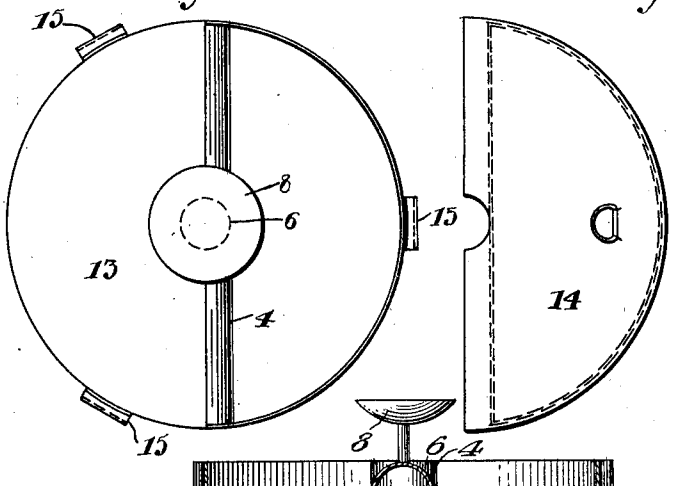


Fig. 3.

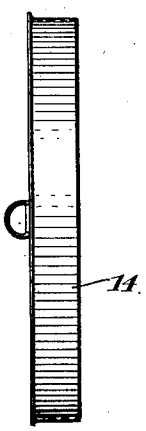
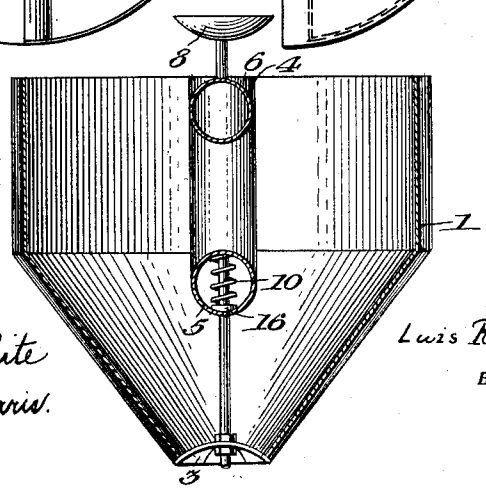


Fig. 4.



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CARBID-HOLDER FOR ACETYLENE-GAS GENERATORS.

1,003,047. Specification of Letters Patent. **Patented Sept. 12, 1911.**

Application filed July 9, 1910. Serial No. 571,152.

To all whom it may concern:

Be it known that I, LUIS RIVAS IRUZ, a citizen of the United Mexican States, residing at Mexico city, Federal District, Mexico, have invented certain new and useful Improvements in Carbid-Holders for Acetylene-Gas Generators, of which the following is a specification.

This invention relates to carbid-hoppers for acetylene gas generators, in which a cup-shaped valve member is held in the valve seat or mouth of the tapered carbid-hopper by means of a spring, and by providing on a threaded valve stem a check-nut on one side of the valve member and another nut on the opposite side. The tension of the spring for keeping the valve set is thereby made adjustable.

In the accompanying drawing, Figure 1 is a vertical section of the hopper, Fig. 2 is a top view of the same, Fig. 3 is a plan view of the removable cover as well as showing the same in a side view and Fig. 4 is a vertical section taken on the line 4—4 of Fig. 1.

Referring to the drawing, the hopper proper is designated as (1) and is of the customary inclined tapered form at its bottom, where it is provided with the discharge orifice (2) that forms the valve seat into which the inverted cup-shaped valve (3) is normally set, whereby the carbid is obstructed from sliding into the water receptacle on top of which the hopper is placed. Inside the hopper is disposed the transverse upper tubular support (4) and thereunder the lower tube (5) both being united by the vertical tube (6) which lower end is inserted into the lower tube (5) and its upper end runs through the transverse upper tubular support (4). The vertical tube 6 affords a housing for the valve-stem 7, and its pressure spring 10. By being jointed to the tubular supports 4 and 5, as indicated at 4′ and 5′, respectively, a strong and durable structure is provided, which will adequately withstand the strains of a large quantity of carbid around the tube 6, and the lower end of the vertical member 6 is not only substantially supported, but an inclosed action is provided for the lower end of the spring 10 and the washer 16. Furthermore, the lower end of the tube 6 is adequately supported, without obstruction of the carbid contained in the hopper, since the rounded nature of the cross tube or support 5 offers no crevice or ledge on which the carbid lumps can lodge, even around the joint formed by its juncture with the vertical tube 6. The same remarks apply to the upper transverse support 4, no ledge being formed around the member 6 or on the support proper to receive and hold the carbid particles.

To the upper extremity of the valve stem (7) is rigidly fixed the pressing disk (8), and the collar (9) at some distance from the disk, fixed to the valve stem, guides this latter in its sliding movement up and down inside the vertical tube (6) under the action of a spring (10) that surrounds the stem and abuts against the collar (9) in its upward expansion, while the lower end of the spring, which is attached to the washer (16), rests upon the inner wall of the lower transverse tubular support (5). The other end of the valve stem that penetrates the transverse tubular support (5) is threaded, and upon this extension is screwed the check-nut (11) so that the inverted cup-shaped valve member (3) may be stopped at the desired distance when slipped on to the stem and afterward retained by the nut (12). By means of these two nuts (11) and (12) the tension of the spring may readily be adjusted in accordance with the weight of the bell, that floats around the hopper in the class of generators where the carbid is dropped into the water receptacle from time to time.

The mouth of the hopper is partly closed by the stationary half-cover (13); and the removable other half portion (14) which is clearly disclosed in the Fig. 3, excludes dampness and vapor from the interior of the hopper. The hopper can readily be supported on the top of the water receptacle of the gas generator by the lugs (15) projecting from the outside of the hopper, engaging the rim of the receptacle.

What I claim is:

1. In an acetylene gas generator, the combination with a hopper having a discharge bottom, a valve controlling said bottom and having a valve stem extending vertically in said hopper, a tubular housing inclosing said valve stem, a transverse tubular supporting element extending across said hopper at the lower end of said housing and jointed to said lower end in a V-shaped joint to communicate therewith, and an upper transverse supporting element jointed to said housing to surround the latter with a circu-

lar joint, said transverse elements acting to ward off particles of carbid against lodgment.

2. In an acetylene gas generator, the combination with a hopper having a discharge bottom, a valve controlling said bottom and having a valve stem extending vertically in said hopper, a tubular housing inclosing said valve stem and depending centrally in said hopper, and upper and lower transverse elements extending to and supporting said housing, said transverse supporting elements having curved surfaces adapted to ward off particles of carbid against lodgment and the lower of said supporting elements having a V-shaped opening in its upper side to which the lower end of said housing conforms and is jointed.

In testimony whereof, I have affixed my signature, in presence of two witnesses.

LUIS RIVAS IRUZ.

Witnesses:
K. GRANDJEAN,
JOSÉ MATA.