

(No Model.)

D. HIGGINS.
SEWER TRAP.

No. 596,751.

Patented Jan. 4, 1898.

Fig. 1.

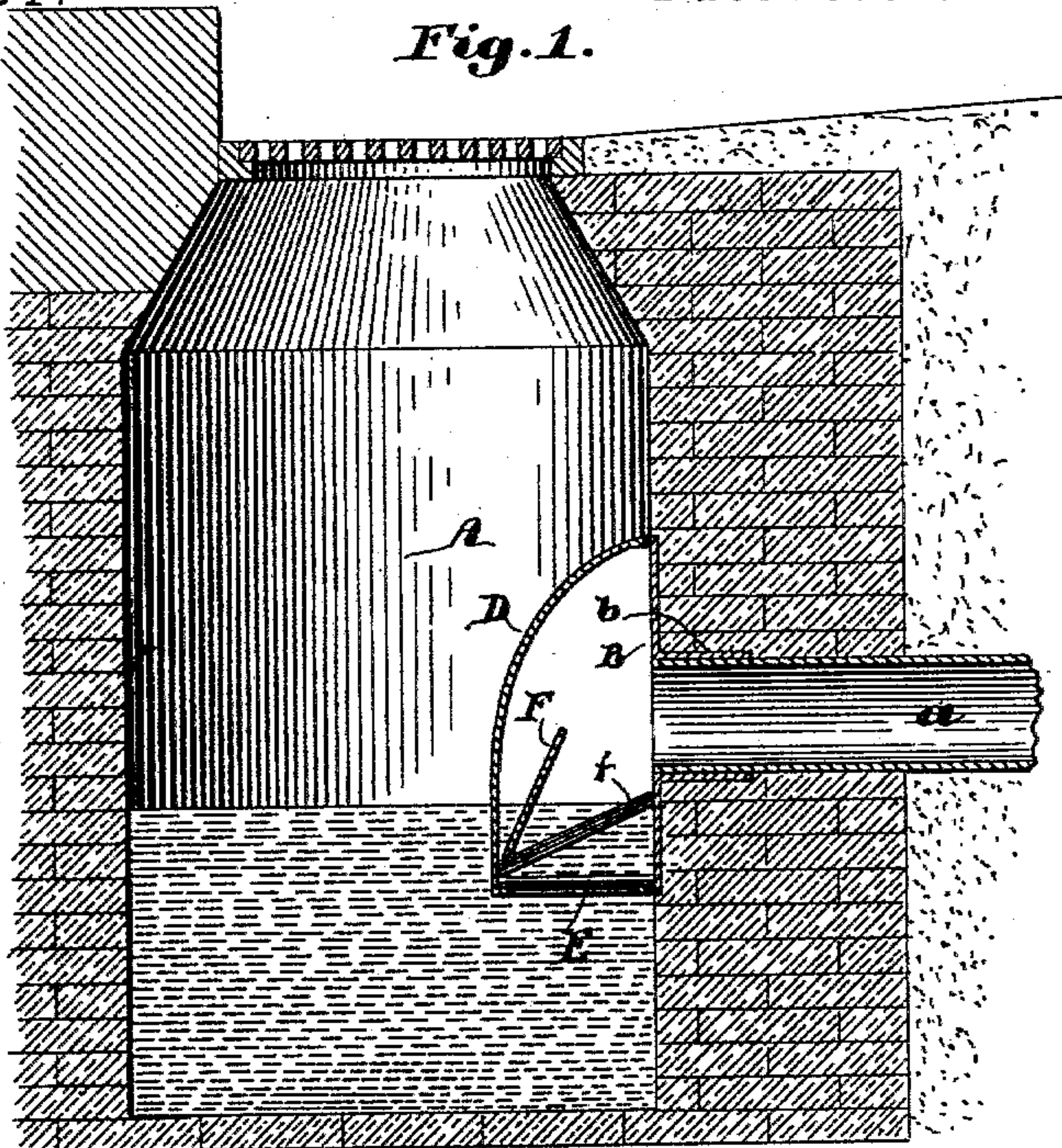
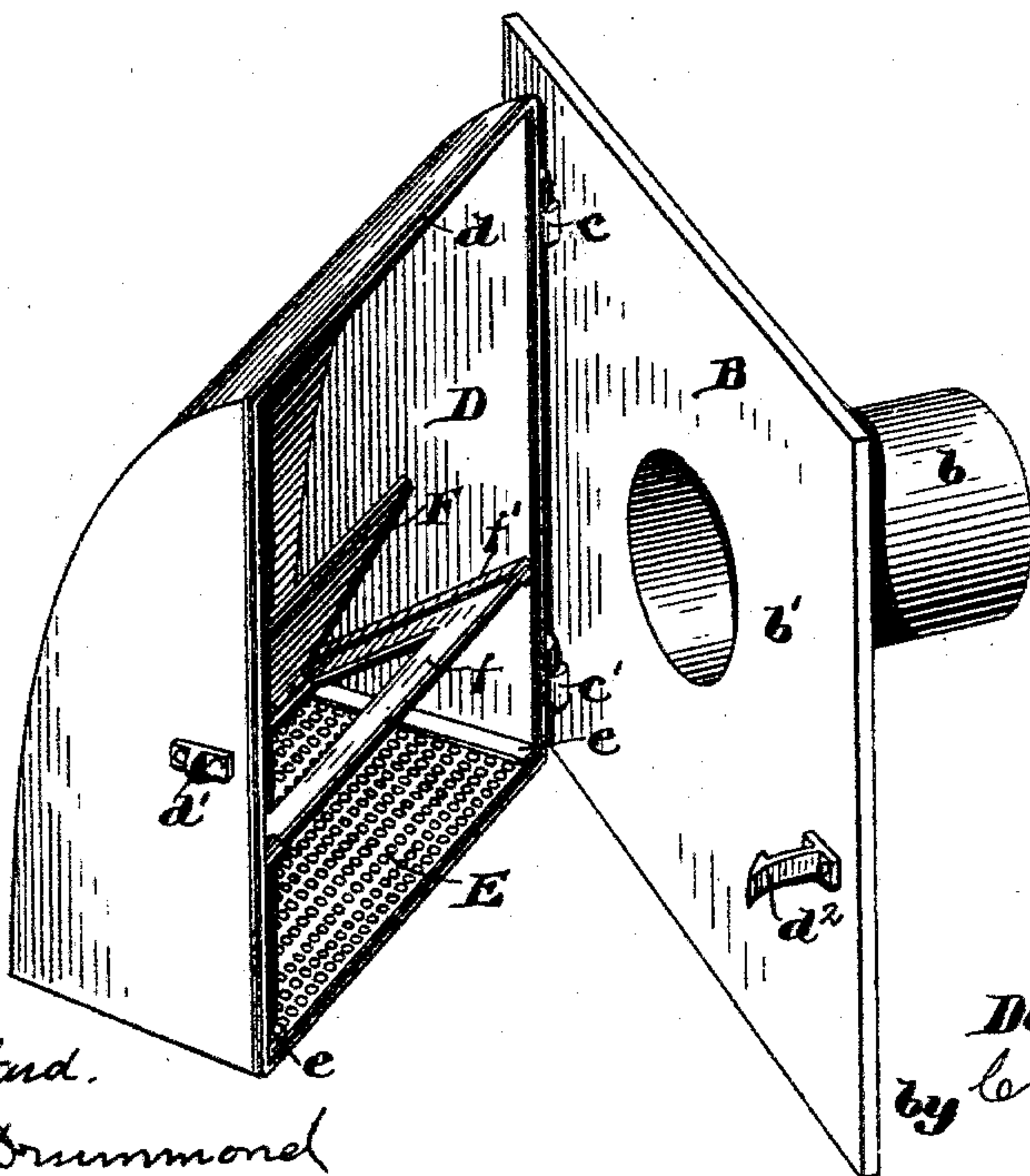


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

DANIEL HIGGINS, OF BOSTON, MASSACHUSETTS.

SEWER-TRAP.

SPECIFICATION forming part of Letters Patent No. 596,751, dated January 4, 1898.

Application filed April 16, 1897. Serial No. 632,383. (No model.)

To all whom it may concern:

Be it known that I, DANIEL HIGGINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Sewer-Traps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to sewer-traps, being particularly intended to be used in connection with a catch-basin as an improvement on my former patented device, No. 334,378, dated January 12, 1886. As shown in my patent, the outlet is arranged at the end of a considerable opening embedded in the masonry of the cesspool or catch-basin, and in this opening is permanently hung a valve-closure, fitting down snugly against a surrounding rib or partition, which is also cast with the body forming the opening mentioned, a hood or guard being hinged at its upper end to the top of the said body, so as to hang by gravity against the adjacent wall of the cesspool and form a protecting-cover for the opening. In practice, however, constructions of the kind described are open to several objections, inasmuch as they do not give free access to the sewer-outlet, there being more or less obstruction on account of the valve and the partition against which it closes. Moreover, the hood hanging down by gravity prevents ready access to the outlet when it is desired to bail out the cesspool or to otherwise inspect or tend to the trap and its connections. It is very desirable to be able to have uninterrupted access directly to the outlet and to have the latter entirely clear of all attachments and obstructions. Therefore I have devised a construction which brings the sewer-outlet flush with the inside of the catch-basin and permits the trap and all its parts to be bodily swung to one side, where they will remain, or from which position they can readily be lifted and removed, if desired, while the workmen clean the basin or inspect the outlet. Not only can the parts be swung to one side, as stated, but when closed they afford a perfectly tight-fitting closure or trap to prevent the escape of sewer-gas, and at the same time my improved trap is so constructed that when closed the removable parts

thereof are locked against unauthorized interference.

Further improvements and advantages of my invention will appear in the course of the following detailed description thereof, and the invention will be more particularly defined in the appended claim, reference being had to the drawings forming a part of this specification.

In the drawings, Figure 1 is a central vertical section showing my invention in operative position as applied to a usual catch-basin. Fig. 2 in perspective shows the details of construction of my improved sewer-trap.

The catch-basin A and outlet *a* may be and are of any approved style ordinarily found in sewer systems. Adjacent the inner end of the outlet I build into the masonry a casting B, comprising a shoulder or thimble *b* and a face-plate *b'*, the latter extending flush with the inner wall of the catch-basin. On the plate *b'*, at one side thereof, herein shown as the left-hand side, is connected, by means of hinges *c c'*, a hood D, preferably provided on its vertical and top sides with packing *d*, set into its edges, so as to hermetically seal the hood against the plate *b'* to prevent all escape of sewer-gas when the hood is closed, the hood for this purpose, moreover, being preferably cast in one piece and having its sides, front, and top integral and imperforate, so as to present a closed cover for the opening of the thimble *b*. At the side opposite the hinges the hood D is provided with a suitable locking device, herein shown as consisting of a lug *d'*, cooperating with a catch *d''* on the plate *b'*, so that when the hood D is swung closed it will be automatically fastened. Within the hood I provide a screen E and valve F, the former being preferably held in ways *e*, formed at the bottom of the hood and opening at the inner edges thereof, so that the screen can only be withdrawn when the hood is swung back from its closed position.

The valve F is hinged at one edge to a plate *f*, the latter sliding in ways *f'*, similar to those provided for the screen, whereby the valve may be withdrawn only when the hood is swung back.

It will be noticed that I have mounted the valve to open upwardly away from the sewer-

outlet, this provision being made for the reason that it thereby offers the least resistance to the ready outflow of the water, the latter readily lifting the valve as the water rises to flow out through the outlet *a*, the valve, however, instantly closing down against its seat *f* the moment any backflow should occur and normally keeping closed by gravity. I have mounted the valve below the bottom of the outlet, so that thereby there will normally always be a water seal effectually closing the catch-basin against any escape thereinto of sewer-gas, this water seal reinforcing the valve-closure.

In practice a catch-basin is usually cleaned out by a workman descending part way thereinto by means of a ladder and bailing out the water and collected refuse into the outlet *a*, a dip-pan being hung on the opening as a sort of funnel for the purpose of enabling the laborer to readily empty the buckets as he dips, and it will be apparent that by my construction this operation is greatly facilitated, for the reason that the sewer-outlet *a* is directly at hand flush with the inner wall of the catch-basin, and also the hood which normally closes the same being capable of being swung laterally to one side, where it will remain entirely out of the way, offers no obstruction nor hindrance whatever to the workmen, enabling a scraper to be used in the outlet, if desired.

I am aware that heretofore it has been proposed to make sewer-traps having a removable hood or closure for the outlet, this hood being bolted to the outlet so that the several bolts and nuts could be respectively loosened and then the hood taken off and hauled out of the catch-basin whenever it was desired to clean out the latter, it being necessary to let down the hood in accurate position again, repack it, and readjust and tighten the bolts again after doing the work, this construction, however, offering so much delay and inconvenience as to be practically worthless and of no service in practical construction. Also it has been proposed to cast a hood or closure and thimble all together and permanently secure the same directly in the masonry of the catch-basin, the closure being provided with removable caps or cover-plates, so that the contents of the buckets in the dipping out of the catch-basin could be hurled through these openings and thereby indirectly reach the

sewer; but these constructions offer so much obstruction and interfere so materially with the workmen, moreover projecting out into the catch-basin and being otherwise of so great inconvenience, as to be decidedly objectionable in practical use. My invention aims at removing all these objections and provides a construction which leaves the outlet of the catch-basin free and unobstructed whenever it is desired to clean out or inspect the catch-basin and its outlet, the outlet being open directly at the plate *b'* and the latter being unobstructed by any ribs, valves, or other obstacles, so that for the purpose of cleaning the catch-basin the outlet becomes nothing but an unobstructed hole. At the same time the outlet may be instantly closed and secured without the delay or necessity for any bolts or releasing or fastening devices, and when so closed all the parts are securely retained against removal.

The screen prevents the entrance to the sewer of any leaves, sticks, or other debris and the valve prevents the entrance to the catch-basin of any matters from the sewer, and in either case, if either of these should become broken or mutilated, it is a very simple matter, according to my invention, simply to slide out the broken part and replace it with a new one.

Various changes may be resorted to within the spirit and scope of my invention.

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

A sewer-trap, comprising a plate centrally perforated to register with the outlet of a catch-basin, and a hood, the latter having connection to said plate by vertical hinges at one side and by a locking device at its other side, and provided with a removable screen at its bottom and a removable valve between said bottom and said perforation, said screen and valve being mounted in ways formed on the inner side walls of said hood, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL HIGGINS.

Witnesses:

GEO. W. GREGORY,
GEO. H. MAXWELL.