

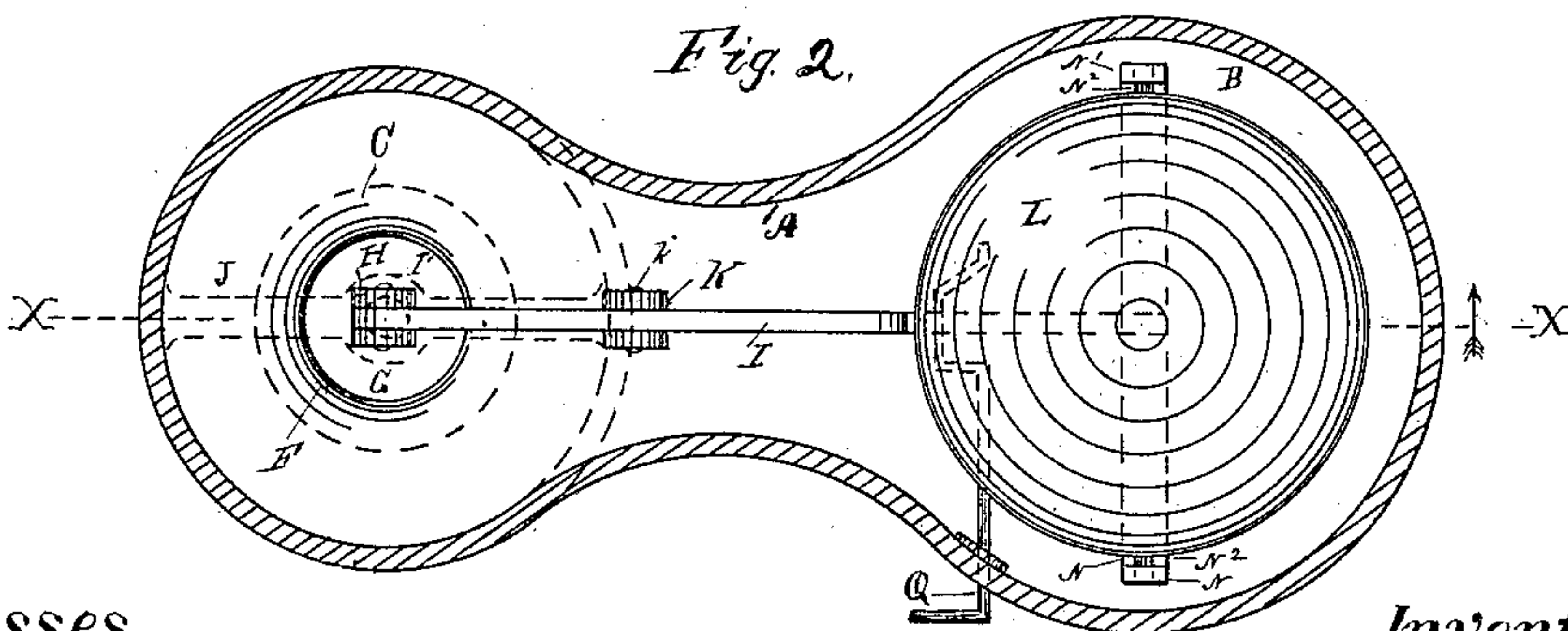
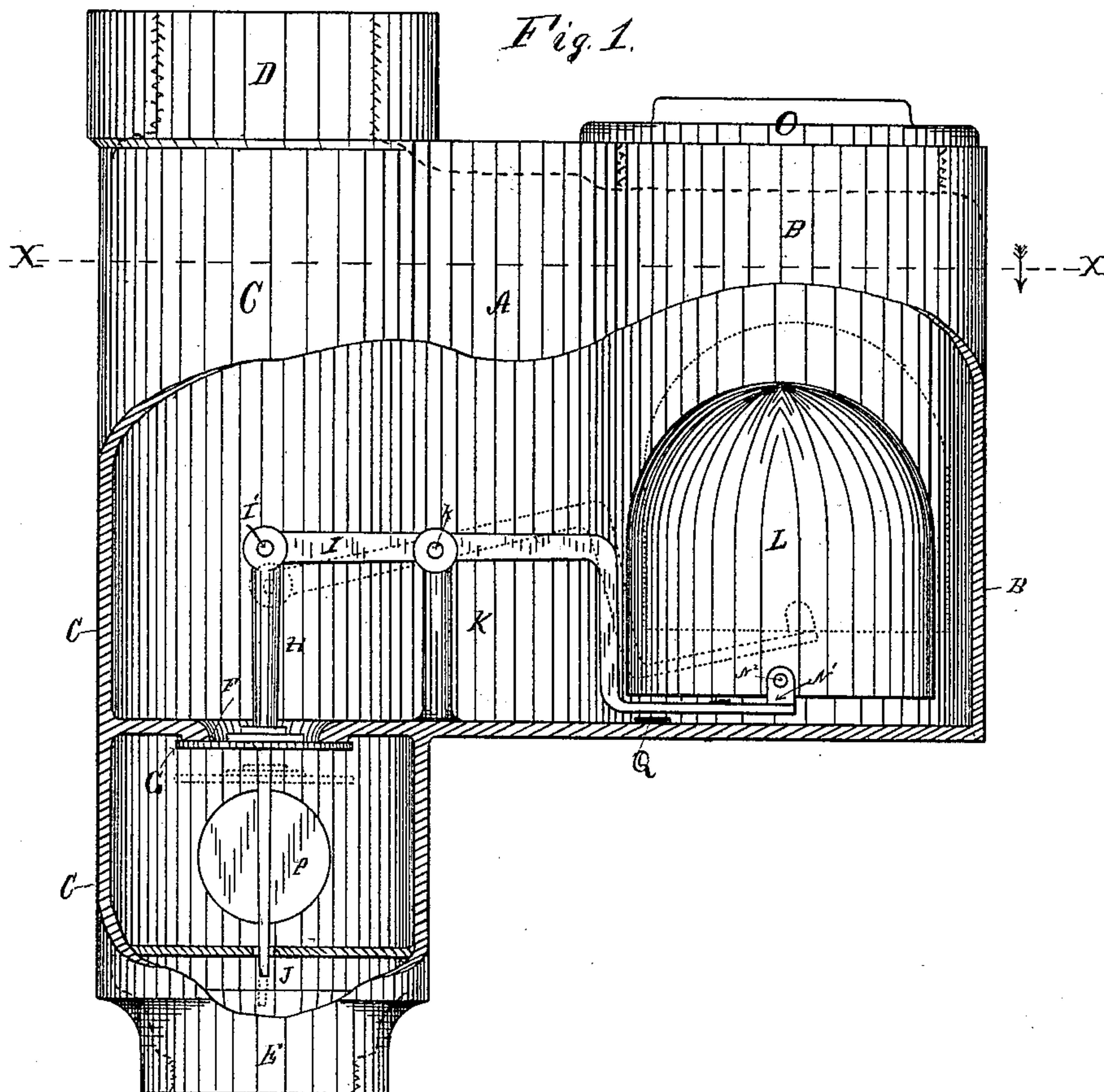
(No Model.)

J. McCONNELL.

SEAL TRAP FOR WASTE PIPES.

No. 353,577.

Patented Nov. 30, 1886.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## SEAL-TRAP FOR WASTE-PIPES.

SPECIFICATION forming part of Letters Patent No. 353,577, dated November 30, 1886.

Application filed February 8, 1886. Serial No. 191,169. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN McCONNELL, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have  
5 invented certain new and useful Improvements in Seal-Traps for Waste-Pipes; 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, reference being  
10 had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to seal-traps for waste-pipes; and it consists in the improvements hereinafter set forth and described.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved  
20 seal-trap with part of the side broken away, showing the internal mechanism thereof. Fig. 2 is a horizontal section of the same on line *x x* in Fig. 1, looking in the direction of the arrow.

Like letters refer to like parts in all the figures.

In the construction of my improved seal-trap, A is a hollow receptacle or chamber having a projection, B, extending outward to one side  
30 of the sink waste-pipe, the portion C forming a portion of the waste-pipe, the inlet-pipe being attached thereto at D, and the discharge-pipe at E.

In the portion C, I place a valve-seat, F, faced on the under side to receive a valve. This valve G is made of a circular disk of metal ground to its seat F, or provided with a disk of rubber or other suitable packing material on its upper surface. This valve G is  
40 provided with a stem, H, which passes through the valve G, and extends upward to and is attached to a lever, I, by means of a pintle, I'. If desired, the stem H may also be extended to and through an opening in a cross-bar, J, which operates to retain the valve G in a central position under its seat F; but this guide-bar may be dispensed with if desired, as other convenient mechanism may be used for the purpose.

50 The lever I is mounted upon a support, K, by means of a pintle, *k*, and extends into the

projection B of the chamber A, where it is connected to the lower portion of a float, L. This float L is preferably made substantially hemispherical in shape, and the lever I is preferably attached to the flat side thereof by a  
55 cross-bar, N, attached to the lower end of the lever I, the ends of this cross-bar being turned up at N', where it is connected to the float by means of stud-pins N<sup>2</sup>, so that the float will rise perpendicularly, as illustrated by dotted lines in Fig. 1. In the top of the portion B of the chamber A, I put a hand-hole, which is closed by a screw-cap, O, which may be opened to remove any obstruction from the trap. I  
65 also make a hand-hole, which is closed by a screw-cap, P, in the portion of the chamber C below the valve-seat F, for the purpose of readily getting at the valve G when desired.

In the lower part of the portion B of the  
70 chamber A, and under the lever I, I place a small bell-crank lever, Q, one end of which projects through the side of the chamber, so that by turning it up the lever I and float L can be raised sufficiently to open the valve G, and permit all of the fluid in the chamber A to escape, to prevent freezing, or for any other purpose desired.

In operation, the water passing into the chamber A lifts the float L, which operates  
80 the lever I, depressing the valve G, and allowing the water to freely escape, until the float L sinks to such a point as to close the valve G against its seat F, when the balance of the water in the chamber A will be retained  
85 by the closing of the valve G, leaving at all times a small depth of water over the valve G.

The amount of water in the chamber can be varied by the adjustment of the float L, so that it will close the valve at such depth of  
90 water in the chamber A as may be desired, thus at all times making a perfect seal against a backward pressure of foul gases from the sewer.

Having thus fully described my invention,  
95 so as to enable others skilled in the art to which it appertains to construct and use the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a seal-trap for waste-pipes, a chamber adapted to be coupled into such waste-pipe,



having a valve seat in the bottom thereof, and a valve opening downward from such valve-seat, in combination with a float in said chamber connected by a lever to a stem on said valve projecting upward into said chamber, whereby said valve is automatically operated by the action of the water on said float, substantially as and for the purpose set forth.

2. The combination, in a seal-trap for waste-pipes, of a chamber adapted to be coupled into such waste-pipe and form a continuation thereof, and having a lateral extension to one side of the line of said pipe, and a valve-seat in the bottom of the chamber in line with the inlet and outlet thereof, with a valve opening downward from said valve-seat, and a hemispherical float in said chamber connected to the upward-projecting stem of said valve by means of a lever, by means whereof said float operates said valve, and a bell-crank lever in the lower part of the laterally-projecting portion of said chamber for operating said lever and float to drain the chamber, all substantially as and for the purpose set forth.

3. In a seal-trap for waste-pipes, a chamber provided with hand-holes and caps for closing the same, substantially as shown, and a valve-

seat in the bottom of said chamber, in combination with a valve opening downward from said seat, and a float within said chamber connected to and adapted to operate said valve by means of a lever, and a bell-crank lever in the lower portion of said chamber for raising the float so as to drain the chamber, substantially as and for the purpose set forth.

4. In a seal-trap for waste-pipes, the chamber A, having the lateral projection B, and being adapted to be coupled into a waste-pipe, and the valve-seat F in the bottom of said chamber, in combination with the downward-opening valve G, having an upward-projecting stem, H, the lever I, and the float L, attached thereto within said chamber for operating said valve, and the bell-crank lever Q, adapted to raise the float and open the valve for draining the chamber, all substantially as and for the purpose set forth.

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

JOHN McCONNELL.

Witnesses:

L. D. HANFORD,  
W. P. GRAZIER.