No. 816,717.

PATENTED APR. 3, 1906.

J. B. DULANEY.

ACETYLENE GAS GENERATOR.

APPLICATION FILED AUG. 3, 1905.

Fig. 1.

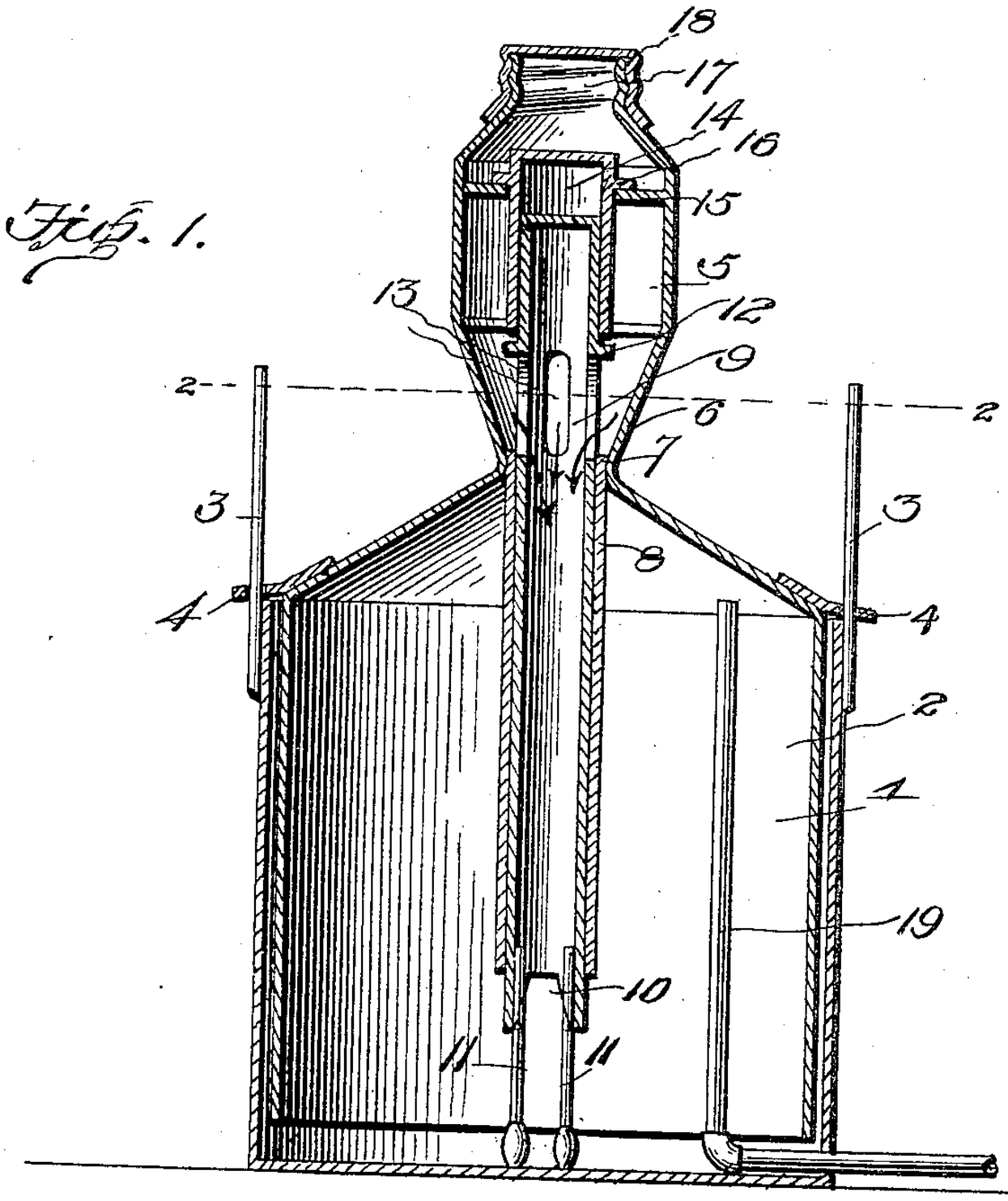
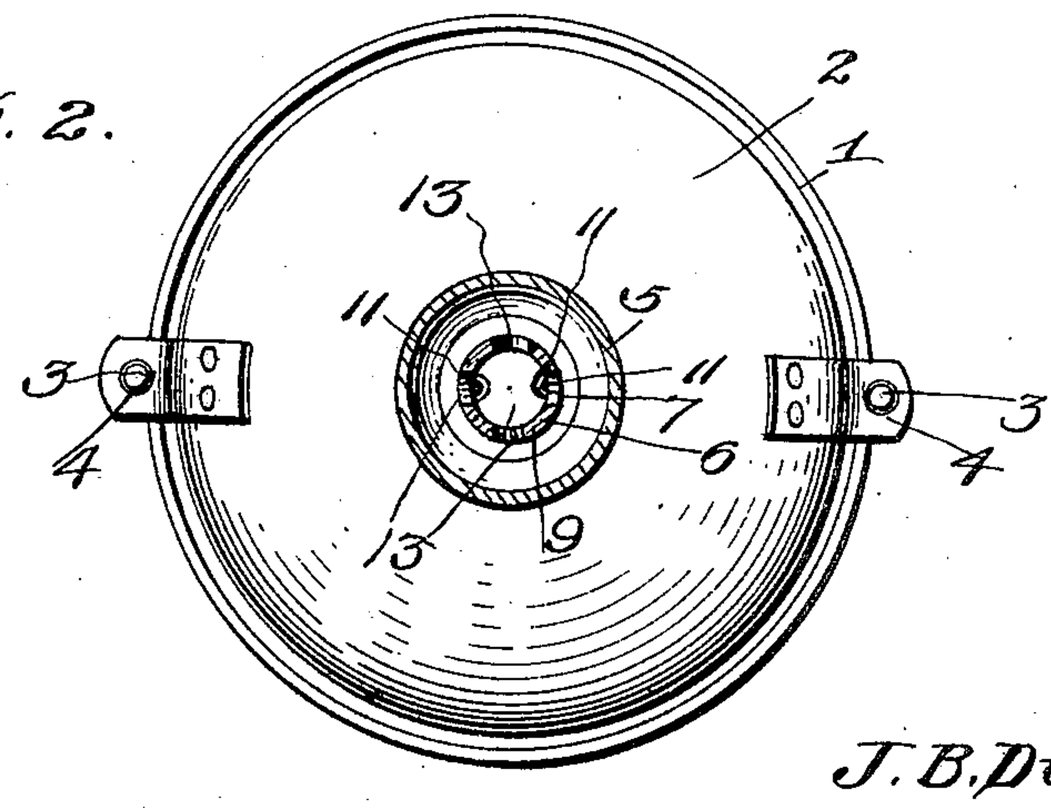


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN B. DULANEY, OF ECTOR, TEXAS.

ACETYLENE-GAS GENERATOR.

No. 816,717. Specification of Letters Patent. Patented April 3, 1906.

Application filed August 3, 1905. Serial No. 272,566.

To all whom it may concern:

Be it known that I, JOHN B. DULANEY, a citizen of the United States, residing at Ector, in the county of Fannin and State of Texas, have invented certain new and useful Improvements in Acetylene-Gas Generators; and I do 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 invention relates to improvements in acetylene-gas generators, and more particularly to means for feeding carbid to the water.

The object of the invention is to improve and simplify the construction and operation of feeding devices of this character, and thereby render the machine more efficient and durable in use and less expensive to manufacture.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view through my improved acetylene-gas generator, and Fig. 2 is a detail horizontal sectional view taken on the plane indicated by the line 2 2 in Fig. 1.

Referring to the drawings by numerals, 1 denotes a water tank or receptacle having an open top through which slides a gas-bell 2. The latter is guided in its sliding movement by vertically-extending guide-rods 3, which are secured upon the tank 1 and project through apertured lugs or brackets 4, provided upon the cone-shaped top of the bell 2.

Upon the center of the top of the bell is mounted a carbid holder or receptacle 5, which has a tapered bottom 6, terminating in an annular valve-seat 7. The latter is arranged at the upper end by a concentrically-disposed guide-tube 8, which projects down into the bell 2, as shown. Within this tube 8 is slidably mounted a valve 9, which is in the form of a hollow cylindrical tube of greater length than the guide-tube 8, so that it projects up into the carbid-holder 5 and down beyond the lower end of the guide-tube 8. Said lower end of the valve-tube 9 is open and slotted, as shown at 10, and provided with two depending feet 11, which may be weighted, if desired, and which are adapted to engage the bottom of the tank 1 for the purpose of opening the valve, as hereinafter explained. The upper end of the valve-tube 9 is closed, and adjacent to said end upon its outer side is provided an annular ring or bead 12, which coacts with the valve-seat 7. In the valve-tube 9 immediately below the valve-ring 12 is formed an annular series of openings 13, through which the carbid may pass from the hopper or holder 5 into the valve-tube 9 and from thence into the water in the tank 1. In order to further guide the valve 9 and to prevent the carbid from interfering with its upward movement, I provide within the hopper 5 upon the upper end of said tube 9 a guide cap or sleeve 14. The latter has its lower open end telescoping the upper closed end of the valve-tube 9 and is supported upon an annular flange 15, which is secured within the hopper 5, as shown. The tube or sleeve 14 projects freely through an opening in the center of the flange 15 and is supported by means of an annular bead or shoulder 16, which is provided upon the upper end of the sleeve 14 and adapted to engage said flange 15. The hopper or holder 5 is filled with carbid through an opening 17 in its top, which is closed by a screw-cap 18, as shown. The gas within the bell 2 is drawn off through a suitable outlet-pipe 19.

The operation of the machine will be readily seen upon reference to the drawings. As the gas in the top of the bell is consumed the latter lowers until the feet 11 of the valve-tube strikes the bottom of the tank 1 and prevent further downward movement of the valve, so that as the bell continues to descend the openings 13 will be brought into the hopper 5 to permit the carbid to pass through them and into the water in the tank 1. As fresh gas is generated the bell 2 rises and the valve-tube 9 drops by gravity, so that its valve-ring 12 engages the seat 7 and prevents the further discharge of the carbid.

Various changes in the form, proportion, and the minor details of constuction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An acetylene-gas generator comprising a water-tank, a gas-bell slidable therein, a carbid-hopper mounted upon said bell, a valve-seat in said hopper, a guide-tube depending from said seat and into said bell, a tubular valve slidable in said guide-tube and

formed with discharge-openings, a valve-ring upon said valve-tube above its openings, a projection upon the lower end of said valve-tube adapted to engage the bottom of said tank, and a combined guide and guard for the upper end of said valve-tube slidably mounted within said hopper, substantially as described.

2. An acetylene-gas generator comprising a water-tank, a gas-bell slidable therein, a carbid-hopper mounted upon said bell, a valve-seat in said hopper, a guide-tube depending from said seat and into said bell, a tubular valve slidable in said guide-tube and formed with discharge-openings, a valve-ring upon said valve-tube above its openings, feet upon the bottom of said valve-tube adapted to engage the bottom of said tank, an apertured flange within said hopper, a sleeve projecting loosely through the aperture in said flange and having its lower, open end telescoping the upper end of said valve-tube, and a shoulder upon said sleeve adapted to engage said flange, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN B. DULANEY.

Witnesses:

GLOSSIE DYER,

H. R. CUNNINGHAM.