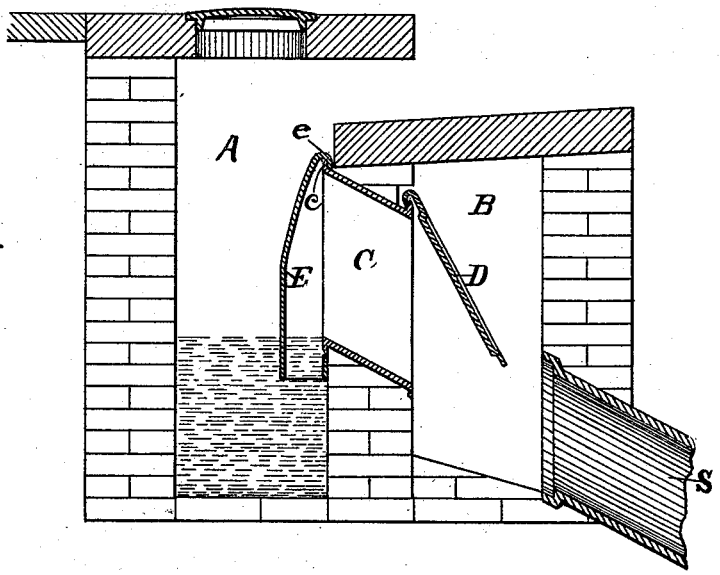
(No Model.)

H. A. PALMER.

SEWER TRAP.

No. 418,816. Patented Jan. 7, 1890.

Fig. 1



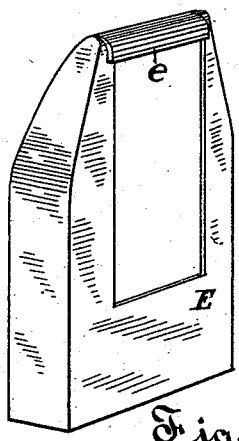


Fig. 2

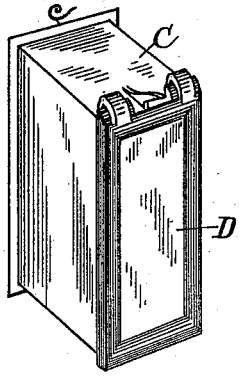


Fig. 3

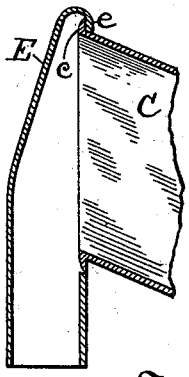


Fig. 4

Witnesses

S. D. Robbins.

Chas. G. Brevillier

Inventor

Horace A Palmer

By his Attys.

Hallock & Hallock

UNITED STATES PATENT OFFICE.

HORACE A. PALMER, OF ERIE, PENNSYLVANIA.

SEWER-TRAP.

SPECIFICATION forming part of Letters Patent No. 418,816, dated January 7, 1890.

Application filed August 9, 1889. Serial No. 320,212. (No model.)

To all whom it may concern:

Be it known that I, HORACE A. PALMER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Sewer-Traps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in sewer-traps, and the purpose thereof is to provide a simple and novel construction and combination of parts constituting a detachable hood and valve combined, whereby a mechanical and water seal is provided for the catch-basins of sewers to prevent floating material from passing into the main sewer, and a perfect water-seal provided in all constructions, the parts being easily accessible through the man-hole and the hood being readily removed at any time for inspection or for flushing.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then definitely pointed out in the claims following this specification.

Referring to the accompanying drawings, Figure 1 is a vertical section showing a sewer-trap or catch-basin in which my invention is embodied. Fig. 2 is a perspective view of the hood. Fig. 3 is a perspective view of the trap and its box. Fig. 4 is a vertical section of the hood, together with a part of the box.

In the said drawings, the reference-letter A denotes the catch-basin, having an area B, into which the valve opens.

The letter C designates the valve-box, which is formed of metal in the form of a parallelogram or a short section of a rectangular metallic casing severed by two parallel cuts, taken in planes forming less than a right angle with the axis of the casing. Thus when the box is set in a vertical wall of masonry, separating the catch-basin from the area into which it opens, it will occupy an inclined position, as shown in Fig. 1. Upon that periphery of the box facing upon the catch-basin I form a flange *c*, which preferably extends entirely around the rectangular box and overlaps upon the masonry in which it is set. Upon the upper horizontal portion of the flange, or above the sewer-inlet, is hung a hood E, formed of suitable metal, nearly semicircular at its lowest edge and for a little distance above the same, and thence contracting toward the upper horizontal edge, upon which is formed a straight downwardly-turned flange or hook *e*, which engages with the flange *c* on the box and sustains the hood, the latter standing out from the masonry sufficiently to receive the former, thereby locating the point of connection wholly above the water-level and above the outlet to the catch-basin. The edges of the hood drop straight from the point of connection with the flange *c*, and lie closely against the masonry wall in which the box is set. They are wholly disconnected therefrom, however, the only point of attachment for the hood being the upper flange *c* of the box, as already described.

Upon the open face of the box C, adjacent to the area B, is hung the valve D. (Shown in Fig. 3.) It is provided with hooks which engage lugs on the box; but this construction, while it enters as an element therein, forms no prominent part of my present invention and requires no specific description.

The function of the hood E is to prevent floating matter from passing through the valve-box, and for this purpose two forms of hoods have heretofore been used. In one form the hood has been hinged to the top of the valve-box by a series of bolts, and when removed it has been necessary to remove the nuts from the bolts. As these parts are invariably corroded with rust, the task is always a difficult one.

In another construction the valve-box is dispensed with entirely, and an opening is formed in the masonry and protected by a hood having a continuous inwardly-turned flange engaging with a "dovetailed" projection mounted on the masonry, whereby the hood may be removed by lifting it and sliding its continuous flange out of engagement with such projection. As the water normally stands above the lower portion of the hood, forming a water seal, this construction is open to the same objection, that the corrosion of the engaging portions—not only those below,

but those above the surface of the water as well—will soon unite the parts so closely that they can only be disengaged with much difficulty and by the exertion of great force. In order, therefore, that the hood may be readily removed, and to this end be connected with the valve-box by a free joint wholly removed from the action of the water and located above the sewer-inlet, and in order that the well or catch-basin may be of the smallest dimensions required, I construct the hood in the manner shown and connect it to the valve-box, as described, in order that the operator may, by seizing a handle formed thereon, raise said hood off its bearing and remove it entirely from the catch-basin readily and quickly and without difficulty, and without the necessity of removing bolts or nuts or inverting the hood or entering the catch-basin, the upward lift upon said hood rocking it upon its point of support and releasing it from any abnormal adhesion thereto.

In case a sudden storm breaks while the basin is being cleaned, the hood, when made in accordance with my invention, may be instantly replaced, and will at once assume its proper position to protect the box. The hood being of iron, is so heavy that it is always preserved in proper position by its own weight.

What I claim is—

1. In a sewer-trap or catch-basin, the combination, with a valve-box constructed to be set in masonry and provided with a lateral flange for overlapping the masonry, of a hood overhanging and covering the open end of the valve-box, said hood being sustained by a hook-shaped flange formed upon its upper horizontal edge, said flange being dropped over the flange on the valve-box, whereby the point of support and connection is located wholly above the water-level or sewer-inlet, and a free joint formed between the hood and box, substantially as described.

2. In a sewer-trap or catch-basin, the combination, with a valve-box set in the masonry and having upon its edge a flange overlying the outer face of the masonry, of a hood overhanging and covering the open end of the box, said hood being substantially semicircular at its lower end and contracting toward its upper end, where a downwardly-turned flange or hook is formed adapted to seat upon and inclose the flange on the upper side of the valve-box, thereby forming a hood which drops below the water-line and is detachably connected with the valve-box by a free joint located above the sewer-inlet or above the water-line, substantially as described.

3. In a sewer-trap or catch-basin, the combination, with an inclined valve-box C, set in the wall between the catch-basin and the sewer, or the entrance thereto, of a hood E, overhanging the open end of the box and having a downwardly-turned flange or hook *e*, adapted to engage a flange *c*, formed on the edge of the valve-box, and a valve D, supported at its upper end by flanges or hooks on the opposite open end of the valve-box, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HORACE A. PALMER.

Witnesses:
JNO. K. HALLOCK,
WM. P. HAYES.