

(No Model.)

C. SCHIRRMESTER.

SEWER.

No. 344,138.

Patented June 22, 1886.

Fig: 1.

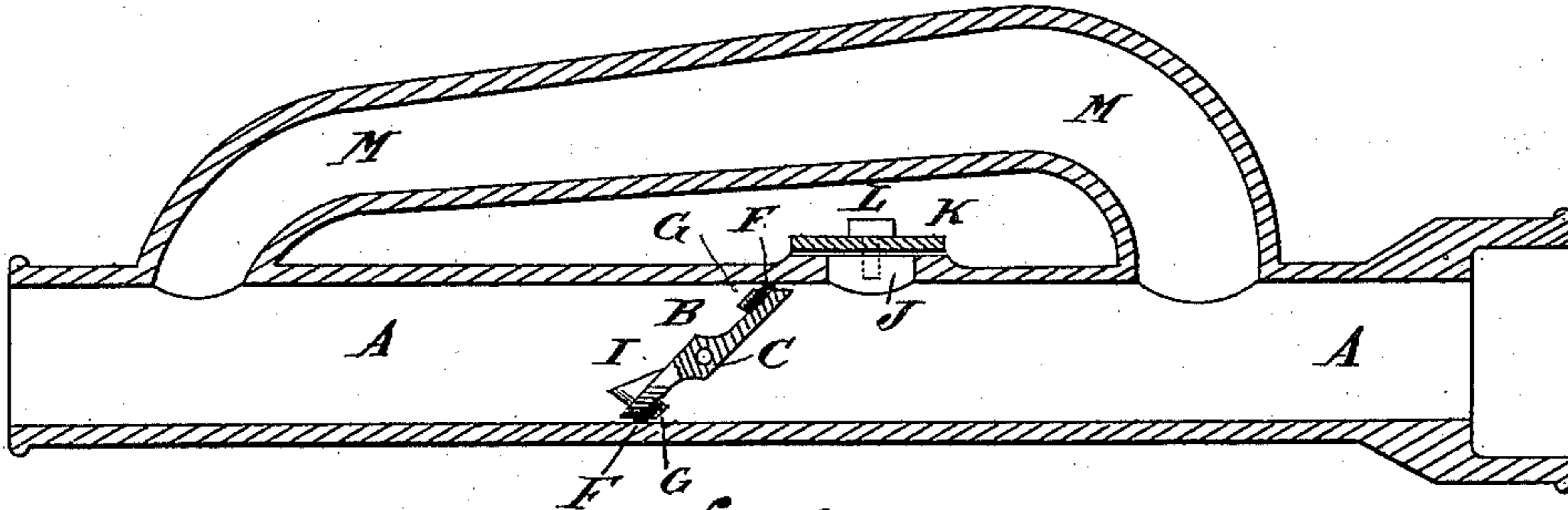


Fig: 2.

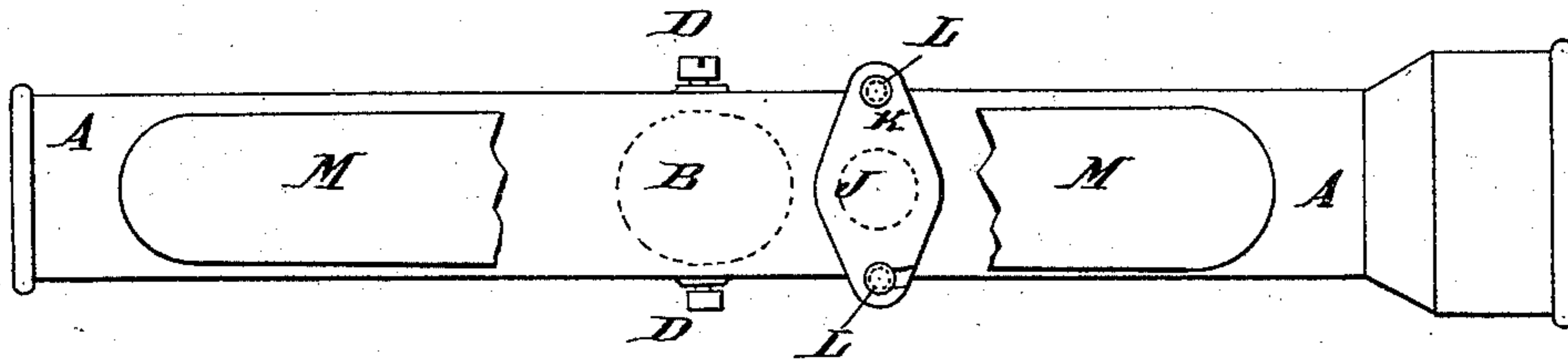


Fig: 4.

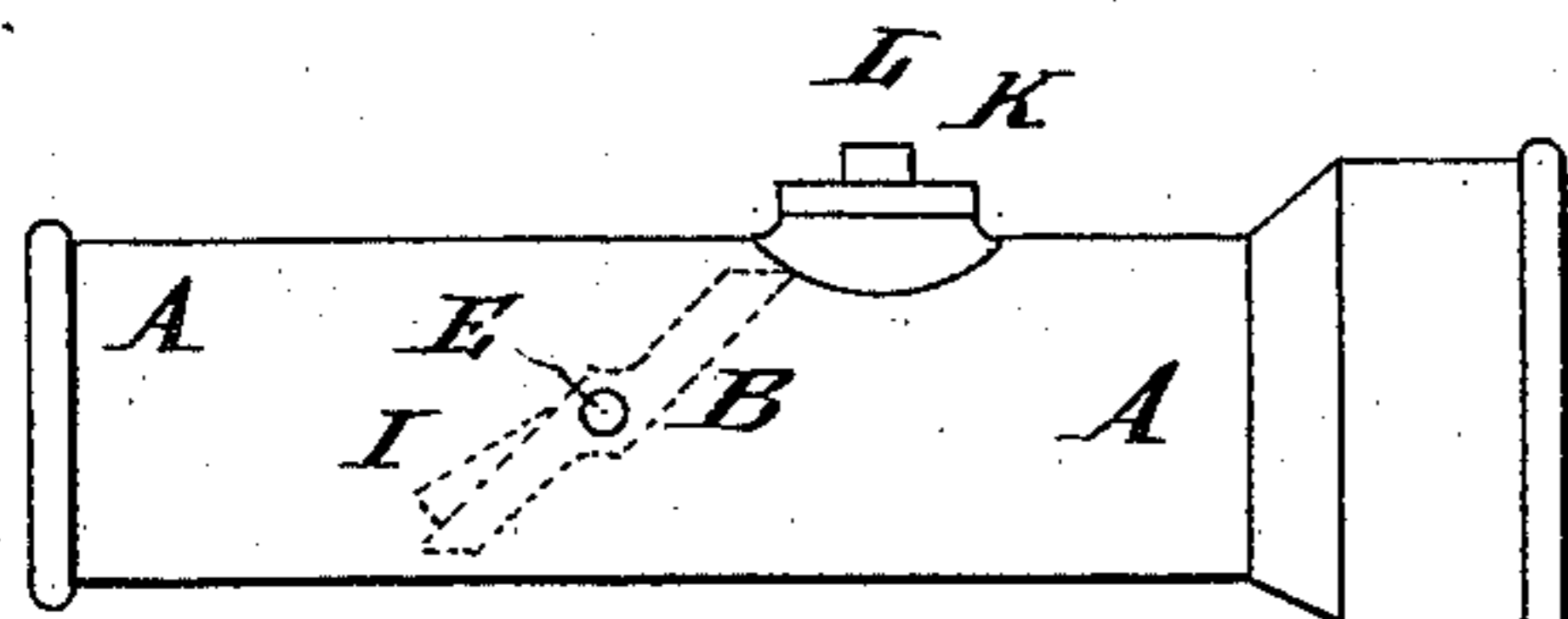


Fig: 5.

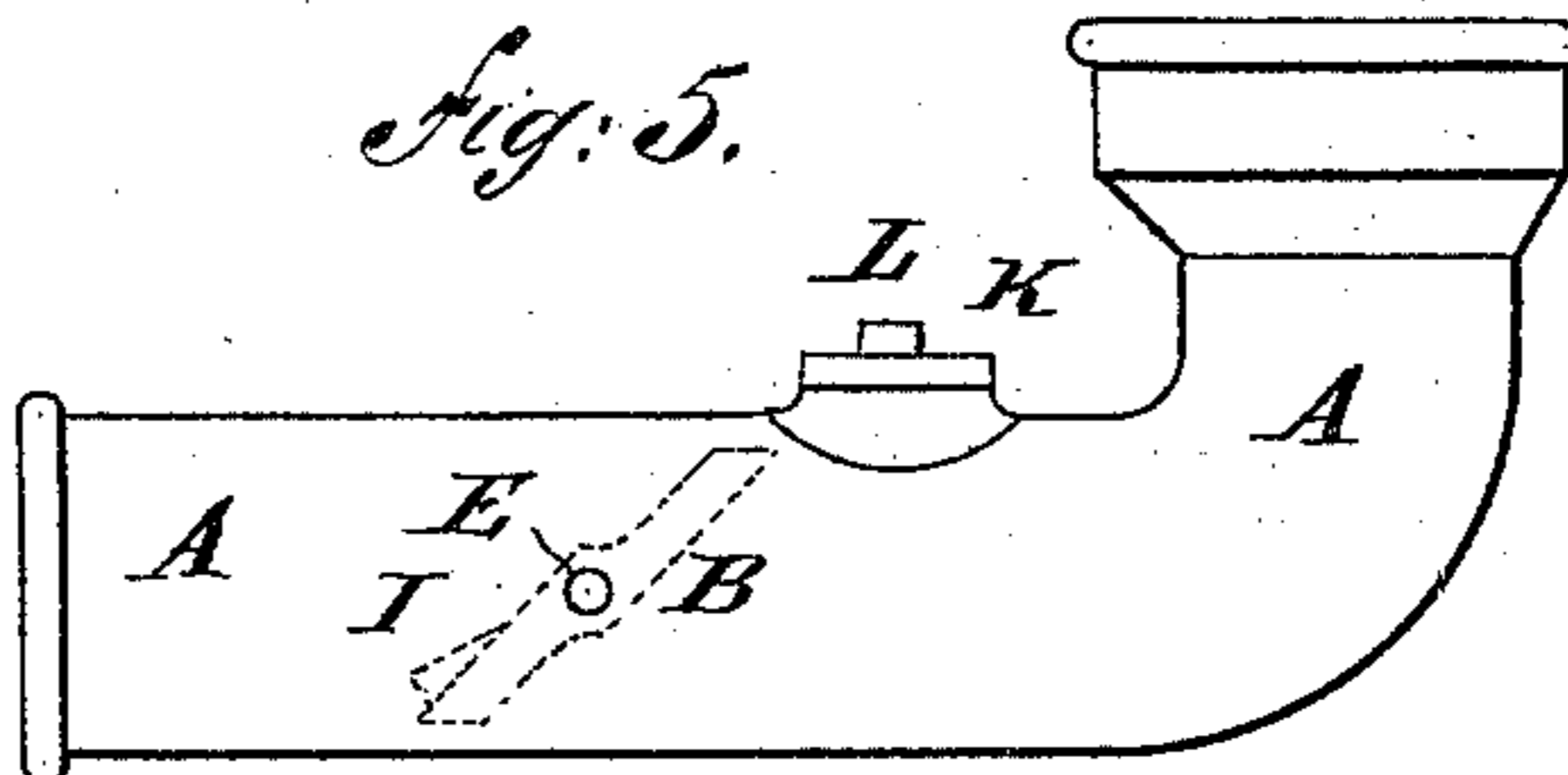
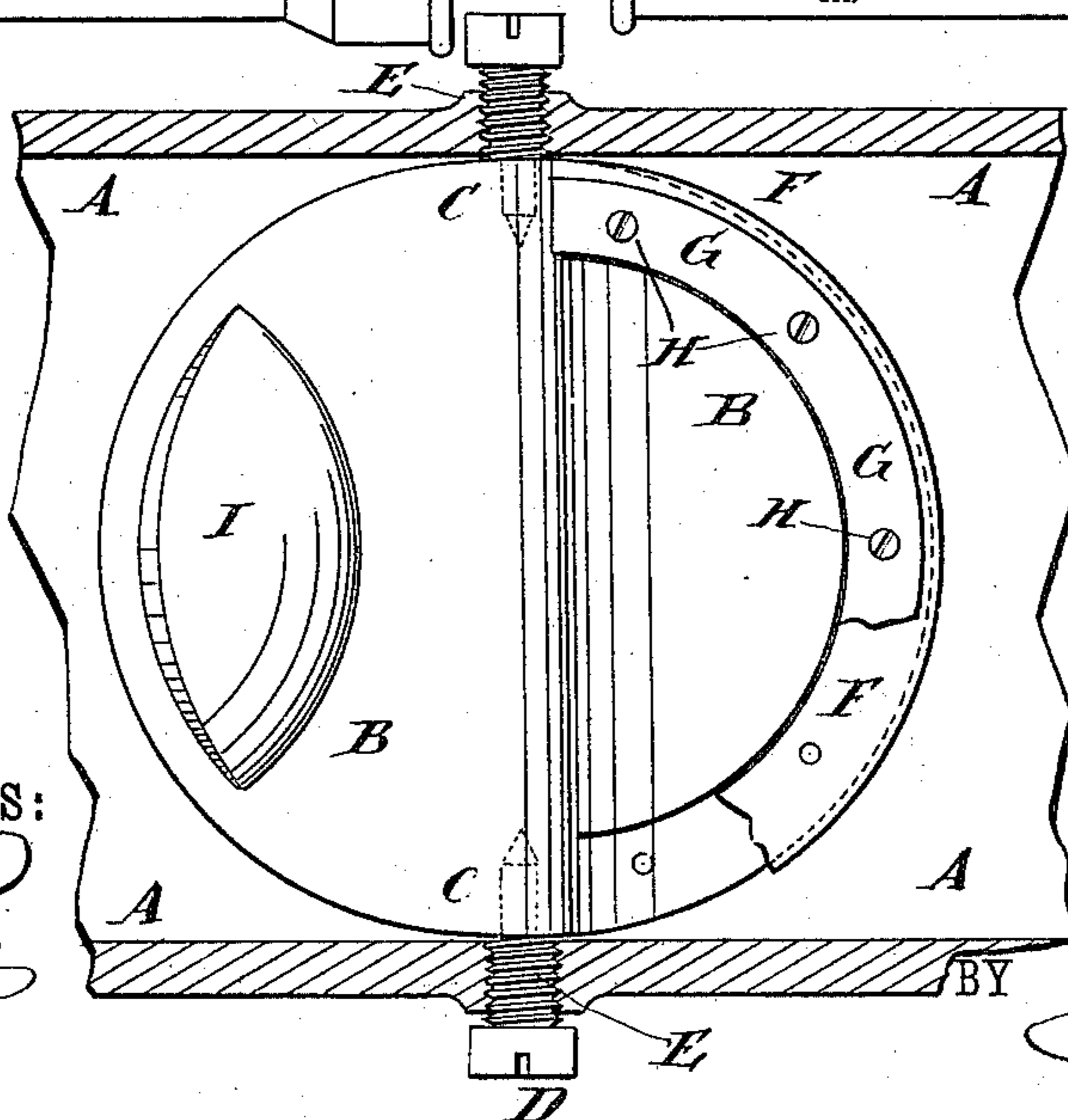


Fig: 3.



WITNESSES:

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SEWER.

SPECIFICATION forming part of Letters Patent No. 344,138, dated June 22, 1886.

Application filed March 25, 1886. Serial No. 196,533. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SCHIRRMESTER, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Sewers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of a length of sewer-pipe to which my improvement has been applied. Fig. 2 is a plan view of the same, part being broken away. Fig. 3 is a sectional plan view of a part of the same, enlarged, and showing the valve open and with parts broken away. Fig. 4 is a side elevation of a length of straight pipe to which my improvement has been applied. Fig. 5 is a side elevation of a length of elbow-pipe to which my improvement has been applied.

The object of this invention is to prevent the backflow of sewage in sewers from rising into drain-pipes and forcing sewer-gas into the air or into buildings, while allowing the waste water from the said buildings to flow into the sewers unobstructed by the back-pressure of sewage.

The invention consists in the construction and combination of various parts of the sewer-pipe, as will be hereinafter fully described.

A represents a length of sewer-pipe, which is preferably placed in the drain or branch sewer leading from the waste-pipes of a building to the main sewer, but which may be placed in the main sewer, if desired.

Into the sewer-pipe A is fitted a valve, B, in the side edges of which, at a little above its center, are formed sockets or recesses C, to receive the ends of pivots D, which pass in through screw-holes E in the sides of the sewer-pipe A. The inner ends of the pivots D are made smooth, so that the valve B will work freely upon them. The outer parts of the pivots D have screw-threads formed upon them to fit into the screw-holes E. The valve B is so shaped as to come to its seat while in an inclined or diagonal position, as shown in full lines in Fig. 1, and in dotted lines in Figs. 4 and 5.

Upon the forward side of the upper part of

the valve B, and the rear side of the lower part of the said valve, or in rabbets formed in the said sides, are placed semi-annular strips F, of rubber, the outer edges of which project a little beyond the edge of the said valve B, so as to come in contact with the inner surface of the sewer-pipe A, and thus secure a close joint. The rubber packing F is secured in place by semi-annular strips G, of metal, secured to the said packing and valve by screws H, passing through the said strips G F, of metal and rubber, and screwing into the said valve.

Upon the forward side of the lower part of the valve B is formed, or to it is attached, a weight, I, of sufficient gravity to close the valve B snugly when left free.

In the upper side of the pipe A, a little in the rear of the valve B, is formed a hand-hole, J, around which is formed a level seat to receive the cover-plate K. The cover-plate K is secured in place by screws L, passing through the said cover and into screw-holes in the said sewer-pipe.

M is a branch pipe, the ends of which are connected with the sewer-pipe A above and below the valve B. The branch pipe M is made considerably smaller than the pipe A, and tapers gradually from its upper or rear end to its lower or forward end, and rises more abruptly from the pipe A and to a greater height at its rear end than at its forward end, so that it will have a descent of its own in addition to the descent due to the descent of the sewer-pipe A. With this construction the pressure of outflowing waste water or sewage from a building will open valve B, so that the said waste water or sewage will flow out freely; but should the sewage be forced back in the main sewer by a storm, a high tide, or other cause, the back-pressure will close the valve B, and the head of waste water above the valve B, in connection with the size, the inclination, and the taper of the branch pipe M, will cause the said waste water to flow out through the said branch pipe M with such force as to overcome the back-pressure from the sewer, so that the discharge of the said waste water will not be prevented. With this construction also, should the sewer-pipe A become clogged, the hand-hole cover K can be detached, the obstruction removed, and the said pipe washed out.

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

1. The combination, with a sewer-pipe, of
5 the valve B, having recesses in its side edges, and provided with the weight I upon the forward side of its lower part, and packing F at the forward side of its upper part and the rear side of its lower part, and the screw-pivots D,
10 passing through the sewer and projecting into the recesses of the valve, substantially as herein shown and described.

2. The combination, with the sewer-pipe A and the valve B, pivoted within the said pipe,
15 of the branch pipe M, formed smaller than the pipe A, tapered from its rear end toward its forward end, having a greater inclination than

the said pipe A, and connected with the said pipe above and below its said valve, substantially as herein shown and described, whereby
20 the discharge of waste water will not be prevented by a backflow of sewage in the sewer, as set forth.

3. A sewer-pipe, A, having a pivoted valve, B, and provided with a hand-hole, J, and cover
25 K in the rear of and near the said valve, substantially as herein shown and described, whereby the said pipe can be readily cleared of obstructions, as set forth.

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Witnesses:

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