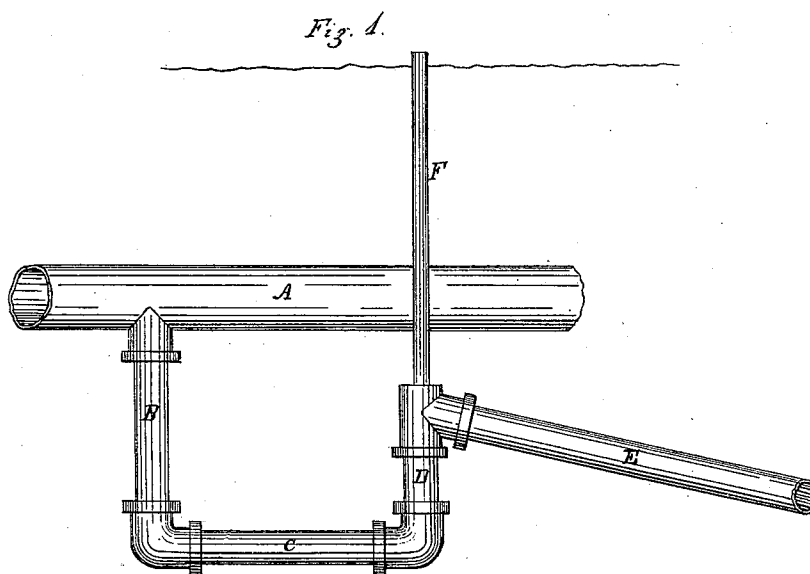


J. H. VANSTENBURGH.

Drip or Water-Trap for Gas-Pipes.

No. 132,939.

Patented Nov. 12, 1872.



Witnesses.

Ja^s S. Wightman
Anna M. Northrop. }

John H. VanSteenburgh
By Thos. J. Cow
Atty

UNITED STATES PATENT OFFICE.

JOHN H. VANSTEENBURGH, OF BALLSTON SPA, NEW YORK, ASSIGNOR TO HIMSELF, DE WITT CLINTON WASHBURN, AND SAMUEL F. DAY, OF SAME PLACE.

IMPROVEMENT IN DRIP OR WATER TRAPS FOR GAS-PIPES.

Specification forming part of Letters Patent No. 132,939, dated November 12, 1872.

To all whom it may concern:

Be it known that I, JOHN H. VANSTEENBURGH, of Ballston Spa, in the county of Saratoga and State of New York, have invented an Improved Drip or Water Trap for Gas-Pipes, of which the following is a specification:

Nature and Object of the Invention.

My invention is designed to relieve gas-pipes, and especially street-mains, from the water of condensation which is deposited by the gas, and which it is necessary to remove to prevent the flow of gas from being obstructed. It has heretofore been customary to remove this water of condensation by tapping the under side of the gas pipe or main in a place where the water of condensation would naturally settle, with a pipe leading to a well to receive this water of condensation, and to remove the water from this well occasionally, as it accumulated, by means of a pump. My invention consists in attaching to and combining with the gas-main or gas-pipe a discharging-pipe to receive the water of condensation, and having a portion thereof extended below the point at which the water of condensation is discharged therefrom, substantially as hereinafter more fully set forth, by which the water of condensation is discharged automatically from the gas-main or gas-pipe; and also in the device hereinafter described for preventing the water of condensation from being siphoned off, under certain circumstances, so as to allow the gas to escape.

Description of the Accompanying Drawing.

The accompanying drawing is a side view of an apparatus constructed according to my invention.

General Description.

A is a gas-main or gas-pipe, to which a pipe, B, opening into it on the under side, is attached. This pipe B is represented in the drawing as having a horizontal section, C, connecting it to the vertical section D, which latter is long enough below the point where the water

is discharged to contain a column of water sufficient to more than sustain the pressure of the gas. E is a pipe, which leads from the pipe D into a sewer or any other convenient place for discharging the water of condensation.

I have found by experiment that it is desirable that the pipes B, C, and D should have considerable size in order to operate to the best advantage; and in some instances I have found that pipes six inches in diameter are not too large.

This device being thus constructed and attached to the gas-main or gas-pipe at a point where the water of condensation will naturally settle, it is obvious that any water condensed in the pipe A will naturally be discharged into the pipe B, and, passing through the pipe C, will rise in the pipe D and be discharged through the pipe E into the sewer or other place of discharge as fast as it accumulates sufficiently to fill the pipe D up to the discharging-orifice. When the device is attached it should be filled with water sufficiently to prevent the escape of gas.

For the purpose of insuring the perfect freedom of the pipe A from the water of condensation I prefer to locate the discharging-orifice of the pipe D at a point lower than the bottom of the pipe A, though this is not strictly essential, as, if this discharging-orifice is on the same level as the bottom of the pipe A, the pressure of the gas will generally be sufficient to keep the pipe A free from water.

In cases where the point of discharge of the pipe E is considerably lower than the point where it is connected to the pipe D it may be advisable, under certain circumstances, in order to prevent the possibility of its becoming filled with water and then acting as a siphon, to attach a pipe, F, to the pipe D, which pipe may extend to the surface of the ground and open into the air, thus forming an air-opening into the pipe D above the point of discharge. In most cases, however, this addition will probably be unnecessary.

It will be obvious, from a consideration of the principles of this device and its modes of

operation, that the precise form of construction herein represented is not material so long as there is a sufficient body of water below the point of discharge to resist the pressure of the gas—as, for example, the pipes B and D might be directly connected to each other at their lower ends without the intervention of the pipe C, and the result would be substantially the same in kind, and perhaps nearly or quite as satisfactory; or the pipes B and D might be connected by a tank of any form with the same result. I prefer, however, the form I have represented as the best.

To avoid the necessity of the use of the pipe F under any circumstances, the pipes B and D may be extended down, if desired, to a point sufficiently below the point of discharge of the

pipe E, assuming the latter to be at all times open to the air at that point.

Claims.

I claim as my invention—

1. The combination of the gas-pipe or gas-main A and the pipes B and D, or their equivalent, either with or without the intervention of the pipe C, substantially as hereinbefore set forth.

2. The combination of the pipe A and pipes B and D and the pipe F, substantially as hereinbefore set forth.

JOHN H. VANSTEENBURGH.

Witnesses:

DAVID MAXWELL,
THOS. L. GLEASON.