No. 628,868. Patented July 11, 1899.

A. A. STROM.

GAS HOLDER.

(Application filed Apr. 10, 1899.)

(No Model.)

Fig. 1.

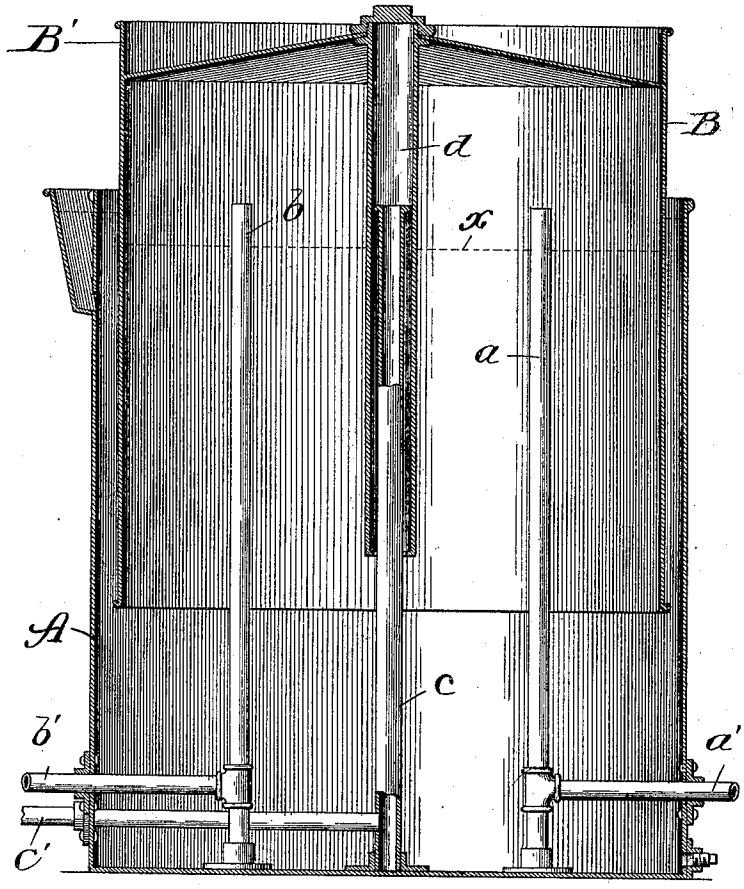
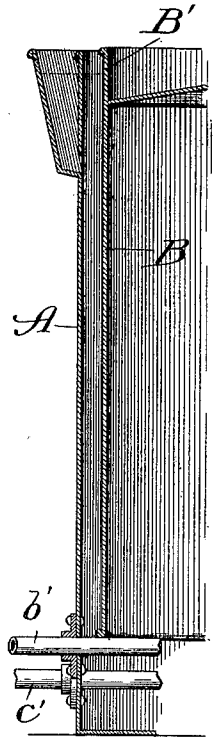


Fig. 2.



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ILLINOIS, ASSIGNOR TO THE WALMSLEY & COMPANY, OF CHICAGO, ILLINOIS.

GAS-HOLDER.

SPECIFICATION forming part of Letters Patent No. 628,868, dated July 11, 1899.

Original application filed December 16, 1898, Serial No. 699,439. Divided and this application filed April 10, 1899. Serial No. 712,506. (No model.)

To all whom it may concern:

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Gas-Holders, of which the following is a specification.

My invention relates to an improvement in the gas-holder or gasometer of an acetylene or other gas apparatus, the present improvement being shown and described in my pending application, Serial No. 699,439, filed December 16, 1898, of which this is a divisional application.

In a gas-holder of the variety to which my improvement relates, involving a lower stationary tank containing water and a rising-and-falling inverted tank or bell telescoping the stationary tank and having the space between them sealed by the water in the lower tank, the desired predetermined pressure of gas in the holder is maintained by the weight of the bell. Therefore any excess of the normal weight of the bell is to be avoided, though it is liable to ensue unless means are provided to prevent, when the bell, which is shorter than the lower tank, drops therein to its lowest limit, since then the water may overflow its top and weight it accordingly. To obviate this occurrence, which is the object of my improvement, I provide a shielding-flange extending about and above the top of the bell to project beyond the water-level in the holder when the bell is down to its lowest limit of descent.

Referring to the accompanying drawings, Figure 1 is a vertical section of a gas-holder provided with my improvement, showing the bell raised; and Fig. 2, a broken section of the same, showing the bell in its lowest attainable position.

A is the lower tank, containing a gas-inlet pipe *a*, rising from its base above the water-level, (indicated at *x*,) and provided with a branch *a'*, through which to communicate with a gas-generator, (not shown,) and in the tank A are also shown a gas-outlet pipe *b*, rising above the water-level, and provided with a discharge-branch *b'*, and a pipe *c*, rising from the base and telescoping a pipe *d*, depending from the center of the top of the bell B, to afford a guide for the latter in rising and falling, and a safety-escape to the outer air through a branch *c'* for excess pressure in the holder which gains access to the pipe *c* when the rise of the bell carries the lower end of the pipe *d* above the water-level *x*. The internal arrangement, however, of pipes in the holder is quite immaterial to my improvement, and the arrangement thereof shown and described is only referred to as presenting one that is suitable to the operation of a gas-holder.

The bell B maintains by its weight the predetermined pressure of discharge through the pipe *b* of the gas in the holder admitted therein through the pipe *a*, and to avoid increasing the weight of the bell when it falls to an extent which brings its top *e* below the level of water in the holder by the water overflowing the top I provide a shield B' around the bell-top to extend it above the lowest plane to which the bell may drop in the stationary tank. This shield prevents any increase in the pressure of gas in the holder beyond that for which the apparatus is adapted from water gaining access from the holder to the top of the bell to bear it down.

What I claim as new, and desire to secure by Letters Patent, is—

In a gas-holder, the combination with the stationary tank of a bell telescoping therewith and shorter than the tank and than the depth of its contained body of water to adapt it to descend therein till the upper edge of the bell is below the water-level in the tank, and a shielding-flange surrounding and extending above the top of the bell and affording means for preventing access of said water to the top of the bell when below said level, substantially as described.

AXEL A. STROM.

In presence of—
M. J. FROST,
R. T. SPENCER.