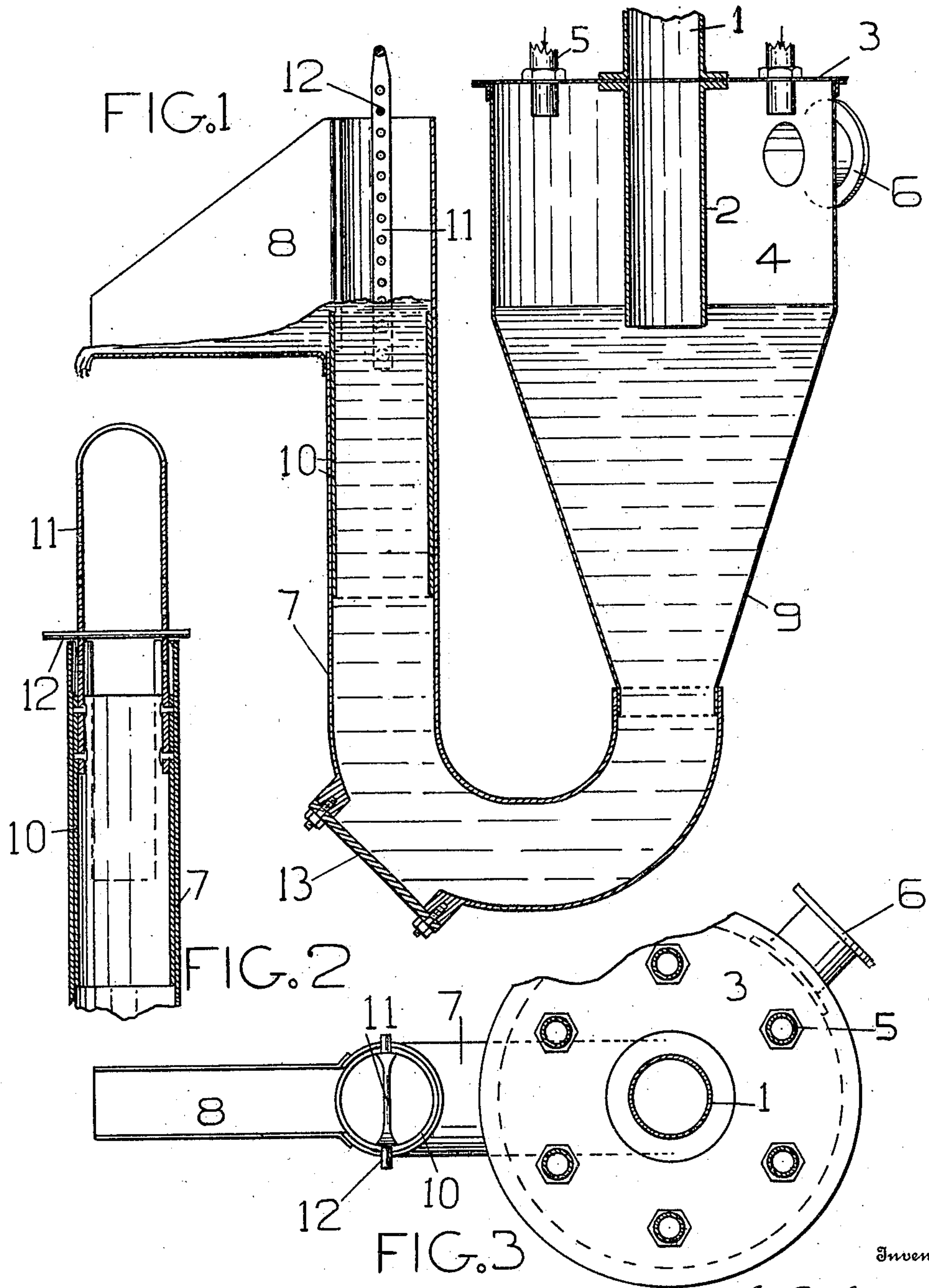


No. 819,660.

PATENTED MAY 1, 1906.

L. P. LOWE.
GAS WASHER.

APPLICATION FILED MAR. 27, 1905.



Witnesses

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LEON P. LOWE, OF SAN FRANCISCO, CALIFORNIA.

GAS-WASHER.

No. 819,660.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed March 27, 1905. Serial No. 252,226.

To all whom it may concern:

Be it known that I, LEON P. LOWE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Gas-Washers, of which the following is a specification.

This invention relates to an improved gas-washer, the object of the invention being to provide an apparatus of this character which shall be self-cleaning and which can also be adjusted to regulate the depth of immersion of the outlet for the gas to correspond with varying conditions of gas-making.

In the accompanying drawings, Figure 1 is a vertical section of the apparatus. Fig. 2 is a broken vertical section of the discharge-pipe of the apparatus, taken at right angles to the section in Fig. 1; and Fig. 3 is a broken plan view of a gas-washer.

Referring to the drawings, 1 represents the gas-pipe, by means of which the gas is conducted to the washer, and 2 represents a continuation thereof. Said pipes 1 and 2 are secured by flanges upon the cover 3 of the gas-washer 4. By means of pipes 5, passed through said cover, water is continually discharged into said washer. In order to escape, the gas must pass below the bottom of the pipe 2 and through the water in the washer, being thereby washed, finally escaping through an outlet-pipe 6 above the level of the water.

Since water is continually being supplied to the washer, it is necessary to provide an escape for the water thus continually discharged into the washer. Heretofore it has been the practice, so far as my knowledge extends, to provide for such escape by means of an overflow at the surface level of the water in the identical chamber into which it is discharged. With such construction the effect is that the tarry and other residuum washed out of the gas is deposited in the bottom of the chamber and has to be removed from time to time.

In the present construction no overflow-outlet of this character is provided, but an outlet is provided at the bottom of the chamber 4 in the form of a pipe 7, bent back upon itself, so as to extend upwardly at its end, and provided at the top with a spout 8. By means of this construction all the tarry and other residuum separated from the gas by washing with water is carried along with the water and is discharged thereby through said

spout 8, so that the washer does not have to be cleansed at intervals from such residuum, but is self-cleansing.

In order to further increase the scouring action of the water, which causes this form of washer to be self-cleansing, the lower portion 9 of said vessel 4 is made conical or converging downward where it connects with the bent pipe 7. This greatly improves the scouring action, as the velocity of the water through the extreme bottom of the vessel is thereby increased in the inverse proportion to its cross-sectional area as compared with the cross-sectional area of the upper portion of the vessel. The water running very rapidly through the bottom of the vessel completely carries away all residual matter.

In certain apparatus for the manufacture of gas it is desirable to vary from time to time the depth of immersion of the gas-pipe 2. For instance, it may be necessary in one stage of the process to permit the gas to pass out from the bottom of the pipe 2 into the washer and at another stage to completely seal the mouth of said pipe against the passage of gas therefrom.

In the present invention this can be done by means of a pipe 10, fitting closely within the uplift branch of the pipe 7, the edge of said pipe 10 controlling the level of the water that can escape from the washer. This pipe 10 fits within the pipe 7 very closely, so that the amount of water which can pass between the pipes is not sufficient to appreciably affect the level of the water in the washer, nearly all of the water being compelled to pass over the edge of the pipe 10. In order therefore to vary the depth of immersion of the pipe 1, it is only necessary to vary the height at which this pipe 10 is supported, and this is done by means of a bail 11, attached to said pipe 10, having perforated sides through which can be passed a rod 12, as shown in Fig. 2, resting upon the edge of the upper end of the pipe 7.

13 represents a door which may be opened when necessary to obtain access to the discharge-pipe under usual conditions.

I claim—

1. A gas-washer comprising a gas-washer proper, a gas-supply pipe, a water-inlet pipe, a water-outlet pipe connected to the bottom of said washer, said pipe extending downwardly and then bending upwardly to a point above the level of the gas-supply pipe, and means for controlling the discharge of

the water from said upwardly-bending pipe except at a point above the level of the gas-supply pipe, substantially as described.

2. A gas-washer having a supply-pipe for the gas, an inlet-pipe for the water and an outlet-pipe leading downwardly from the bottom thereof of less cross-sectional area than the upper portion of the washer, substantially as described.

3. A gas-washer having a supply-pipe for the gas, an inlet-pipe for the water and an outlet-pipe leading downwardly from the bottom thereof of less cross-sectional area than the upper portion of the washer, said washer converging or tapering downward to said outlet-pipe, substantially as described.

4. A gas-washer comprising a gas-washer

proper, a gas-supply pipe, a water-inlet pipe, a water-outlet pipe connected to the bottom of said washer, said pipe extending downwardly and then bending upwardly to a point above the level of the gas-supply pipe, and a pipe having a slidable engagement with the outlet-pipe to the discharge of the water from said upwardly-bending pipe except at a point above the level of the gas-supply pipe, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

L. P. LOWE.

Witnesses:

FRANCIS M. WRIGHT,
BESSIE GORFINKEL.