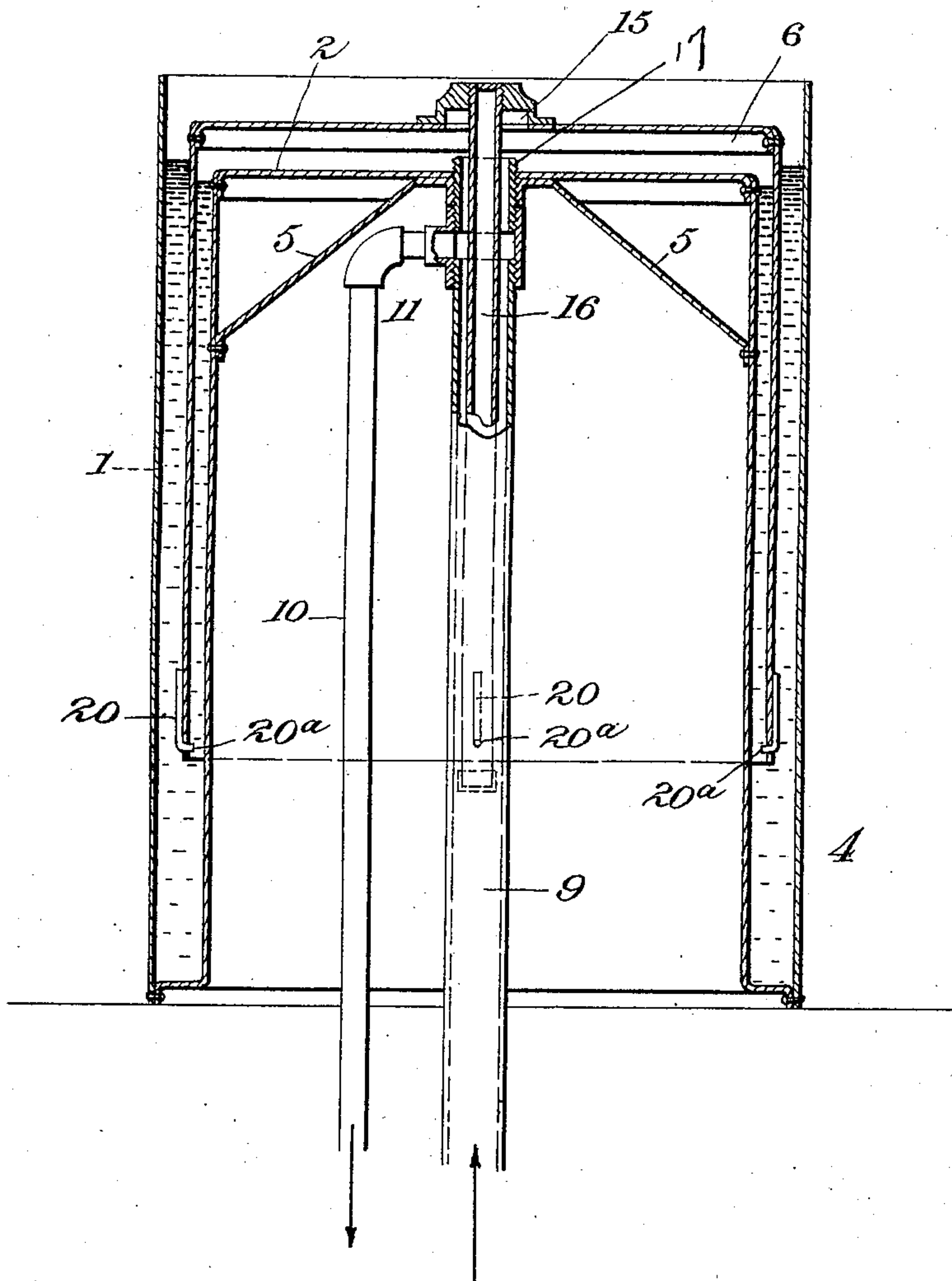


(No Model.)

H. C. SERGEANT.
ACETYLENE GAS HOLDER.

No. 576,827.

Patented Feb. 9, 1897.



WITNESSES:

M. V. Bidgood
W. H. Humphrey

INVENTOR

Henry C. Sergeant

BY

Tonight Bros
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY C. SERGEANT, OF WESTFIELD, NEW JERSEY.

ACETYLENE-GAS HOLDER.

SPECIFICATION forming part of Letters Patent No. 576,827, dated February 9, 1897.

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To all whom it may concern:

Be it known that I, HENRY C. SERGEANT, a citizen of the United States, residing at Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Acetylene-Gas Holders, of which the following is a specification.

The object of my present invention is to obviate the violent ebullition of surplus gas from the holder which is so objectionable on account of the shaking of the bell and the spilling and wasting of the sealing liquid. I accomplish this object by arranging short open-ended vertically-extending tubes on the outside of and adjacent to the lower edge of the bell with their lower ends communicating with the inside of the bell. By this means the surplus gas can escape with very slight ebullitions and without disturbing the seal or shaking the bell or spilling the sealing liquid.

In order that my invention may be fully understood, I will now proceed to describe the same with reference to the accompanying drawing, and afterward point out the novelty with more particularity in the annexed claims.

The drawing represents my improved gas-holder in vertical sectional elevation.

1 is a tank or receptacle made of sheet metal or other suitable material, and 2 is an imperforate body also made of sheet metal and having an outwardly-flared flange 3 at its lower edge, which is riveted or otherwise secured to the tank 1, forming therewith an annular well or chamber 4 between them.

5 are suitable braces within the imperforate body 2.

6 is the gas-receiving bell, supported within the annular chamber 4 over the body 2, and formed with an annular recess or pocket 15, from which extends inwardly or downwardly the guide-pipe 16, closed at its lower end. The guide-pipe 16 projects down into and works vertically in the gas-supply pipe 9.

9 is the gas-supply pipe, leading from the gas-generator to the holder. The pipe 9 extends up through the top of the imperforate body 2, and has a slight rim or projection 17, which projects into the recess or pocket 15 of the bell when the bell is lowered, and has open communication with the interior of the bell.

10 is the gas-exit pipe, communicating through coupling 11 with a supply-pipe 9 and adapted to supply gas for consumption. The guide-pipe 16, working in the supply-pipe 9, guides the bell in its up-and-down movement. I prefer to employ glycerin as the liquid seal in the chamber 4, the annular shape of the chamber requiring a small quantity only of the liquid.

It will be clear that when the gas is entirely exhausted from the receiver that there will be a very small free space left in the receiver between the bell and imperforate body and the supply-pipe and tubular extension, because the bell is so shaped at top that it will fit snugly upon the top of the imperforate body when the bell is lowered.

20 are short open-ended vertically-extending tubes attached to outside of bell 6, and having lower inturned ends 20^a, extending through the wall of the bell just above its lower open edge. When the bell becomes full of gas and is elevated thereby, any surplus gas will pass quietly out through small tubes 20 without shaking the bell or spilling any of the sealing liquid.

I prefer to employ the annular form of well, as it reduces to a minimum the free air-space in the holder and the necessary quantity of sealing liquid, and I have illustrated my invention applied to this form of gas-holder, but it will be clear that my invention applies equally as well to other forms of gas-holders.

I do not limit myself to the exact arrangement of the open-ended tubes, but wish to be understood that my invention comprises any arrangement of relief-passages in the bell of a gas-holder which will afford communication between the inside of the bell at points just above its lower edge and the outside of the bell at points above the inside communication for the free escape of surplus gas above the surface of the sealing liquid.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a gas-holder, the combination of a liquid-containing well or tank, with the bell supported therein and provided with relief-passages which communicate between the inside of the bell at points just above its lower edge and the outside of the bell at points above

the inside communication, substantially as and for the purposes set forth.

2. In a gas-holder, the combination of the liquid-containing well or tank, with the bell provided with open-ended short tubes communicating with the inside of the bell above its lower edge and extending upwardly therefrom and communicating with the exterior at points above, as set forth.

10 3. In a gas-holder, the combination of the liquid-containing tank or well, the bell supported therein, the gas-supply pipe, a guide-pipe

carried by the bell and engaging and telescoping with the gas-supply pipe for guiding the bell in its up-and-down movement, and short 15 open-ended tubes arranged vertically on the outside of the bell and having inturned ends passing through the bell adjacent to its lower open end, as set forth.

HENRY C. SERGEANT.

Witnesses:

M. V. BIDGOOD,

J. GREEN.