S. PHILLIPS.

DEVICE FOR CLEANING SEWERS.

No. 177,421. Patented May 16, 1876.

Fig. 1.

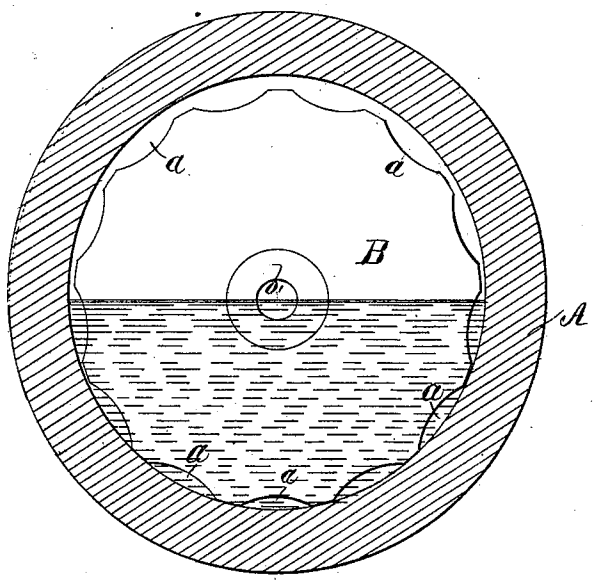
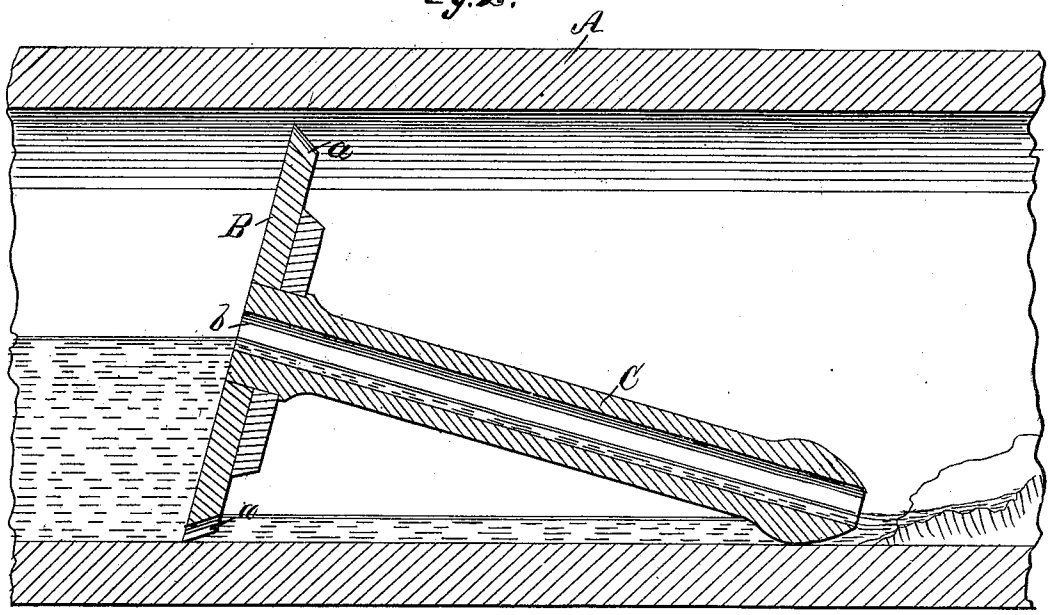


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

SAMUEL PHILLIPS, OF LAUREL, MARYLAND.

IMPROVEMENT IN DEVICES FOR CLEANING SEWERS.

Specification forming part of Letters Patent No. **177,421**, dated May 16, 1876; application filed March 29, 1876.

To all whom it may concern:

Be it known that I, SAMUEL PHILLIPS, of Laurel, in the county of Prince George's and State of Maryland, have invented certain new and useful Improvements in Sewer and Pipe Cleaners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a transverse, and Fig. 2 a longitudinal, section of my apparatus as applied to the cleaning of a water main or pipe, sewer, or tunnel.

My invention relates to a new and useful apparatus for cleaning out, by the action of running water, any sewer, water-main, &c.

The invention consists in applying to the sewer, water-main, or other inclosed water-channel intended to be cleaned, a movable dam of corresponding shape and suitable size, and then charging the pipe or sewer with a continuous head of water, in the manner to be hereinafter described.

To enable others skilled in the art to make and use my improvement, I will describe its parts in detail.

In the drawing, A represents a sewer or water-main, of circular form in its cross-section, and B the cleaning apparatus, consisting of a disk of corresponding size and shape, made of wood or other suitable material, provided with notches or openings *a* around its periphery, and which may be of any suitable size and shape. An opening, *b*, is made in the center of the disk, into which a hollow guide arm or tube, C, is fitted and secured. The free end of this arm is represented as being enlarged, to provide against tear and wear.

The operation is simple and effective. Water being let on, it collects back of the instrument and passes through guide-tube C, cutting a path in the mud for it. It also passes through openings *a* at the bottom and lower side, cutting up and washing away the mud and other sedimentary matter. The force of the water pushes the machine along as fast as the main or sewer is cleaned.

The apparatus is inserted at the man-hole of any straight section of pipe or sewer, and will continue down to the end, where it can be taken out and re-inserted, if desired, into the next straight stretch. Pipe C guides and holds it in proper position to do its work.

Where oval, circular, curvilinear, quadrilateral, or polygonal mains or pipes are to be cleaned out, and, in fact, in almost all cases where the vertical is at least equal to the horizontal diameter, the vertical diameter of the movable dam or apparatus B may, with advantage, be made slightly greater than its horizontal diameter. This construction is rendered possible from the inclined position it is made to occupy in resting on the point of its supporting-arm C. The upper portion of the dam B need not necessarily be provided with openings *a*.

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

1. A movable dam, B, provided with an opening or openings, *a*, around or at its lower edge, and with a guide and supporting arm, C, substantially as and for the purpose set forth.

2. A movable dam, B, provided with an opening or openings, *a*, around its edge, and with a hollow guide and supporting-arm, C, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SAMUEL PHILLIPS.

Witnesses:

D. G. STUART,

M. M. ROHRER.