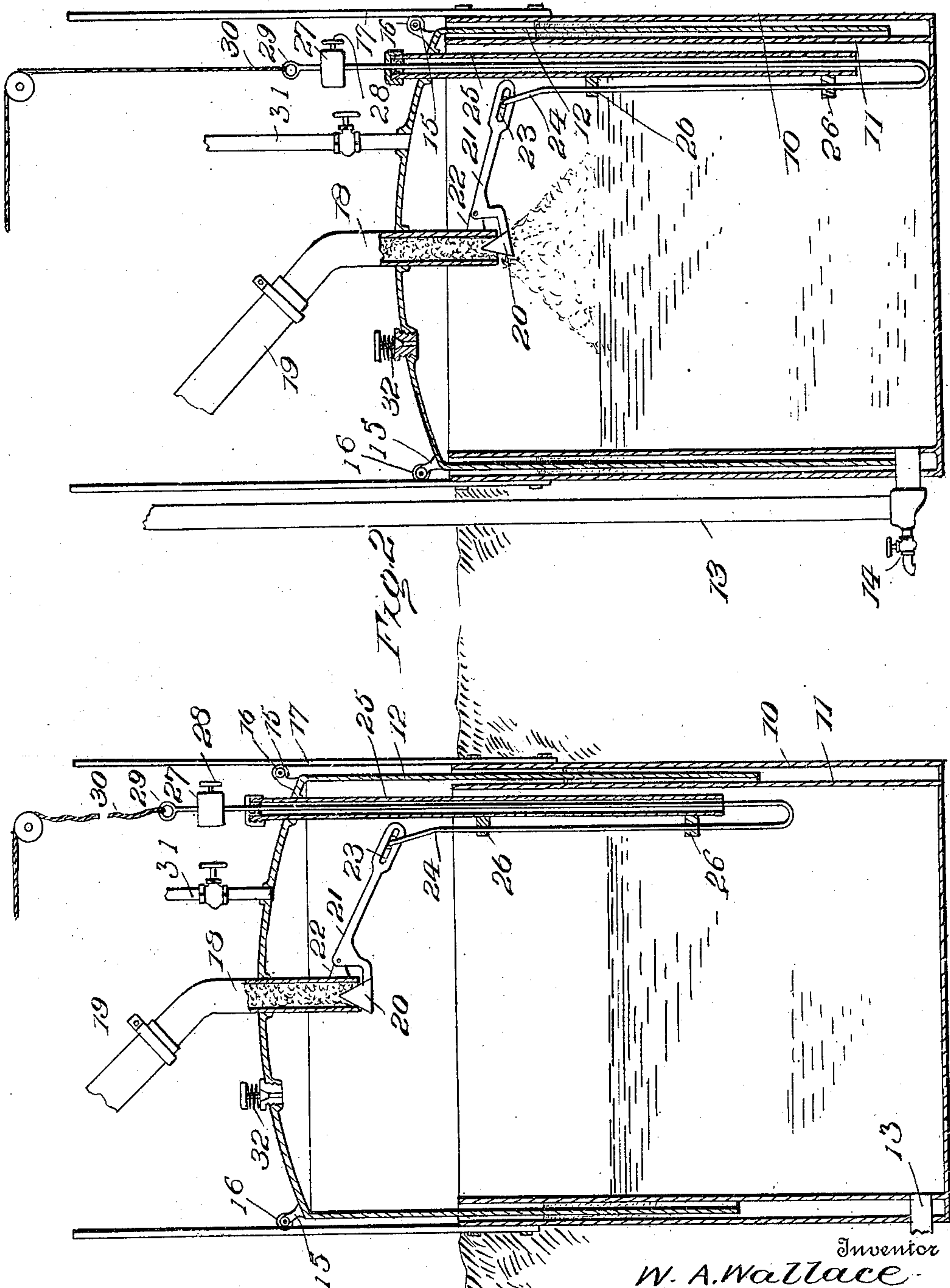


W. A. WALLACE.  
GAS GENERATOR.  
APPLICATION FILED DEC. 2, 1909.

975,910.

Patented Nov. 15, 1910.



Witnesses  
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FIG. 1.

By

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# UNITED STATES PATENT OFFICE.

WILLIAM A. WALLACE, OF ALTUS, OKLAHOMA, ASSIGNOR TO JAMES E. DRIGGERS, OF ALTUS, OKLAHOMA.

## GAS-GENERATOR.

975,910.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed December 2, 1909. Serial No. 530,971.

*To all whom it may concern:*

Be it known that I, WILLIAM A. WALLACE, citizen of the United States, residing at Altus, in the county of Jackson and State of Oklahoma, have invented certain new and useful Improvements in Gas-Generators, of which the following is a specification.

This invention relates to gas generators and refers particularly to a novel form of acetylene generators which are commonly known as gasometers.

An object of this invention is to construct a gasometer of this character with a bell carrying means for regulating the supply of carbid to the body of the generator or tank and which is automatically controlled by the movements of the bell incident to the passage of gas from the gasometer.

The invention has for a further object a construction in a gasometer whereby the amount of the carbid may be manually controlled in order to feed a larger amount of the carbid to the tank when a large quantity of gas is being consumed.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a vertical section through the improved gasometer disclosing the valve of the supply pipe in a closed position, and Fig. 2 is a section of the same disclosing the valve opened.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

Referring to the drawing the numeral 10 designates the tank of the gasometer which is provided with an inwardly spaced wall 11 for the reception of a quantity of water to seal the bell 12 which is positioned over the upper end of the tank 10. The tank 10 is preferably of cylindrical formation and is supplied with a quantity of water for the generation of the gas through a supply pipe 13, the same being provided with a valve 14 for drawing off the water from the tank when desired. The bell 12 which is positioned over the upper open end of the tank 10 is necessarily of cylindrical formation and is provided with brackets 15 which carry in their outer ends rollers 16 having peripheral grooves formed therein for engagement against vertical guide rods 17. The guide

rods 17 are employed for the purpose of steadying the bell 12 during its movement.

Centrally disposed through the upper end of the bell 12 is a carbid supply pipe 18 which is provided at its upper end with a length of flexible piping 19 leading to a suitable source of supply from which the carbid falls by gravity. The lower end of the supply pipe 18 is extended through the bell 12 and is provided with a conical valve 20 which is inserted in the lower end of the same and adapted to control the passage of carbid therefrom. The valve 20 is carried upon the short arm of a bell-crank lever 21 which is pivotally secured upon an arm 22 laterally extended from the lower end of the feed-pipe 18. The long arm of the bell-crank lever 21 is extended toward the side of the bell 12 and is provided with a longitudinal slot 23 through which is engaged in loose relation the upper end of a controlling rod 24. At one side of the bell 12 and extended through the top of the same is a tube 25 which projects downwardly within the bell in spaced relation from the inner wall of the tank 10. The controlling rod 24 is passed downwardly along the side of the tube 25 and retained in vertical position through the medium of lugs 26 which are outwardly extended from the side of the tube 25 in spaced relation. The lugs 26 are suitably apertured for slidably retaining the controlling rod 24 in position. The rod 24 is returned upon itself at its lower end and extended upwardly and centrally through the tube 25, the rod 24 terminating at a point slightly above the upper extremity of the tube 25 above the bell 12. A weight 27 is suitably secured about the upper extremity of the controlling rod 24 by means of a set-screw 28 for the purpose of normally depressing the rod 24.

It will be observed from the drawing that the curved portion of the controlling rod 24 is positioned considerably below the lower end of the tube 25 to admit of the vibration of the controlling rod 24 through the lugs 26 and the tube 25. An eye 29 is formed upon the upper extremity of the rod 24 for the reception of a cord 30 which is employed for the purpose of manually raising the rod 24 to open the valve 20. The bell 12 is provided with a suitable gas-pipe 31 which leads from the upper end thereof and conducts the gas in any suitable manner where



the same is to be consumed. A safety valve 32 is also located through the upper end of the bell 12 to admit of the escape of any excess of gas formed therein.

5 In the operation of the device the gasometer assumes the position which is disclosed in Fig. 2 wherein gas is to be generated. A quantity of carbid is fed through the feed-pipe 18 and permitted to escape  
10 from the lower end thereof, by reason of the fact that the controlling rod 24 is engaged against the bottom of the tank 10 and is forced upwardly thereby. This position of the rod 24 raises the long arm of the bell-  
15 crank-lever 21 and withdraws the conical valve 20 from the lower end of the feed-pipe 18. As the valve 20 is of conical formation the carbid is spread out and enters a large surface of the water which is con-  
20 tained in the tank 10. This distribution of the carbid is disclosed in Fig. 2. As gas is formed in the tank 10, the pressure of the same raises the bell 12 and admits of the downward movement of the controlling rod  
25 24 under the action of the weight 27. This movement of the rod 24 draws the long arm of the bell-crank lever 21 downwardly and forces the conical valve 20 upwardly into the lower end of the feed-pipe 18 to gradu-  
30 ally reduce the flow of carbid therefrom. Should the bell 12 be in a raised position and it is desired to introduce a larger quantity of carbid to the tank the cord 30 is drawn taut and caused to raise the con-  
35 trolling rod 24 through the tube 25 to thereby swing the bell-crank lever 21 and open the valve 20. Water is fed to the tank 10 through the pipe 13 in any suitable manner and the valve 14 serves the purpose of with-  
40 drawing the water from the tank when it is desired to cleanse the same.

Having thus described the invention what is claimed as new is:—

45 1. A gasometer including a tank having a bottom, an inwardly spaced wall in said tank, a bell disposed between the wall of said tank and said inwardly spaced wall, a feed-tube extended downwardly through said bell, a valve carried by said feed-tube  
50 for controlling the passage of carbid therefrom, a second tube extended downwardly through said bell at one side thereof, a controlling rod within said second tube and projecting below the lower end of the same

to strike the bottom of said tank and arrest 55 the movement of said rod, a returned portion formed on said controlling rod and connected to said valve, and a weight carried upon the upper end of said controlling rod for normally closing said valve. 60

2. A gasometer comprising a tank having a bottom, spaced walls formed in said tank, a bell positioned between said walls and the upper end of said tank, a feed-pipe carried by said bell and extended through the up- 65 per end thereof, an arm projected laterally from the lower end of said feed-pipe, a bell-crank lever pivotally mounted upon said arm, a valve carried by the arm of said bell-crank lever and extended upwardly into 70 said feed-pipe to control the passage of carbid therefrom, a controlling rod loosely connected to the long arm of said bell-crank lever and adapted to strike the bottom of said tank upon the downward movement of 75 said bell, a tube carried at one side of said bell and extended upwardly therefrom, a returned portion formed upon said controlling rod and extended upwardly through said tube, and a weight carried upon the up- 80 per end of said controlling rod above said tube.

3. A gasometer including a tank having spaced walls, a bell engaged over said tank and between said walls, a feed-pipe extend- 85 ed through the upper end of said bell, a valve carried by said feed-pipe, a controlling rod depended from said valve for engagement with the bottom of said feed tank, said controlling rod having a returned por- 90 tion thereon extending upwardly through said bell and a weight carried by said controlling rod for normally depressing the same.

4. A gasometer having a tank, a bell dis- 95 posed over said tank, a feed-tube mounted in said bell, a valve carried by said feed-tube, and a controlling rod carried by said valve for engagement with the bottom of said tank, said controlling rod being also 100 extended upwardly through said bell to admit of the manual operation thereof.

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

WILLIAM A. WALLACE. [L. s.]

Witnesses:

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