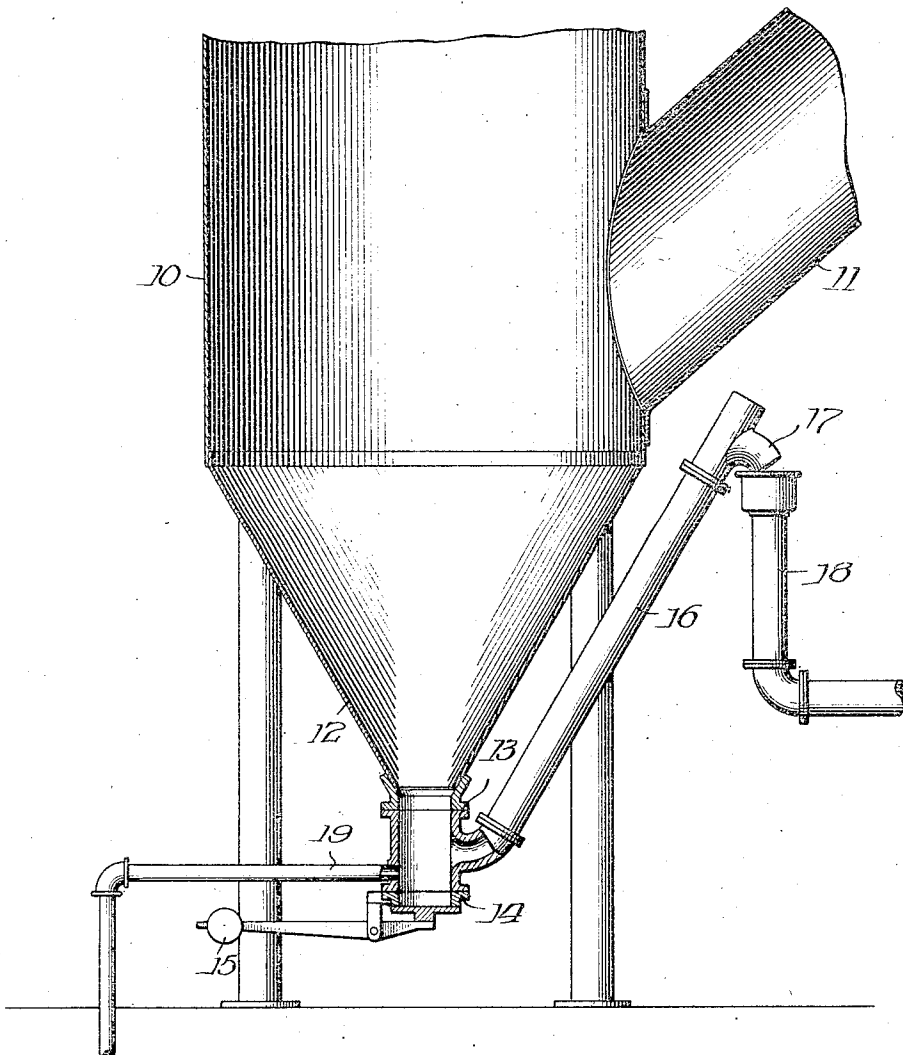


W. MATHESIUS,
DRAIN FOR GAS CLEANERS AND METHOD OF OPERATING THE SAME.
APPLICATION FILED DEC. 8, 1915.

1,245,366.

Patented Nov. 6, 1917.



Witnesses:

Ed. Davidson
L. J. Murray

Inventor
Walter Mathesius

By *L. C. Luthman*
Att'y.

UNITED STATES PATENT OFFICE.

WALTHER MATHESIUS, OF CHICAGO, ILLINOIS.

DRAIN FOR GAS-CLEANERS AND METHOD OF OPERATING THE SAME.

1,245,366.

Specification of Letters Patent.

Patented Nov. 6, 1917.

Application filed December 8, 1915. Serial No. 65,671.

To all whom it may concern:

Be it known that I, WALTHER MATHESIUS, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Drains for Gas-Cleaners and Methods of Operating the Same, of which the following is a specification.

10 My invention relates to gas washing apparatus and has particular reference to a novel drain and a method of operating the same whereby clogging of the water seal outlet is avoided.

15 In many plants it is common to employ gas washers in which water is utilized for removing solid particles from the gas, the water and contained solid matter falling to the lower portion of the washer and allowed to overflow through a water seal. Difficulty 20 has been experienced in providing means which will not become clogged and thus interrupt the operation of the system.

My invention relates to a simple expedient which has been utilized with great success in washers of the vertical type, although it may be utilized with equal facility in washers of other types in which the water is discharged through a seal at a low point 30 of the washer.

The method and apparatus will be more readily understood by reference to the figure which is a sectional view through the lower portion of a gas washer having my improvement applied thereto.

35 In the drawings I have illustrated the lower portion of a gas washer 10 having an inlet pipe 11. The lower portion 12 of the washer is frusto-conical and is adapted to act as a seal, a quantity of water being maintained therein. At the outlet I provide a T 40 13 to which is connected a trap 14 held in place by a counterweight 15. When necessary the seal may be cleaned by opening the trap 14, but inasmuch as this involves the escape of water and mud, the use of the trap is undesirable. Extending from the T is a 45 pipe 16 terminating at its upper end in an outlet 17 which connects with a sewer pipe 18. The water as it falls into the conical portion 12 rises until it reaches the height of the overflow pipe 17 after which it overflows in the sewer. It has been found that sediment collects in the lower portion of the

outlet and finally completely closes the same. 55 I have found that by inserting a small pipe 19 in the opposite side of the T 13 the difficulty as to clogging is entirely avoided. This small pipe acts simply as a bleeder and runs continuously. The bulk of the water 60 and sediment is discharged through the pipe 16.

By the use of these simple pipes I am enabled to avoid the necessity for opening the trap 14 and flooding the vicinity with water 65 and mud, and the cleaner is capable of continuous operation.

I claim:

1. In a gas cleaner, the combination of a lower portion acting as a water seal, an 70 overflow outlet extending upwardly from said lower portion, and a normally open bleeder pipe also connected to said lower portion and discharging a small quantity of water in an opposite direction to that of 75 said overflow pipe, substantially as described.

2. In a gas cleaner, the combination of a conical water seal having a contracted outlet, an overflow pipe extending upwardly 80 from said outlet, and a normally open bleeder pipe connected to said outlet opposite to said overflow pipe.

3. A method of preventing the lodgment of sediment at the outlet from the water seal 85 of a gas washer, which consists in discharging the bulk of the water through a large overflow pipe connected to a restricted lower portion of the seal, and constantly discharging a relatively small quantity of water from 90 the same point in the seal in a direction opposite to the flow of the bulk of the water, substantially as described.

4. A method of preventing the lodgment of sediment at the bottom outlet from a 95 water seal, which consists in discharging the bulk of the water through an overflow conduit which forms the main outlet from the seal, and constantly discharging a relatively small quantity of water from the same point 100 in the seal in a direction opposite to the flow of water through the main outlet, substantially as described.

WALTHER MATHESIUS.

Witnesses:

D. V. MEDALIE,
W. J. WHITE.