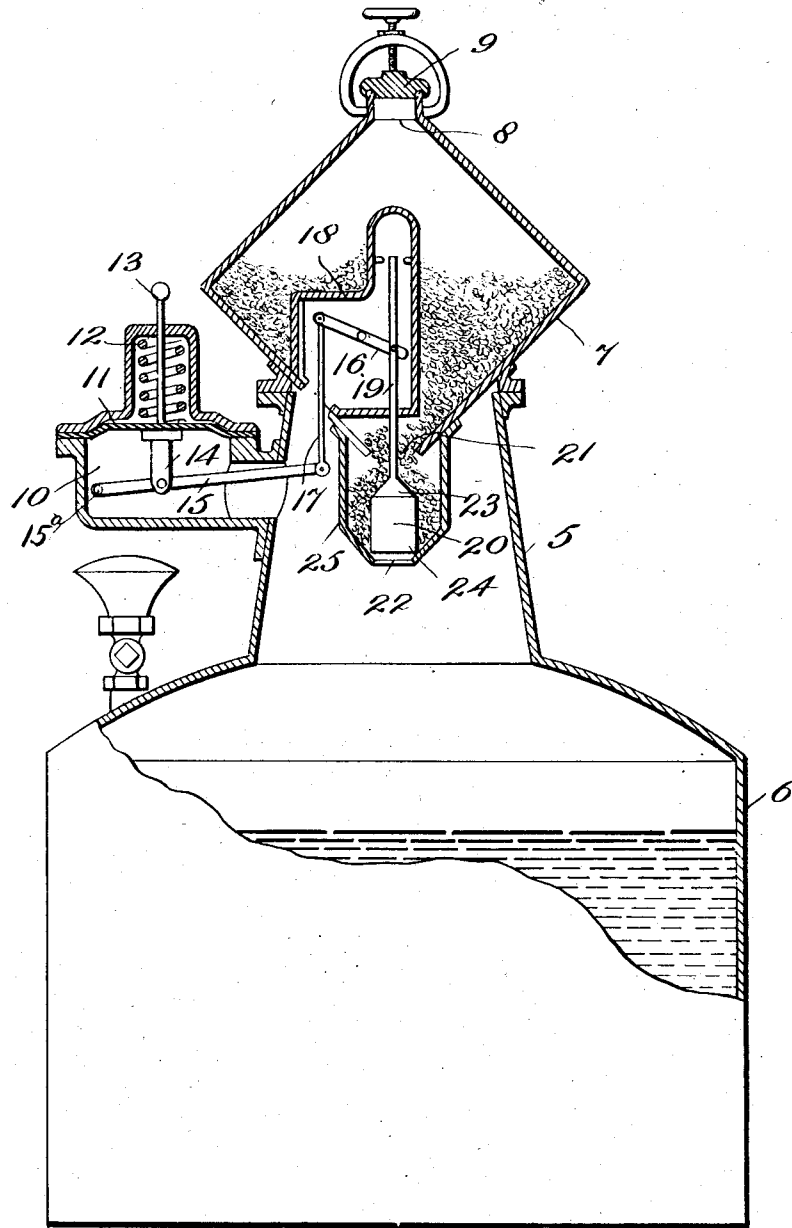


C. HOLDER, JR.
CARBID FEEDING MECHANISM.
APPLICATION FILED JUNE 26, 1912.

1,051,736.

Patented Jan. 28, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

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CARBID-FEEDING MECHANISM.

1,051,736.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed June 26, 1912. Serial No. 706,115.

To all whom it may concern:

Be it known that I, CHARLES HOLDER, JR., a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Carbid-Feeding Mechanism, of which the following is a specification.

This invention relates to carbid supply boxes and more especially to valves controlling the carbid which is permitted from time to time to fall in the gas tank and water therein, as will be more fully described in the following specification, set forth in the claim and illustrated in the drawings, wherein is shown a sectional view of the upper end of the gas tank with the invention applied thereto.

In the gas tank of this nature as hereto constructed, trouble has been experienced in providing a valve which will free itself of the particles of carbid so as to permit of a close fit on its seat so as to prevent the dropping of particles of the material into the water of the tank below.

This invention provides a cupola 5 located at the top of the tank 6 and having thereon a carbid hopper 7 with the usual handhold 8 at the top and lid 9 to fit on same. To one side of the cupola 5 is a chamber 10 whose upper end is provided with the diaphragm 11 above which is arranged a spring 12 to normally force it downward. The diaphragm carries a stem 13 with a fork 14 at its lower end and to which is pivoted the lever 15, the latter being fulcrumed at 15^a within the chamber 10. The latter is connected with the second lever 16 by means of link 17, the lever 16 is pivoted in the valve rod housing 18 of the hopper 7 and as shown, it carries the stem 19 having at its lower end the valve 20 adapted to seat itself in the opening 21 or 22 according to the pressure of the gas in the tank 6 and as it is influenced by the diaphragm 11. The upper

end 23 of the valve is conical, so as to permit the carbid to slide off and to fit closely within the opening 21 while the lower end of the valve is provided with a sharp edge 24 which forces aside any particles of carbid and fits closely within the valve opening 22.

When the pressure of gas is above the normal within the tank on account of an oversupply of carbid in the water, diaphragm 11 is forced upward as shown, raising the link 17 and forcing the valve 20 into the opening 22. Now, it is evident that the valve 20, when in one position serves to admit carbid from the hopper to discharge into the chamber 23, while in another position of the valve 60 communication between the hopper and the chamber is cut off and the opening 22 uncovered to permit the carbid in said chamber to discharge into the tank 6.

The main object of this invention is to provide the valve constructed so as to properly close several openings as the supply of gas is increased or diminished.

What I claim as new is:—

In an acetylene gas tank, the combination 70 with a carbid supply hopper on the top of the tank and having opening in its lower end, of a chamber below the opening and having an outlet in its lower side, a valve wholly within the chamber and having a 75 rectangular edge on its lower side and a conical top, a rigid stem for the valve, a housing to guide the stem, a casing at one side of the supply box, a diaphragm in the casing, a spring to press the diaphragm 80 downward, a lever operating on the diaphragm, and means in the housing for connecting the lever with the valve stem.

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

CHARLES HOLDER, JR.

Witnesses:

GEO. A. BYRNE,

WM. E. PALMER.