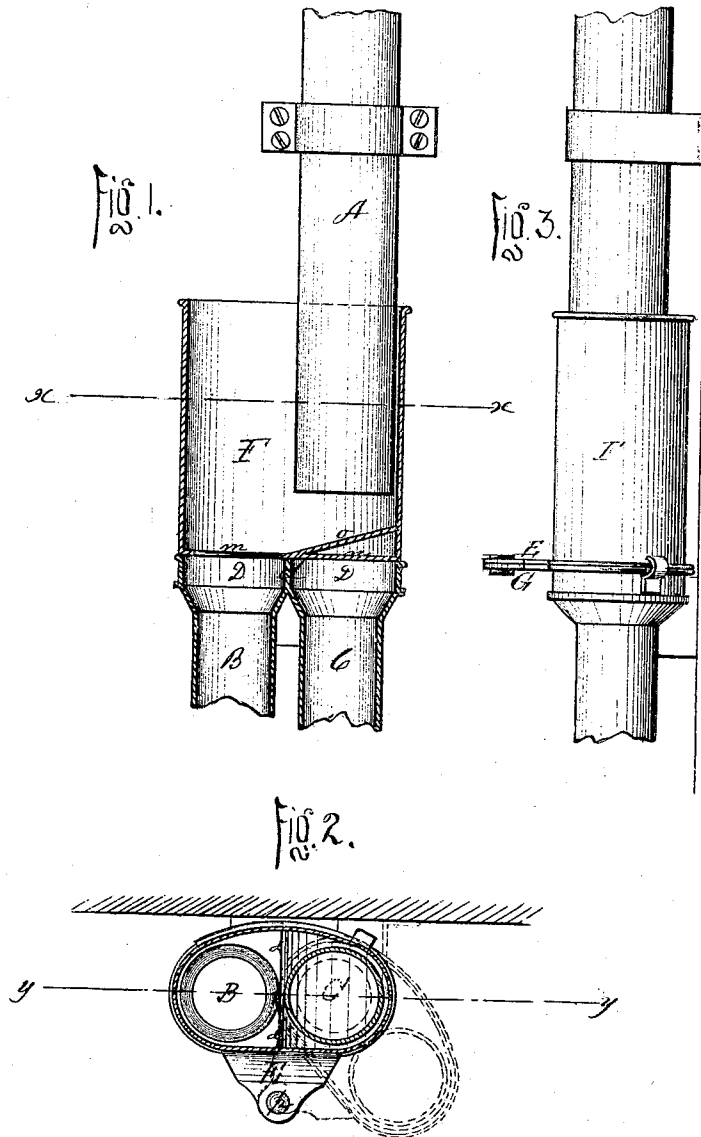


R. M. Bixby,

Water Chut Off.

No. 111,720.

Patented Feb. 14. 1871.



Witnesses:
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RUFUS M. BIXBY, OF IOWA CITY, IOWA.

Letters Patent No. 111,720, dated February 14, 1871: antedated February 2, 1871.

IMPROVEMENT IN WATER CUT-OFFS.

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, RUFUS M. BIXBY, of Iowa City, in the county of Johnson and State of Iowa, have invented a new and improved Water Cut-Off; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a vertical section through line *y y* of fig. 2.

Figure 2 is a horizontal section through line *x x* of fig. 1.

Figure 3 is a side view.

The object of this invention is to provide a cheap and convenient instrument by which water or other fluid may readily be cut off from one pipe and made to flow into another.

In the drawing—

A is the induction-pipe, and

B C are two eduction-pipes, all arranged as shown.

The upper ends of the two lower or eduction-pipes terminate in an oblong vessel, D, divided into two chambers by a vertical partition.

The chambers may taper downward to the top of the pipes, or they may be of uniform dimensions, and the upper end of the pipes may be funnel-shaped, as shown in the drawing, the object of either arrangement being to supply the pipes with water to their full capacity.

On one side of the vessel D, at its upper edge, is fixed a flat horizontal plate or lug, E, the outer end of which comes exactly in line with the dividing partition *d* between the two chambers of vessel D.

The induction-pipe A is arranged vertically above one of the eduction-pipes C, so as to discharge directly into it when nothing intervenes.

In connection with the parts above described I employ a cut-off or deflector, F, in the form of an oblong vessel resting upon the upper edge of the vessel D, to which its bottom is conformed, and pivoted to the outer end of lug E by means of a similar lug, G, projecting from the lower edge of the deflector, and a pin, *p*, extending through both lugs.

The deflector F is provided with an opening, *m*, which uncovers pipe B or C when brought over either of them, and at the other side it is provided with a

water-tight floor, *n*, which serves to cover one of said pipes when brought over it.

Instead of the floor *n* or in connection with it, if preferred, may be an incline, *o*, which will serve to deflect the water readily from pipe A into pipe B, when the cut-off is in the position shown in fig. 1.

The vessel F, thus constructed and pivoted between the upper pipe and the two lower ones, serves, when properly turned by the operator, to cause the water to cease flowing into either of the eduction-pipes and commence flowing into the other, and the particular pipe to which the water will at any time be directed depends on the position of the opening *m*.

If the vessel F is, as in fig. 1, so turned as to bring the incline *o* over pipe C and the aperture *m* over pipe B, the water from A will escape through B, while, if said vessel is turned on its pivot so as to carry its right-hand side off over the edge of the vessel D and bring the aperture *m* over pipe C, as shown in dotted lines, fig. 2, the water will flow directly from A to C.

The whole apparatus can be made of sheet metal at very little expense, and so as to occupy very little space. It is not liable to get out of order, and when it does can be easily repaired. It is convenient of operation, none of the working parts being concealed, but all being under the eye of the operator, so that he cannot, by mistake, direct the liquid into the wrong pipe.

The pipe A projecting down into the vessel F forms a stop which arrests the motion of the latter when turned in either direction, thereby infallibly indicating when the deflector is in the proper position to open the required pipe.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

In connection with the pipes A B C, arranged as shown, the oblong vessel D divided into two compartments, one above each exit-pipe, in combination with the deflecting vessel F pivoted at *p* and provided with the opening *m* and floor *n* or *o*, all said parts being constructed as and for the purposes set forth.

R. M. BIXBY.

Witnesses:

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