

H. C. BUSCHMANN.
CARBID INDICATOR FOR ACETYLENE GENERATORS.
APPLICATION FILED MAR. 23, 1911.

1,006,826.

Patented Oct. 24, 1911.

Fig - 1 -

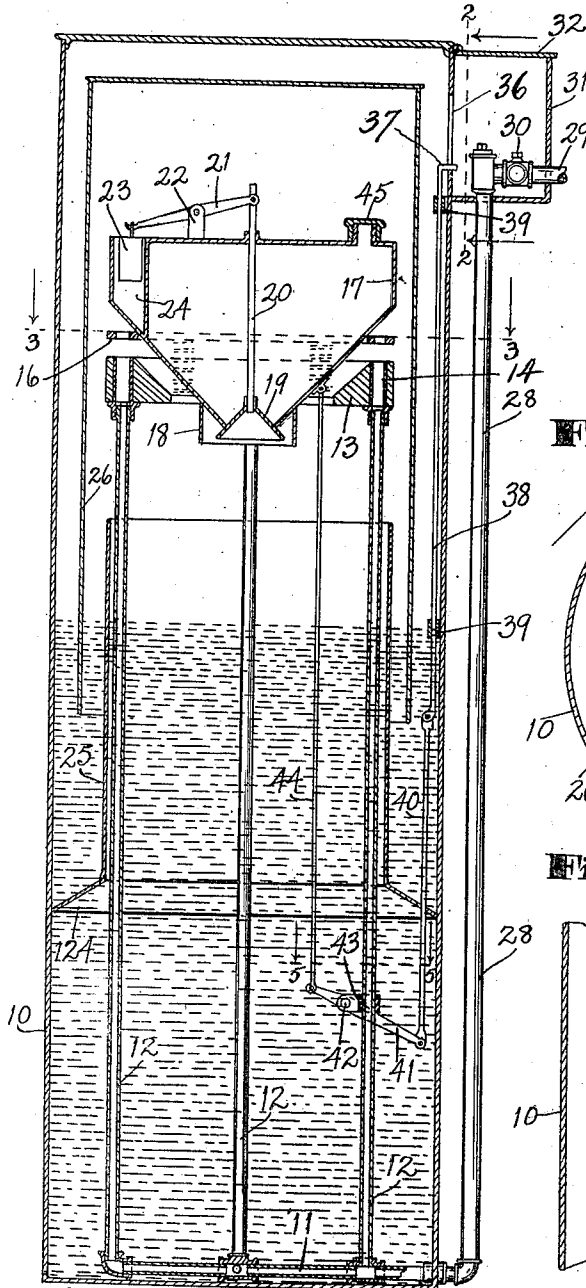


Fig - 2 -

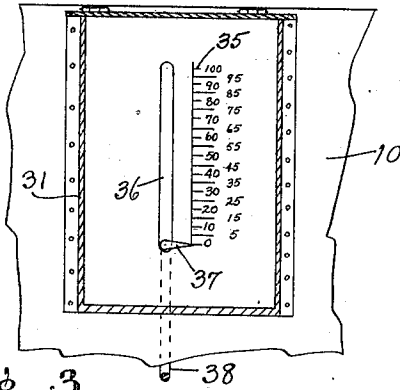


Fig - 3 -

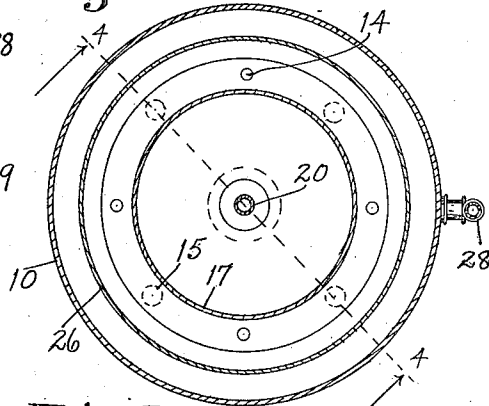


Fig - 4 -

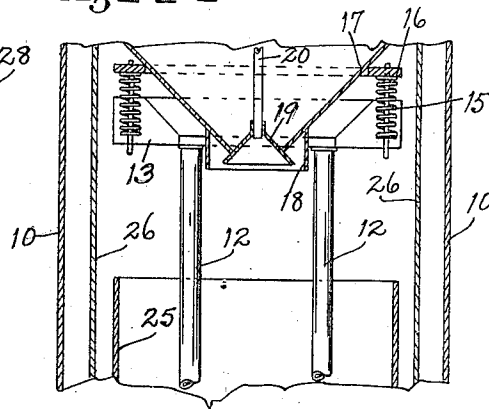
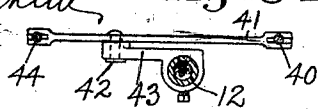


Fig - 5 -



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UNITED STATES PATENT OFFICE.

HARRY C. BUSCHMANN, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE JENNE ACETYLENE GAS MACHINE COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION.

CARBID-INDICATOR FOR ACETYLENE-GENERATORS.

1,006,326.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed March 23, 1911. Serial No. 616,441.

To all whom it may concern:

Be it known that I, HARRY C. BUSCHMANN, a citizen of the United States, and resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain useful Carbide-Indicator for Acetylene-Generators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide, in connection with acetylene gas generators, means for indicating the quantity and condition of the carbide.

The nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a central vertical section through the device. Fig. 2 is a section on the line 2-2 of Fig. 1. Fig. 3 is a transverse section on the line 3-3 of Fig. 1. Fig. 4 is a partial vertical section through the device on the line 4-4 of Fig. 1. Fig. 5 is a section on the line 5-5 of Fig. 1.

There is provided an outside tank 10, which may be buried in the ground or not, as desired. Within said tank on the bottom there is a horizontal arrangement of pipes 11, from which four upwardly extending gas pipes extend to an annular head 13 through which gas inlet ports or passageways 14 extend. In said annular head or ring 13 a number of vertical spiral springs 15 are mounted for supporting an annular plate or ring 16, which surrounds the conical portion of a carbide holder 17 and supports said holder. When the holder is full of carbide the ring 16 and springs will be depressed, so that the ring will rest upon the annular head 13, but as the carbide is used and the contents of the holder become lighter, the carbide holder will be forced upwardly by the springs. In Figs. 1 and 4 the device is shown with the parts in their idle position.

The outlet of the carbide holder is in the lower end of the conical end of the holder and is surrounded by a casing 18 and is closed or controlled by a conical valve 19, the stem 20 of which extends up and is reciprocable through the top of the carbide holder, and it is actuated or moved upwardly by a lever 21 fulcrumed between its ends on a bracket 22 on top of the carbide holder, and its outer end supports a weight

23 which extends into and operates within a chamber 24 at one side of the carbide holder. About midway of the tank 10 there is an annular partition plate 124 secured to the tank and inclined inwardly and upwardly and is secured to and supports a cylindrical casing 25 which projects above the normal water-line and also above the lower end of the gas chamber 26 which is open at the bottom and closed at the top and is supported by the gas and water.

The operation of the parts so far described is as follows: After the apparatus is suitably charged with water and carbide, gravity will cause the gas tank 26 to descend, so that its top engages the valve stem 20, and the valve 19 being depressed lets some carbide drop down into the water. Gas will form and pass up within the upper portion of the gas tank 26, and when there becomes a sufficient quantity of such gas, it will lift the tank 26 out of contact with the valve stem, and then the weight 23 will close the valve 19, so that no more carbide drops down until the quantity of gas in the gas chamber or reservoir is sufficiently diminished to enable gravity to cause said tank to descend again and open the valve. Hence the construction automatically regulates its action. The gas passes down through the pipes 11 and 12 out of the tank, up through the pipe 28 to a service pipe 29, which is provided with a valve 30 within a chamber 31, which has a lid 32 on the upper end thereof. This entire construction is intended to be buried with the top of the apparatus flush with the top of the ground, although that is not necessary. Within the casing 31 and on or in connection with the wall of the tank there is provided a vertically disposed scale or series of graduations with numerals indicating pounds and having reference to the number of pounds of carbide in the carbide holder. As herein shown, the scale is shown to indicate the amount of carbide up to one hundred pounds. Parallel with said scale there is a slot 36 in the wall of the tank through which a pointer 37 extends, which pointer is secured on the upper end of a rod 38 located within the tank 10 and vertically reciprocable through the guides 39 secured to the wall of the tank. Another rod 40 is pivoted to the lower end of the rod 38, and said rod 40 reciprocates through the partition plate 24 and at its lower end is pivoted

to one end of a lever 41 which is fulcrumed between its ends at 42 in a bracket 43 secured to one of the pipes 12. The other end of the lever 41 is pivotally connected with a rod 44 which extends up to the carbid holder and at its upper end is pivoted to the carbid holder within the annular head 13 so as to be reciprocated and actuated by the carbid holder.

10 The carbid indicating apparatus operates as follows: When the carbid holder is charged with carbid through the cap-closed carbid opening 45, the carbid holder will settle down and that will cause the pointer 15 or indicator 37 to move upwardly to the number indicated by the weight of the carbid. As the carbid is used or consumed, its weight diminishes and the springs 25 correspondingly push the carbid holder, which 20 causes a correspondingly downward movement of the pointer 37 along the scale 35. Thus anyone can readily see at any time how much carbid there is left in the carbid holder by raising the lid 32 and inspecting the indicator in the chamber formed by the casing 31.

I claim as my invention:

1. An acetylene gas generating apparatus including a carbid holder with a tapering

lower portion, an annular plate loosely extending around the tapering portion, springs for supporting said annular plate, stationary means in which said springs are mounted, a scale with weight graduations, and means actuated by the movement of said carbid holder and movable along said scale for indicating the weight of the carbid in the carbid holder.

2. An acetylene gas generating apparatus including a main tank with a vertical slot 40 in the wall thereof, weight graduations adjacent said slot, a carbid holder within the tank, yielding means for supporting the same so it may have vertical movement, a lever mounted within the tank, a connecting rod from said lever to said carbid holder, whereby the carbid holder actuates the lever, and an indicating rod connected with and actuated by said lever and having a pointer projecting through said slot. 45

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named. 50

HARRY C. BUSCHMANN.

Witnesses:

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