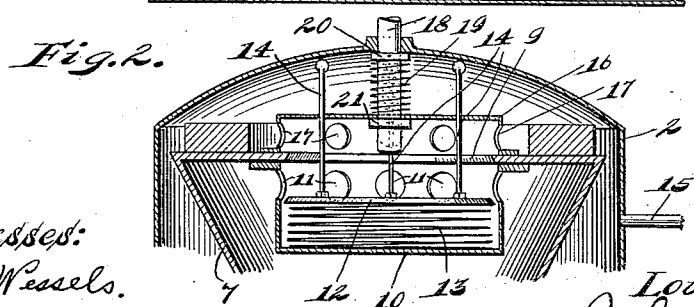
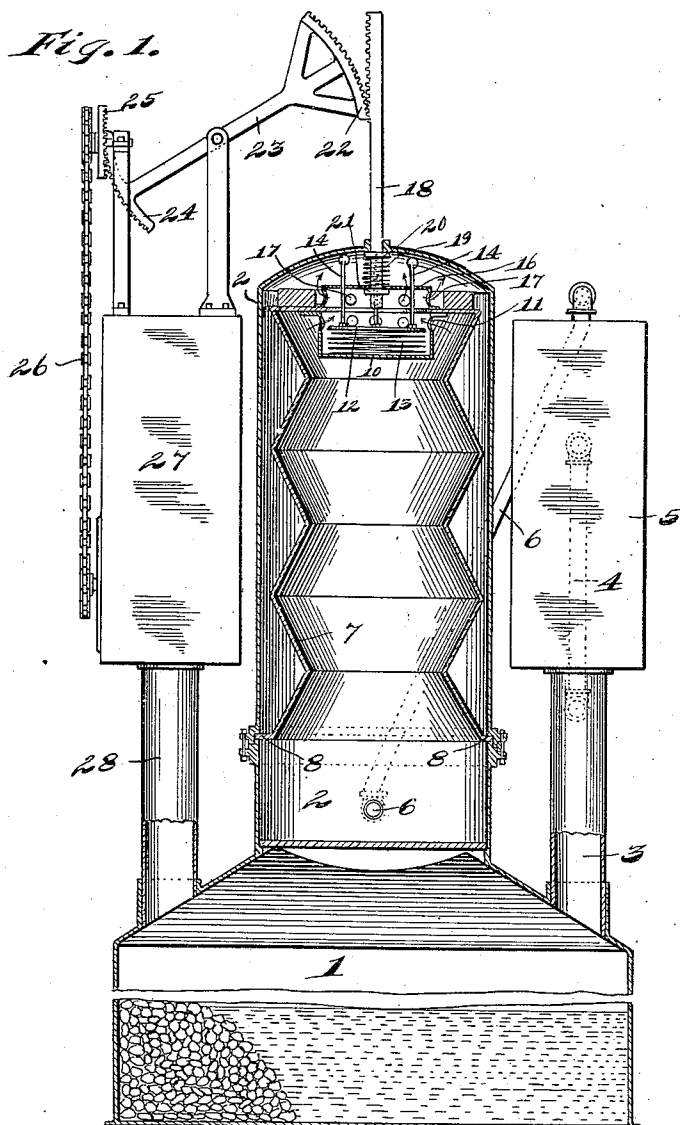


L. BADER.
GASOMETER.

APPLICATION FILED JUNE 5, 1911.

1,016,058.

Patented Jan. 30, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS BADER, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-THIRD TO WILLIAM BADER AND ONE-THIRD TO MARTIN J. DETMER, OF CHICAGO, ILLINOIS.

GASOMETER.

1,016,058.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Original application filed November 25, 1910, Serial No. 594,053. Divided and this application filed June 5, 1911. Serial No. 631,273.

To all whom it may concern:

Be it known that I, LOUIS BADER, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Gasometers, of which the following is a specification.

My invention relates to improvements in gasometers especially adapted for use in acetylene gas generators, the present application being a divisional application of my prior application for improvements in acetylene gas generators filed November 25th, 1910, Serial No. 594,053.

The object of the invention is to provide an improved gasometer for use in acetylene gas generators.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification and in which,

Figure 1 is a vertical section through the upper portion of a generator and gasometer, a gas washer and carbid holder and feeding mechanism being shown in elevation, and Fig. 2 is an enlarged section taken through the upper portion of the gasometer.

The preferred form of construction as illustrated in the accompanying drawing comprises a gas generator 1 which may be of any usual or desired construction. A gasometer 2 is arranged on top of generator 1 but not in direct communication therewith and a discharge pipe 3 also leads from the top of said generator. A gas cleanser 5 is arranged upon the top of pipe 3 and a pipe 4 serves as a means of communication between pipe 3 and gas cleanser 5 and a pipe 6 leads from the top of cleanser 5 to the bottom of gasometer 2. The details of the gas cleanser form the subject matter of my copending application and need no further illustration or description here. An extensible bellows 7 is arranged in gasometer 2 above the mouth of pipe 6, the lower edges 8 of said bellows being clamped to the walls of said gasometer as shown. The top of bellows 7 is provided with a central perforation 9 and a cap 10 is secured around the underside of said perforation 9 and is itself provided with a

number of perforations 11 for the free passage of gas therethrough. A valve 12 which is normally held by a spring 13 in position to close perforation 9 is mounted upon rods 14 which project upwardly therefrom. A vent pipe 15 leads from gasometer 2 and serves to permit of the escape of gases passing through perforation 9. A cap 16 is placed over perforation 9 and is provided with perforations 17 for the free passage of gas therethrough. Cap 16 is perforated for the passage of arms 14 which are arranged to contact with the top of gasometer 2 when the top of the bellows 7 approaches the limit of its upward movement.

A rack bar 18 is mounted to reciprocate in the top of gasometer 2 and is carried by cap 16, being normally held in elevated position by means of a spring 19 imprisoned between cap 16 and a washer or collar 20 secured to said rack bar. Rack bar 18 is free for vertical movement relatively to cap 16, its upward movement being limited by a collar or washer 21 arranged to contact with the underside of the top of cap 16. By this arrangement it will be observed that upon increase of gas pressure in gasometer 2 bellows 7 will be extended and rack bar 18 caused to rise. When the top of bellows 7 approaches the top of gasometer 2 arms 14 contacting with the top of the gasometer depress valve 12 and permit the escape of a portion of the gas in said gasometer, thus relieving any excess or dangerous pressure. Should the rack bar 18 be held by any accident or other cause from traveling upwardly with the top of bellows 7, the lower end of said rack bar will contact with valve 12 to open the same and thus relieve any dangerous or excessive pressure. By these means it will be observed that the pressure in gasometer 2 may be maintained practically constant. Rack bar 18 meshes with a segmental gear 22 carried by one end of lever 23 which at its other end carries a segmental gear 24 meshing with a crown gear 25. Crown gear 25 is connected by means of a sprocket chain 26 with a carbid holder and feeder 27 which in turn is connected by means of pipe 28 with generator 1. The details of the carbid holder and feeder constitute the subject matter of my copending application and need no further illustration or description here, except the statement that

they are arranged to supply carbid to generator 1 upon descent of rack bar 18, or decrease in gas pressure in gasometer 2.

5 A gasometer constructed as above set forth will be found to be highly efficient and durable in use.

10 While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

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

20 A gasometer comprising an outer shell

and a bellows adapted to be extended by pressure of gas fed to said gasometer; a rack connected to said bellows, said rack being spring held; a relief valve in the head of said bellows arranged to be opened by 25 said rack upon interruption of the movement of said rack; a spring normally holding said valve closed; an arm carried by said valve adapted to contact with the end of said shell to open said valve; and an 30 operative connection with said rack, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS BADER.

Witnesses:

W. C. SMITH,

JOSHUA R. H. POTTS.

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