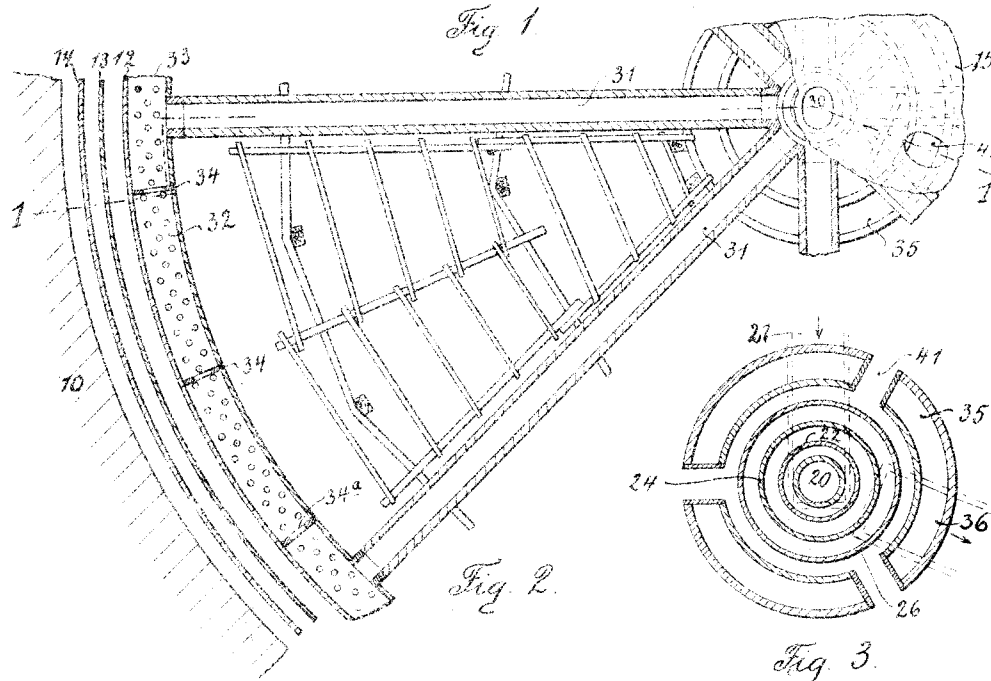
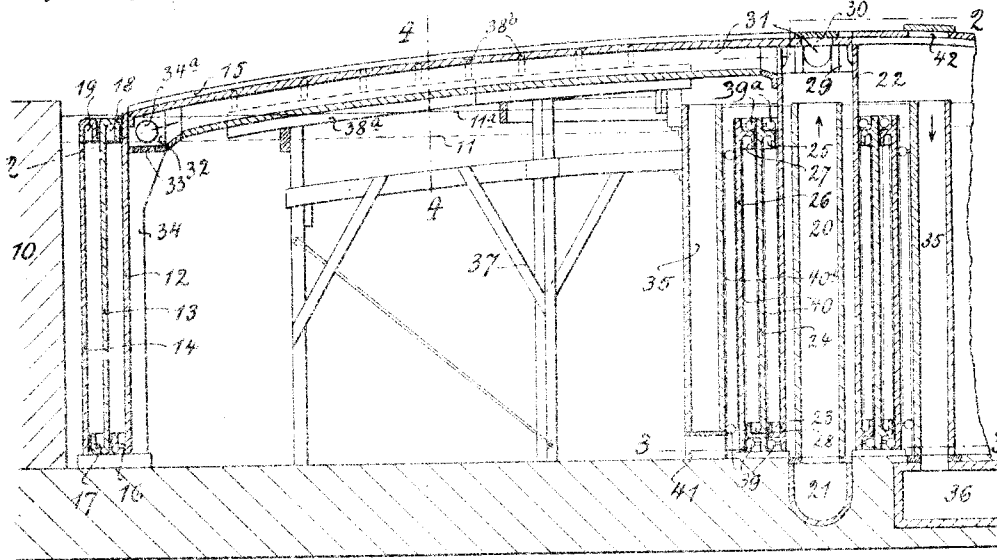


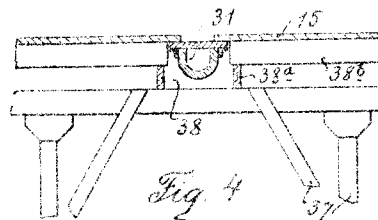
F. J. MAYER.  
GASMETER.  
APPLICATION FILED MAR. 4, 1912.

1,062,983.

Patented May 27, 1913.



WITNESSES:  
*Charles M. Patti*  
*H. B. Linnick*



INVENTOR  
FREDERICK J. MAYER  
BY *John L. Lott*  
ATTORNEY

# UNITED STATES PATENT OFFICE.

FREDERICK J. MAYER, OF NEW YORK, N. Y., ASSIGNOR TO STETTINER CHAMOTTE-FABRIK ACTIEN-GESELLSCHAFT FORM. DIDIER, OF STETTIN, GERMANY, A CORPORATION OF GERMANY.

GASOMETER.

1,062,983.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed March 4, 1912. Serial No. 681,407.

*To all whom it may concern:*

Be it known that I, FREDERICK J. MAYER, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Gasometers, of which the following is a specification.

My invention relates to gasometers and has for its object to provide a construction which will insure the uniform distribution of the gas within the gasometer bell, causing all particles of gas to travel a practically uniform distance within the bell, and thus securing a thorough mixture of the gas contained in the bell, with the fresh gas admitted thereto.

A specific embodiment of my invention will now be described with reference to the accompanying drawings, in which—

Figure 1 is a vertical section taken on line 1—1 of Fig. 2; Fig. 2 is a partial top view, with parts removed and parts in section on line 2—2 of Fig. 1; Fig. 3 is a horizontal section on line 3—3 of Fig. 1; and Fig. 4 is a detail vertical section on line 4—4 of Fig. 1.

The gasometer illustrated in the drawings comprises a tank 10 of any suitable construction, and filled with water as usual, the low water level being indicated at 11, and the overflow level at 11<sup>a</sup>. Into this water is arranged to dip the lower edge of the gasometer bell, which in the construction shown consists of three telescoping sections 12, 13, 14, the inner section 12 having a roof or top 15. The sections 12, 13 are provided with cups 16, 17 at their lower ends, and the sections 13, 14 with inverted cups 18, 19 at their upper ends, to seal the joints between the sections as their lower edges rise from the water, in the well-known manner.

At the central portion of the holder or gasometer is arranged the stationary gas inlet pipe 20, open at its upper end, and connected at its lower end with the duct 21 through which the gas is conveyed from the gas-producing plant. The upper end of the pipe 20 is above the overflow level 11<sup>a</sup>. To the central portion of the top 15 is secured a depending vertical pipe 22 arranged to surround the inlet pipe 20 when the bell is in its lowermost position as shown. As the bell rises and with it the pipe 22, the water contained in a cup 23 at the lower end of

said pipe will seal the joint between the pipe 22 and a larger surrounding pipe section 24 having at its upper end an inverted cup 25 arranged to dip into the cup 23. Similarly, there is a still wider pipe section 26 provided at its upper end with an inverted cup 27 adapted to dip into the water contained in a cup 28 at the lower end of the pipe section 24. The three pipe sections 22, 24, and 26 therefore constitute a telescopic pipe, corresponding to the telescopic arrangement of the bell sections 12, 13, 14. At the upper end of the pipe 22 is located a distributing chamber 29, (accessible through a manhole 30,) from which chamber radial ducts 31 (eight in the example shown) lead to a peripheral duct 32 arranged within the bell section 12 adjacent to its roof or top 15. The gas from the inlet pipe 20 is compelled to pass into the chamber 29 and then through the radial ducts 31 to the peripheral duct 32, these ducts and chamber being imperforate except for their inlet and outlet openings. The outlets from the duct 32 consist of perforations provided in the bottom wall 33 of the duct, preferably around the entire circumference of the bell. I have shown the bell section 12 provided with a number of vertical interior braces or legs 34, each leg being extended through the peripheral duct 32 so as to subdivide the same into segmental compartments which communicate with each other by means of apertures 34<sup>a</sup> provided in said legs.

Surrounding the space in which the pipe sections 22, 24 and 26 are adapted to move, is an annular gas outlet pipe 35 terminating above the overflow level 11<sup>a</sup> so as to communicate with the gas space of the bell, and connected at one point with the outlet duct 36 through which the gas passes to the place of consumption or use. A manhole 42 is provided in the roof 15 at a point vertically above the connection of the outlet pipe 35 with the duct 36. The upper portion of this outlet pipe 35 may be braced by a suitable framework 37 resting on the floor of the gasometer and also adapted to engage the roof 15 of the bell section 12, when said section is in its lowermost position. Gutter-like channels 38 at the top of said framework, are adapted to receive the radial ducts 31, so that the framework 37 will not engage the ducts, thus avoiding any danger of crushing them; the beams 38<sup>a</sup> which form the side

walls of the channels 38 carry cross pieces 38<sup>b</sup> which engage the roof 15 between the ducts. In order that the pipe sections 22, 24, 26 may move with as little friction as possible, wheels or rollers 39 may be secured to the lower portions of said pipe sections, to run on suitable vertical guides 40, 40<sup>a</sup> secured on the inner sides of the pipe sections 24, 26 and of the outlet pipe 35 respectively. Similarly, rollers 39<sup>a</sup> may be secured to the upper portions of the pipes 24, 26 and 25, to travel along suitable guides on the outer surfaces of the pipe sections 22, 24 and 26. In order that water may have free access to the space surrounded by the outlet pipe, so as to fill the cups of the pipe sections 22 and 24, water ducts 41 extend through the outlet pipe at suitable points.

In the drawings, the relative proportions of certain parts, and especially the thickness of the metal, have been exaggerated for the sake of clearness.

The incoming gas passes from the inlet pipe 20 through the telescoping pipes 22, 24, 26 of the bell to the chamber 29, the radial ducts 31 and the peripheral duct 32, the entire channel or passageway through which the gas flows being imperforate up to the point where the gas is allowed to pass into the interior of the bell through the perforated bottom wall 33 of the peripheral duct. The entire body of the gas is therefore compelled to travel to the peripheral openings in the bottom wall 33. From these openings the gas travels within the gasometer bell to the centrally located opening at the upper end of the outlet pipe 35. It will be seen that all the outlets in the wall 33 are at practically equal distances from the upper end of the pipe 35, and thus I secure a uniform distribution of the gas within the bell and a uniform agitation and mixing of the incoming gas with the gas previously contained in the gasometer.

Various modifications may be made without departing from the nature of my invention as set forth in the appended claims.

I claim:

1. A gasometer provided with a bell having a central distributing chamber at the top and a pipe leading to said chamber, ducts extending outwardly from said chamber, a peripheral duct connected with the outer ends of said ducts and communicating with the interior of the bell, a central inlet pipe arranged to deliver gas to the pipe of the bell, and an annular outlet pipe surrounding said inlet pipe at a sufficient distance to leave a space for the pipe of the bell.

2. A gasometer comprising a tank having an inlet pipe and an annular outlet pipe surrounding said inlet pipe, a bell having a

depending pipe arranged to receive gas from the inlet pipe, and ducts for leading the gas from said depending pipe to the peripheral portion of the bell, and constructed to discharge gas into the bell only at the peripheral portion thereof.

3. A gasometer comprising a tank having an inlet pipe and an annular outlet pipe surrounding said inlet pipe, and a bell provided with means for receiving gas at its central portion and discharging said gas into the bell only at its peripheral portion, said means being imperforate between the central and the peripheral portions of the bell.

4. A gasometer comprising a tank having an inlet pipe and an outlet pipe both located at the central portion of the tank, and a bell provided with means for receiving gas at its central portion and discharging said gas into the bell only at its peripheral portion, said means being imperforate between the central and the peripheral portions of the bell.

5. A gasometer comprising a tank having an inlet pipe and an outlet pipe both located at the central portion of the tank, and a bell provided with means for receiving gas at its central portion from said inlet pipe, means for discharging the gas into the interior of the bell at its periphery, in a number of jets, and imperforate ducts for leading the gas from the central receiving means to the peripheral discharging means.

6. A gasometer comprising a tank provided with pipes for the admission and education of gas respectively, a bell provided with means for receiving gas at its central portion, with means for discharging the gas into the interior of the bell at its periphery, and with imperforate ducts for leading the gas from the central receiving means to the peripheral discharging means, and a stationary support arranged to engage the upper part of the bell in its lowermost position, at points laterally of said ducts, so as not to engage the ducts.

7. A gasometer comprising a tank provided with a central pipe, an annular pipe surrounding said central pipe, a duct extending through said annular pipe to supply water to the space between said two pipes, and a bell provided with a gas-conveying pipe arranged to fit between said central pipe and said annular pipe.

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

FREDERICK J. MAYER.

Witnesses:

LAURA E. SMITH,  
L. C. FLACCUS.