M. B. COWDEN.

Automatic Sewer-Trap.

No. 227,614. Patented May 18, 1880.

Fig. 1.

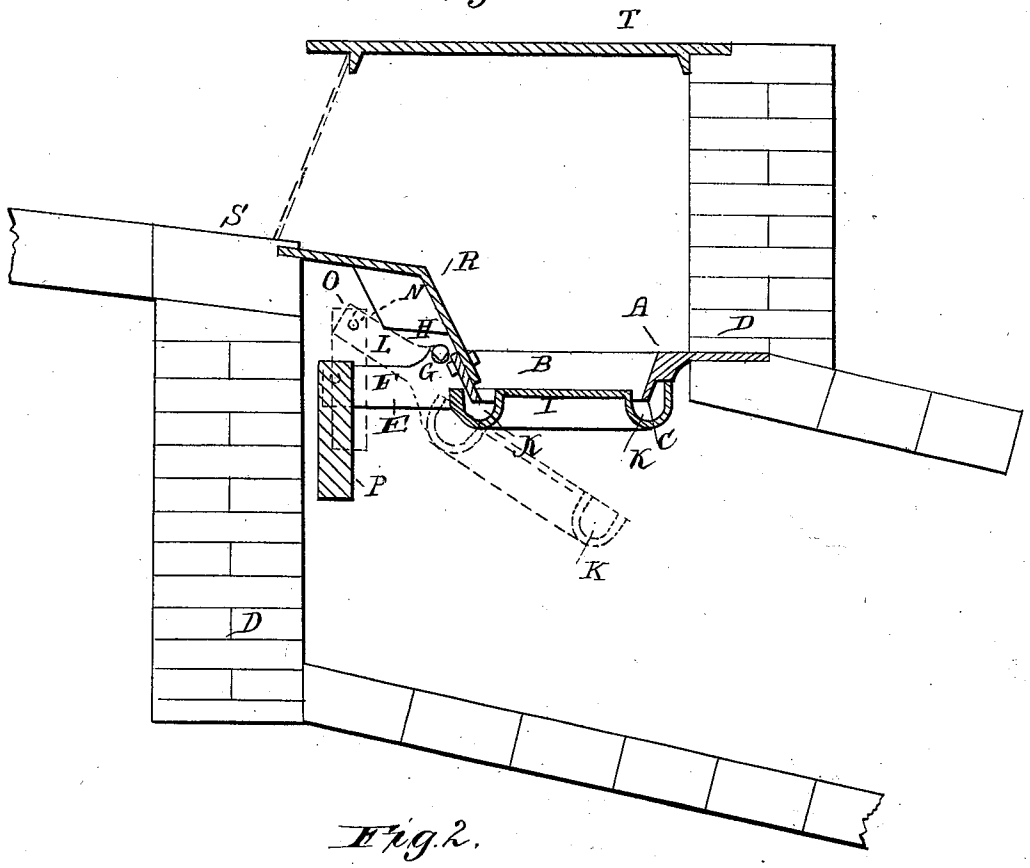
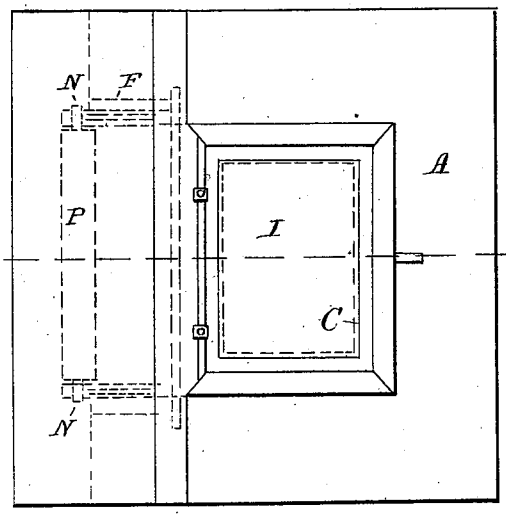


Fig. 2.



Witnesses,
F. L. Durand
Chas. L. Coombs.

Inventor,
M. B. Cowden
By H. J. Ennis
Attorney.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MATTHEW B. COWDEN, OF HARRISBURG, PENNSYLVANIA.

AUTOMATIC SEWER-TRAP.

SPECIFICATION forming part of Letters Patent No. 227,614, dated May 18, 1880.

Application filed December 12, 1879.

To all whom it may concern:

Be it known that I, MATTHEW B. COWDEN, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain Improvements in Automatic Sewer-Traps, of which the following is a specification, reference being had to the accompanying drawings, making part of the same.

This invention relates to certain improvements in that class of sewer-traps which are operated automatically by the inflowing sewage matter to permit the passage of such matter to the sewer, and to form a water-seal after the passage of such sewage matter, to prevent the escape of noxious or offensive gases, as more fully hereinafter specified; and it has for its object to so construct the parts of the trap that they may be readily inserted in sewers already constructed, and will not require any special construction of the masonry, as in the sewer-traps of this class in ordinary use.

To this end the invention consists of a cast-metal frame having an opening for the passage of sewage matter, provided with a downwardly-extending flange entirely around said opening and a hinged valve provided with a recess around its edge, and a counter-balance, by means of which it is kept in a normal position, in combination with an angle-plate, by means of which the device is adapted to sewers of ordinary construction, as more fully hereinafter specified.

In the drawings, Figure 1 represents a vertical section of my improved trap, showing the same in position, and Fig. 2 a top view of the same.

The letter A indicates a cast-metal frame having an opening, B, with a downwardly-extending flange, C, entirely around it. Said frame is adapted to be set in the masonry D of the sewer-opening, as shown in Fig. 1 of the drawings. Said frame A, at one side of the opening B, is provided with a space, E, and flanges F at each side, in which flanges are formed the bearings G for the knife-edge H of the valve I.

The said valve I is constructed with a recess, K, entirely around its edges, and with extensions or arms L at one side, which are provided with knife-edged lugs H, adapted to set in the bearings G of the flanges F. The said arms or extensions are provided with bearings N near their ends, for the reception of the lugs O on a counter-balance or weight, P, which is adapted to hang in the opening E and hold the valve in a normal position.

The letter R indicates an angle-plate fastened to the side of the opening B, which divides said opening from the opening E. The horizontal portion of said angle-plate extends over the opening E and forms a connection with the edge of the gutter S, to conduct the inflowing sewage matter to the trap.

The letter T indicates a metallic cover, of the usual construction, covering the trap-opening leading to the sewer.

The operation of my invention is as follows: The inflowing water and sewage matter passing from the gutter to the trap overbalance the weight and open the valve, allowing the sewage matter to pass to the sewer. When the sewage matter ceases to flow in sufficient quantities to overbalance said weight it will hold the valve in a normal position, the recess at the edge of said valve collecting and holding a quantity of water, which, with the depending edge of the opening B, will form a complete water-seal, effectually preventing the escape of noxious and offensive gases.

I am aware that counterbalanced water-sealed valves are old; but these require, so far as I am aware, peculiar formations of the masonry in setting them in the sewers.

By the use of my angle-plate I am enabled to adapt my device to sewers of ordinary construction, as the angle-plate may be made to adapt itself, with the inlet hopper and valve, to any construction of masonry.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the frame A, provided with a downwardly-projecting rim, C, and with an angle-plate, R, forming a connection with the gutter, the weighted valve I, having a semicircular recess around its edges to collect water and form a seal with the rim C when the valve is closed, substantially as specified.

M. B. COWDEN.

Witnesses:
ALEX. BLESSING,
A. J. MARSHBANK.