

C. F. JENKINS.
ACETYLENE GENERATING AND STORING APPARATUS.
APPLICATION FILED JUNE 14, 1911.

1,010,266.

Patented Nov. 28, 1911.

Fig. 1.

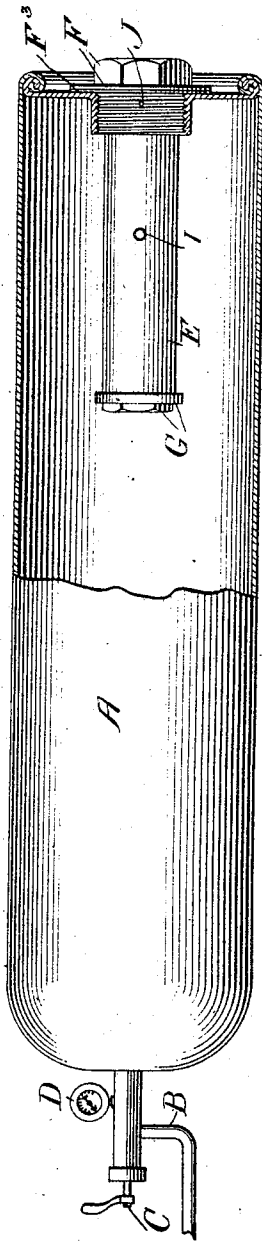
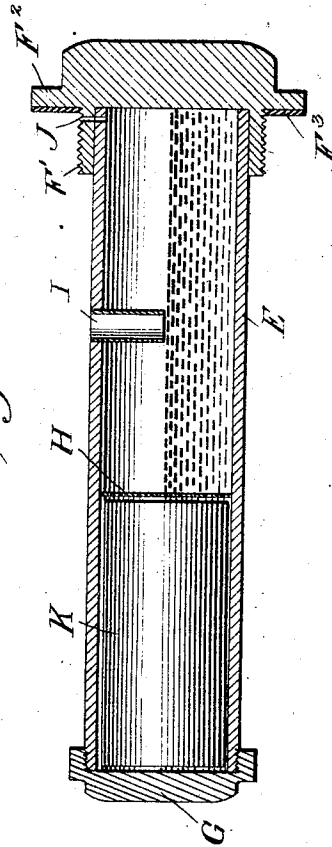


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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ACETYLENE GENERATING AND STORING APPARATUS.

1,010,266.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed June 14, 1911. Serial No. 633,150.

To all whom it may concern:

Be it known that I, CHARLES FRANCIS JENKINS, a citizen of the United States, residing at 1808 Park road northwest, Washington, in the District of Columbia, have invented certain new and useful Improvements in Acetylene Generating and Storing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to acetylene generating and storing apparatus and the embodiment shown and hereinafter described in detail sets forth devices especially intended for use on automobiles or other vehicles.

The general object is to provide a compact, inexpensive apparatus which while effective is safe even in the care of the most unskilled persons. In general a small steel storage tank is provided with a removable generator in which is placed, from time to time, a limited amount of water and a carbide cartridge containing only sufficient carbide to fill the tank with gas at a safe pressure. Provision is also made for automatically and harmlessly discharging any gas that may be in the tank when the generator is removed.

In the accompanying drawings, Figure 1 is a side elevation, partly in axial section, of an acetylene storage tank of common general form. Fig. 2 is an enlarged view showing in axial section a generator seen in Fig. 1 in place in the tank.

In these figures, A represents a seamless steel, horizontally placed, tank provided with a discharge or lamp-supply pipe B having a valve C and communicating with a pressure gage D. Into the wall of this tank is screwed a cylindrical generator tube E, preferably, as shown, axial with respect to the tank and projecting into the same from one end. This tube is closed at one end by a permanently attached cap F threaded at F' to engage in a threaded aperture in the tank, provided with a circumferential flange F², a gasket F³, and adapted to receive a wrench or the like by which it may be screwed into place in the tank or be detached therefrom. The opposite end of the tube is closed by a threaded cap G also adapted to be rotated by a suitable tool. The tube is divided transversely by a fo-

raminous diaphragm H, and is provided, between the diaphragm H and cap F with a small, open tube I extending inward approximately to the axis of the tube. The tube is also provided with an aperture J leading outward through its wall near the flange F² of the cap.

To prepare the generator for use, the cap G is removed, the aperture J is closed, if desired, and while the tube is held erect water is placed in the tube, any surplus escaping through the small lateral tube I, a carbide cartridge K, preferably of paper, is then placed upon the diaphragm and the cap G is replaced, and the whole generator is screwed firmly into the tank A, as shown in Fig. 1.

The parts are so proportioned and arranged that in any position of the tube little or no water will escape through the tube I. When the generator is in place, the water flows around the lower portion of the cartridge and soon penetrates to the carbide. Gas is at once generated, filling the upper part and then escaping through the pipe I into the tank, whence it passes to the lamps in the usual way. Each cartridge contains enough, and only enough, carbide to fill the tank properly and hence there is no danger from over-generation.

When the gage shows that the gas is nearly exhausted, the generator is removed and refilled. Danger is here avoided by means of the aperture J which is safely closed when the generator is screwed home in the tank wall but which is opened as soon as the generator is partly unscrewed and while it is still safely held by the threads. If then gas under material pressure fills the tank when the detaching operation begins, it escapes harmlessly between the flange and tank wall.

It is obvious that changes in construction may be made while keeping within the invention, and I do not wish therefore to limit myself to the construction shown.

What I claim is:

The combination with a gas storage tank having a suitable threaded opening, of a tubular water holding generator projecting inward through said opening and having its outer end portion in threaded engagement in said opening, a foraminous wall dividing the generator transversely and forming in

one end thereof a carbid compartment, an open tube passing outward through the wall of the body of the generator from a point in the axial portion of its interior, the apparatus being provided with a vent passage leading outward from the interior of the tank and having its outer end in position to be closed by screwing home the generator

and opened by partially unscrewing the same.

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

CHARLES FRANCIS JENKINS.

Witnesses:

ROBERT CRAIG GREENE,
JAMES L. CRAWFORD.