

J. A. Miller.

Street Gutter.

N^o 63,284.

Patented Mar. 26, 1867.

Fig. 1.

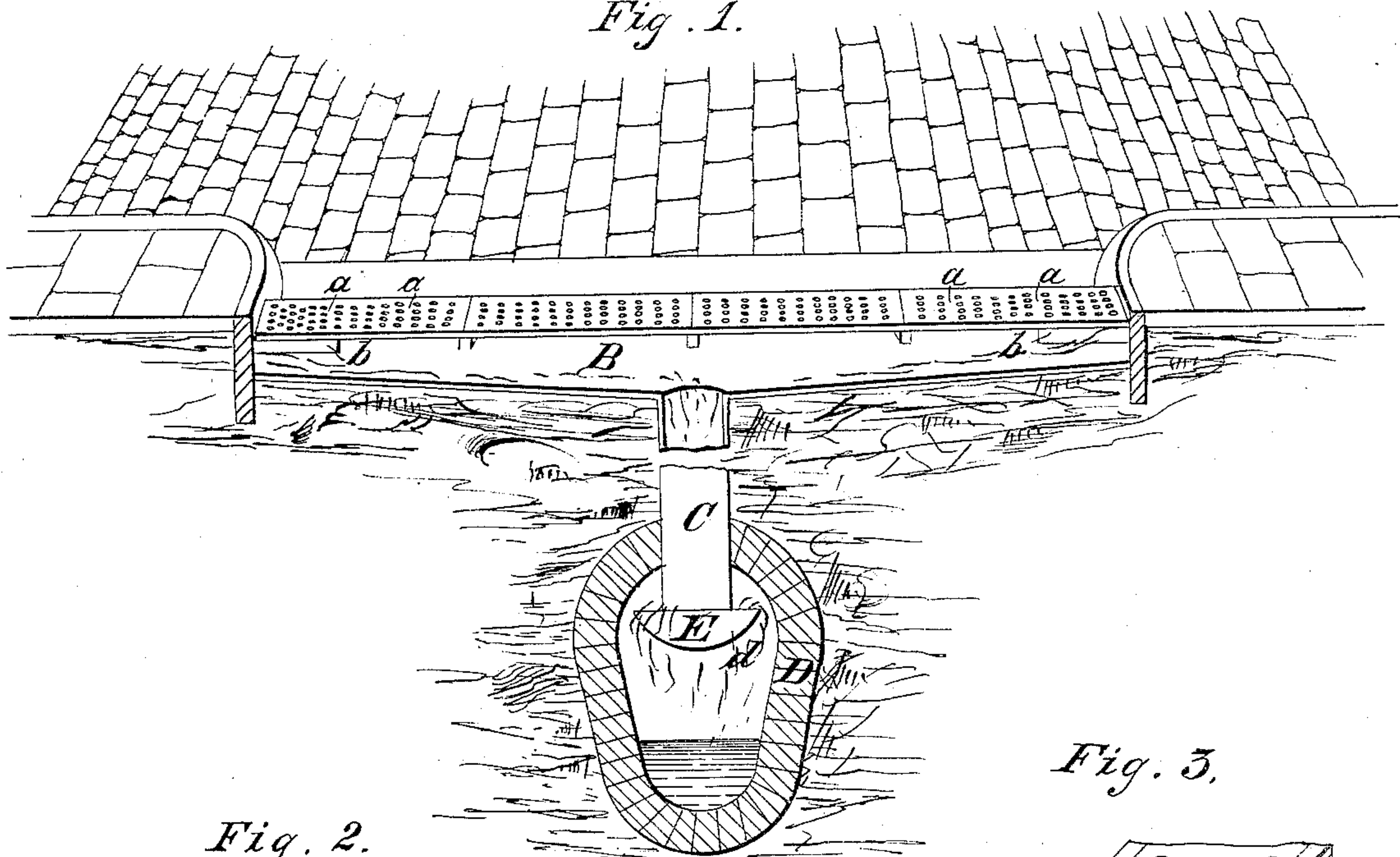


Fig. 2.

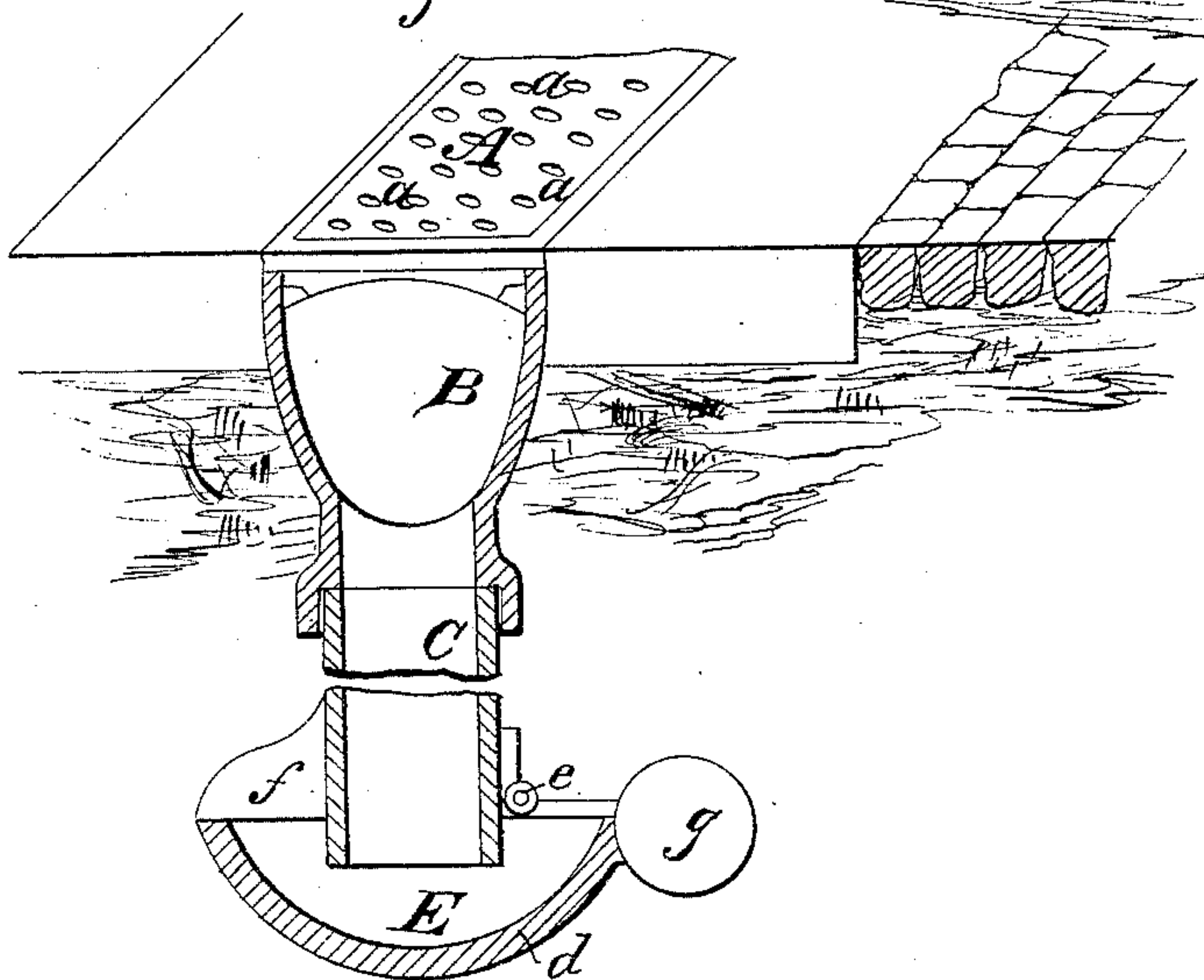
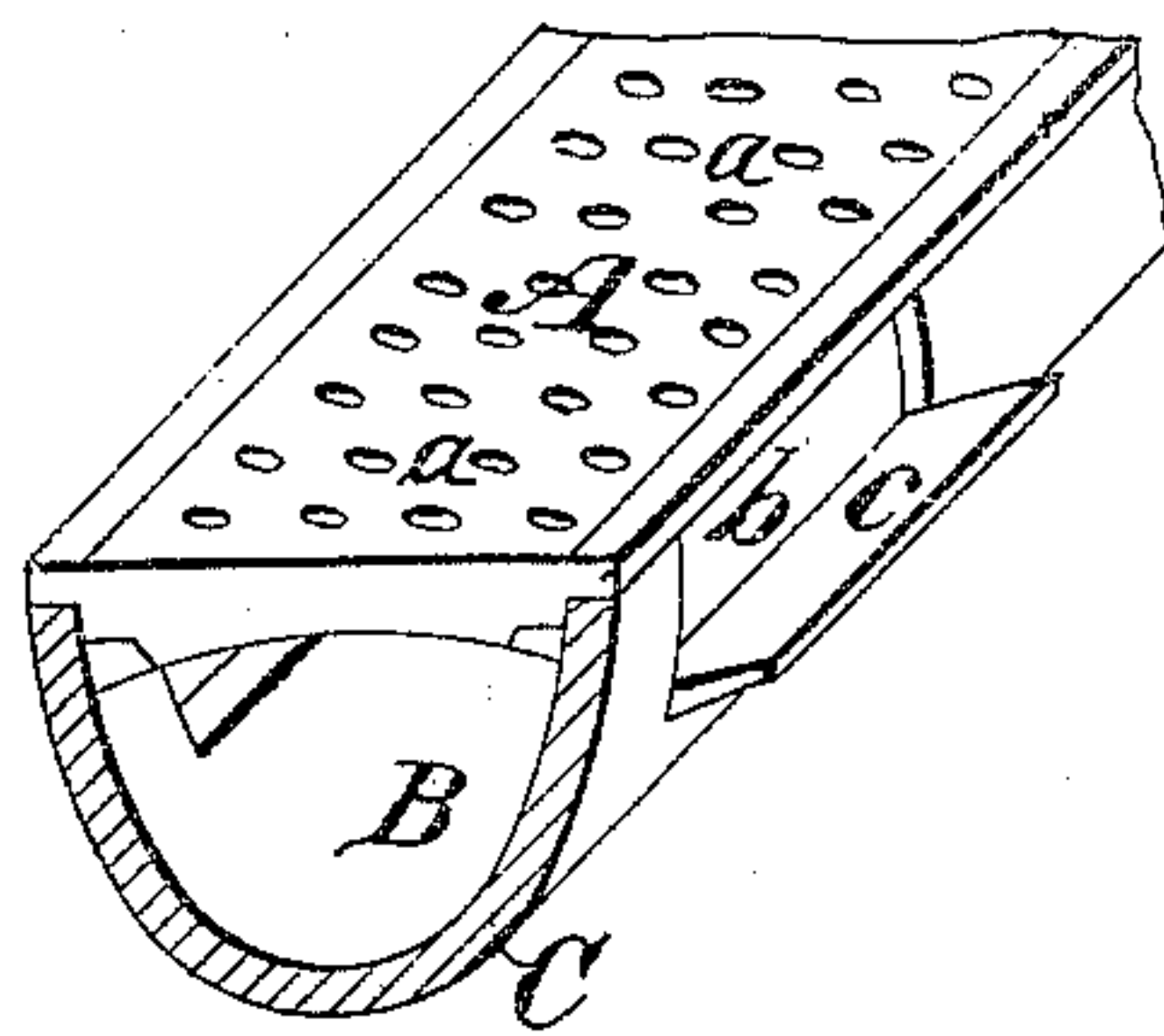


Fig. 3.



WITNESSES:

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JOSEPH A. MILLER, OF NEW YORK, N. Y.

Letters Patent No. 63,284, dated March 26, 1867.

IMPROVED STREET-CROSSING AND SEWER INLET.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSEPH A. MILLER, of the city, county, and State of New York, have invented a new and improved Crossing and Sewer Inlet; 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 make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention.

Figure 2 is a transverse section of the same.

Figure 3 is a sectional end view of the same.

Similar letters of reference indicate like parts.

This invention consists in a street-crossing, made of a series of perforated metal plates, supported by a trough which inclines from the ends towards the centre of the crossing, and which is pivoted with a pipe extending from its middle or lowest part down into the sewer in such a manner that all the water and mud which accumulate on the crossing and in the trough can be easily washed down in the sewer and will be swept down by a copious rain without fail. The bottom end of the pipe leading down in the sewer is provided with a stench-trap, composed of a cup, which is hinged to the pipe and held up by a suitable weight in such a manner that in ordinary times the water accumulating in said cup will close the bottom end of the pipe and prevent the stench of the sewer from passing up to the street, but, in case of a very copious rain, the current of water passing down through the pipe will overbalance the weight and the cup is tilted and washed out. Said trough is provided with apertures at its sides near its ends, and through these apertures it communicates with the gutters in such a manner that all the water and mud collecting in the gutters can be easily swept and washed down into the sewer.

A represents a street-crossing, made of a series of metal plates, which are perforated with a large number of holes *a*, and which rest upon the edges of a trough, B. This trough extends from one side-walk to the other, as shown in fig. 1 of the drawing, and it is made so that its bottom slopes down from both ends towards the middle, whence a pipe, C, extends down into the sewer D. The trough B communicates with the gutters through apertures *b* in its sides, as seen in fig. 3 of the drawing, and from the lower edges of these apertures extend lips or aprons *c*, which serve to support the trough, and over which the mud and water from the gutters run down into the trough. The pipe C, being at the lowest point of the trough, conducts all the mud and water which may collect in said trough down to the sewer D; and, in order to prevent the stench from the sewer passing up in the street, a stench-trap, E, is applied to the bottom end of said pipe. This stench trap is composed of a cup, *d*, which is attached to one side of the pipe C by a hinge or pivot, *e*, and which is caused to turn up against a stop, *f*, by means of a balance-weight, *g*, as shown in fig. 2 of the drawing. The mouth of the pipe C extends down below the edge of the cup *d*, and in ordinary times the water used for washing the streets, or the water resulting from moderate rains, is sufficient to keep the cup full, thereby preventing the passage of any stench or bad smell from the sewer up through the pipe C into the street. But, in case of a heavy shower, the quantity of water rushing down through the pipe C overcomes the balance-weight *g* and causes the cup *d* to tilt so that the water will discharge freely from the pipe, and at the same time all the mud or other sediment which may have collected in the cup is washed out. After the flood created by the shower stops the cup reassumes its original position, and being filled by the clean water trickling down through the pipe C, excludes the stench in a perfect manner, and all danger of choking or being clogged up with mud is avoided.

By this arrangement a street-crossing and a sewer entrance are obtained which are, to a great extent, self-cleaning, and which can be kept clean with very little trouble and expense. Only one sewer or sewer entrance is required in the middle of the street, and the stench from the sewer is effectually prevented passing up in the street.

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

1. The arrangement of a trough, the bottom of which slopes down from its ends towards the middle in combination with a street-crossing made of perforated plates of metal or other suitable material, and with a pipe extending from the lowest part of the trough down in the sewer, substantially as and for the purpose described.

2. The sewer inlets *b* and aprons *c* at the ends of the trough B, in combination with the pipe C, extending from the lowest portion of the trough down in the sewer D, substantially as and for the purpose set forth.

3. The application of the stench-trap E in combination with the pipe C, sewer D, trough B, and crossing A, all constructed and operating substantially as and for the purpose described.

JOSEPH A. MILLER.

Witnesses:

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ALEX. F. ROBERTS.