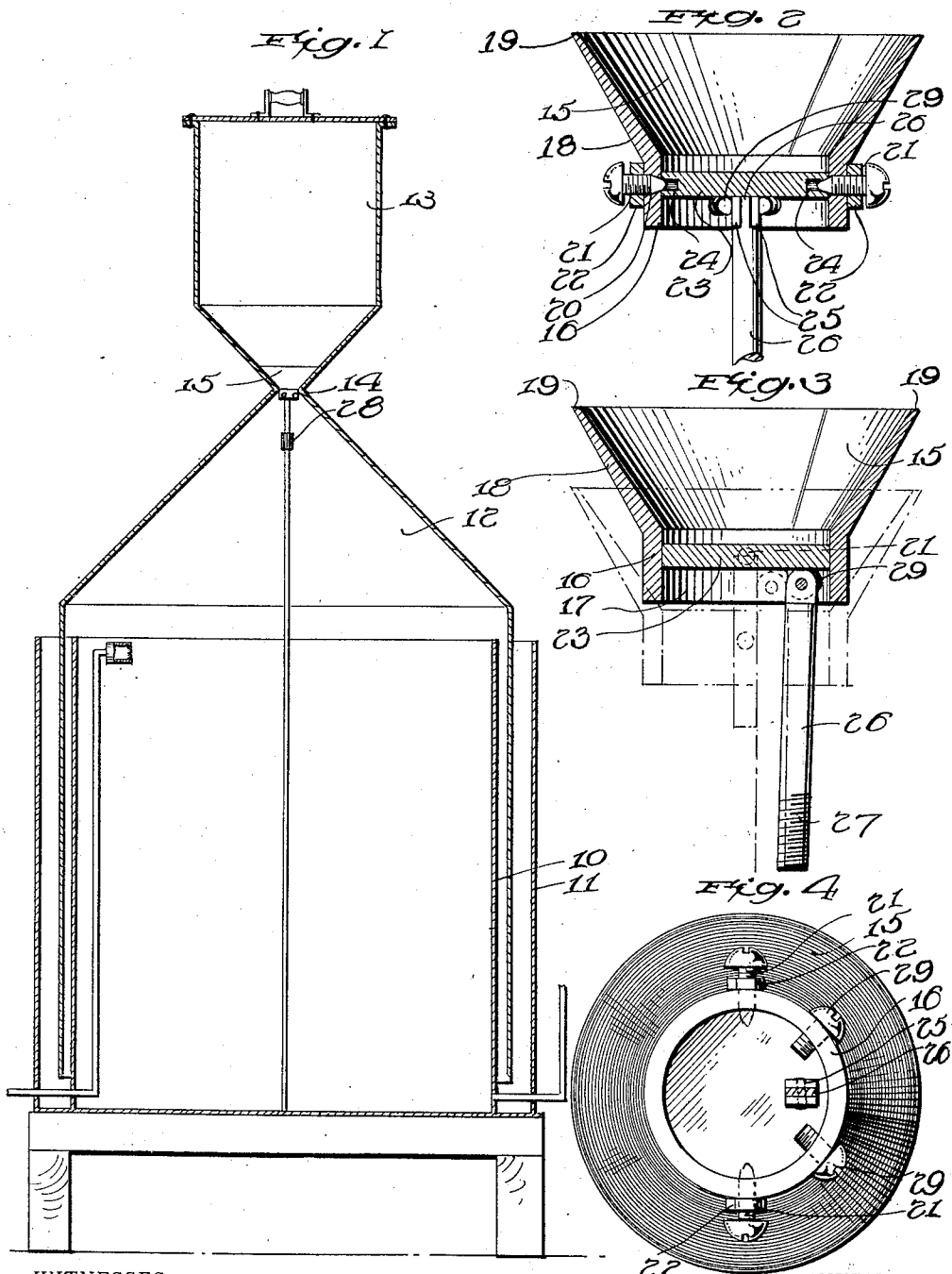


J. S. BALLARD.
CARBID FEED VALVE.
APPLICATION FILED JUNE 1, 1912.

1,050,597.

Patented Jan. 14, 1913.



WITNESSES

John S. Ballard
L. N. Mullis

INVENTOR

John S. Ballard
By E. O. Vrooman, His Attorney.

UNITED STATES PATENT OFFICE.

JOHN S. BALLARD, OF GAINESVILLE, TEXAS.

CARBID-FEED VALVE.

1,050,597.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed June 1, 1912. Serial No. 701,057.

To all whom it may concern:

Be it known that I, JOHN S. BALLARD, a citizen of the United States, residing at Gainesville, in the county of Cooke and State of Texas, have invented certain new and useful Improvements in Carbid-Feed Valves, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to acetylene generators and has special reference to a novel form of valve used in connection with such generators.

The principal object of the invention is to provide an improved form of feeding valve, the valve being of the balanced type, thus rendering the same easily opened or closed.

Another object of the invention is to provide a form of rotary valve of the butterfly type wherein the valve will be provided with a rod arranged to open the same, said rod acting as a weight to close the valve under certain conditions.

With the above and other objects in view, the invention consists in general of certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and Figure 1 is a diagrammatic view of an acetylene generator showing the position of the valve. Fig. 2 is a vertical median section taken through the valve. Fig. 3 is a similar view to Fig. 2 but taken at right angles thereto. Fig. 4 is a bottom plan view of the valve.

The acetylene generator adapted for use with this valve comprises the inner tank 10 and outer tank 11 adapted to receive the sealing water and between these tanks is received the lower end of the bell 12 which is separated from the carbid holder 13 by a constricted neck 14. The valve indicated in general at 15 is shown in position in this neck. This valve consists of a cylindrical lower portion 16 having an opening therethrough as shown at 17, the opening being concentric with the periphery of the cylinder. Above this cylindrical portion extends a hollow inverted frusto conical portion 18 the walls whereof gradually become thinner toward the upper edge and terminate in what is substantially a knife edge 19.

Extending through the threaded apertures

20 arranged at diametrically opposite points in the walls of the cylindrical portion are screws 21 whereon are secured lock nuts 22. Carried on these pivot screws 21 is a disk 23 having rounded edges so that the same may be turned freely on the pivot pins. This disk has diametrically opposed recesses 24 formed therein for the purpose of receiving the pointed ends of the screws 21.

Formed on the disk 23 is a pair of spaced ears 25. Between these ears is received the reduced end of a rod 26, the lower end whereof is threaded as at 27. On this threaded lower end there may be provided a suitable piece of gas pipe, the same being connected by a union 28 so that the lower end of the pipe will extend downward adjacent to the bottom of the inner tank.

In order to form a stop to limit the movement of the valve 23 in one direction there is provided a pair of spaced screws 29 which lie one on either side of the rod 26 when the valve is closed as can clearly be seen by reference to Fig. 4.

In use this device is simply dropped into the constricted neck 14 with the rod and gas pipe hanging down. Now as the gas is used out of the bell the latter descends and when the lower end of the pipe strikes the bottom of the bell the downward movement of the bell causes the pipe to rotate the valve 23 to the position shown in dotted lines in Fig. 3. This permits carbid to flow into the water in the inner tank and as the gas is generated the bell rises and the weight of the rod 26 and attached pipe causes the valve to close.

It will be obvious that any wear on the bearings can be taken up by tightening the screws 21 and that owing to the sharpened edge 19 carbid will flow freely down through the valve.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction of this invention without departing from the material principles thereof and it is therefore not wished to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly come within the scope claimed.

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

A valve for acetylene generators comprising a cylindrical tubular portion forming

the lower part of the valve casing and an inverted frusto conical portion forming the upper part of said casing, the walls of the lower portion being of uniform thickness
5 throughout, and the walls of the upper portion decreasing in thickness upwardly and terminating substantially in a knife edge, a pair of pointed screws oppositely disposed through the walls of the lower portion and
10 each provided with a lock nut, a circular disk having oppositely disposed recesses, said disk being held in the lower portion of

the casing with the points of the screws entering the recesses, a stop pin to limit the motion of said disk in one direction, and a 15 rod pivotally connected to the underside of said disk and provided with an end adapted for attachment to a pipe or the like.

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

JOHN S. BALLARD.

Witnesses:

JAS. R. BELL,

WM. H. AINSWORTH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
