(No Model.)

J. FARTHING.

WATER CLOSET SHUT-OFF.

No. 270,211. Patented Jan. 9, 1883.

Fig. 1.

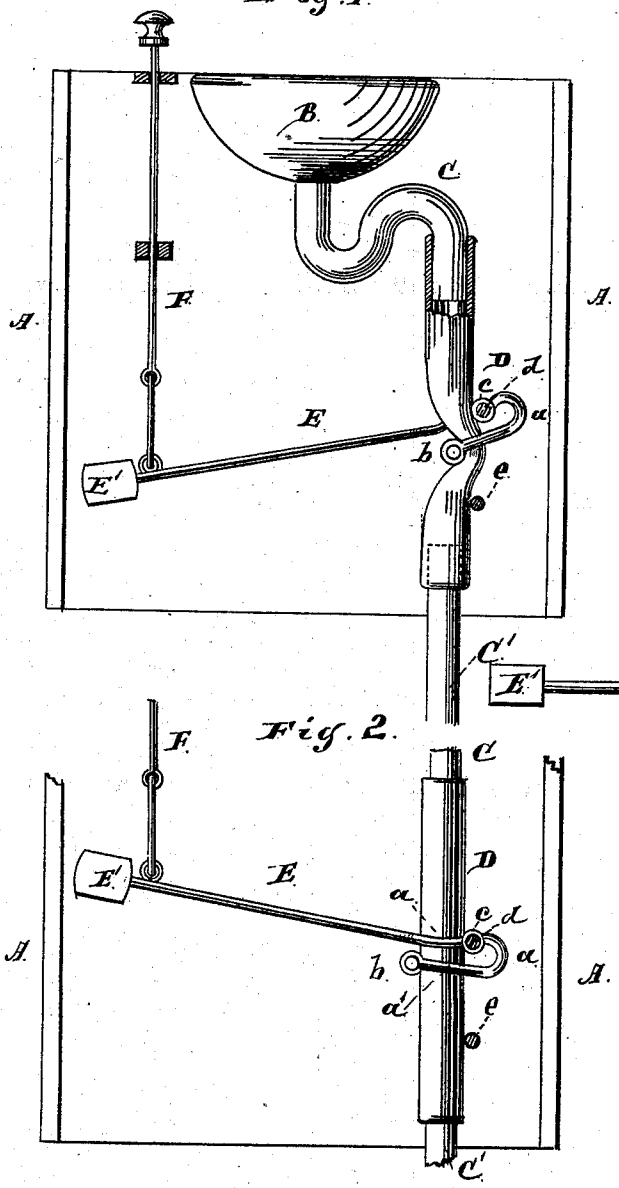


Fig. 3.

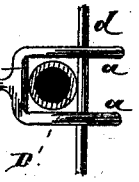


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN FARTHING, OF CHICAGO, ILLINOIS.

WATER-CLOSET SHUT-OFF.

SPECIFICATION forming part of Letters Patent No. 270,211, dated January 9, 1883.

Application filed August 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN FARTHING, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Water-Closet Shut-Offs, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation with the upper end of the cut-off pipe or tube in section, and the cut-off bars also in section, showing the devices in the position they occupy when the shut-off is closed. Fig. 2 is a side elevation of the cut-off devices shown in Fig. 1, showing the parts in the position they occupy when the cut-off is open; Fig. 3, a top or plan view of one form and arrangement of the cut-off lever.

The object of this invention is to construct a cut-off for the discharge from the bowl of a water-closet, the devices of which shall be simple in construction, effectual in operation, and not liable to get out of order or become inoperative, and at the same time perform the work required and allow of a free discharge when open and an effectual guard and stop against the entrance of sewer-gas when closed; and its nature consists in providing a flexible tube-connection interposed between the discharge from the bowl and the discharge-pipe leading to the sewer or other place of deposit, and a cut-off lever and rods, by which the tube will be bent so as to effectually close its opening, and in the several devices and their combinations and arrangements, hereinafter set forth, and pointed out as new in the claims.

In the drawings only so much of a complete water-closet seat as is necessary to illustrate the invention is shown.

A represents a frame or support for the seat and bowl, which frame or support may be constructed as shown, or in any other usual and suitable manner, and is to be provided with the usual top and secondary cover; B, the bowl, of the usual construction; C, the discharge leading from the bowl, having a water cut-off, as shown; C′, the discharge-pipe leading to the sewer or other place of deposit.

D is a flexible tubing, which is preferably made of rubber, but which may be made of other suitable flexible material that can be readily bent to close the opening. One end of this tube is suitably connected or attached to the discharge end of the discharge C, and the other to the inlet end of the discharge-pipe C′, so as to complete the connection between these two devices.

E is an arm or lever, made of a piece of metal or other suitable material, and having, as shown, at its free end a weight or head, E′. The other end of this lever is made in the form of a fork, the arms *a* of which have a return-bend, forming secondary arms *a′*, which are joined or connected by a cross or end bar, *b*. The arms *a* are each provided with a suitable opening or ear, *c*, for the passage of a rod or bar, *d*, which rod or bar may be supported at its ends in suitable bearings or supports, so as to be free to rock as the arm or lever E, which may be firmly connected to the bar *d*, is raised and lowered at its free end. The arm might be journaled or hung loosely, so as to turn on the bar; but in either case the rod or bar *d* forms a pivot for the arm or lever. Below the bar *d*, and in line, or nearly so, therewith, is located a bar or rod, *e*, which is attached at its ends to the frame or support for the seat in any suitable manner, so as to be firm and unyielding, and these bars or rods *d* and *e* are arranged at a sufficient distance apart for the passage between them of that portion of the rubber tube which lies adjacent to the bars to produce a bend in the tube sufficient to effectually close its opening, and this bending of the tube is accomplished by the bar *b*, which comes in contact with the opposite side of the tube as the arm or lever E is depressed; the tube D being located between the bars *d* and *e* and the bar *b*. The bars *d* and *e* form tension-bars and the bar *b* a compression-bar for forcing the tube between the bars *d* and *e*.

F is the handle or raising-rod for lifting the arm or lever E, which rod is held in vertical position by passing through suitable supports on the frame or support of the seat, and is connected at its lower end, as shown, with the arm or lever by a link, so as to form a free connection, and its upper end is provided with the usual knob for raising.

The operation is as follows: When the dis-

charge is to be made from the bowl the arm or lever E is raised at its free end through the rod or lift F, carrying the compression-bar *b* upward and away from the rods *d* and *e*, allowing the flexibility of the tube D to resume its natural proportions, leaving a free opening for the passage of the discharge. When the discharge is completed the arm or lever is allowed to drop by releasing the lift F, bringing the compression-bar *b* into contact with the tube D, and forcing that section of the tube between the bars *d* and *e* over the bar *e* and under the bar *d*, closing the tube at this point and forming a stoppage between the two points *b* and *e*, thus effectually closing the tube and shutting off the escape of the sewer-gas. The position of the parts when the tube is open is shown in Fig. 2, and when closed in Fig. 1.

The weight E′ is not an actual necessity, as the bar could be forced down and held through the rod or lift F; but by providing a weight the descent of the lever is more certain and less care is required in operating the devices.

As shown, two obstructing points formed by the bars *d e* are provided; but such points need not necessarily be a bar or rod, but could be any suitable rigid contact, over which, or partly over which, the tube could be forced. The two points of obstruction are preferred, for the reason that a lighter weight can be used than where a single point of obstruction is used, and the shut-off, by using two bars or points of obstruction, will be more certain.

Although the cut-off is shown in connection with a water-closet bowl, it is evident that it could be applied and used as a cut-off in connection with other devices and receptacles.

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

1. The combination, with a bowl or receptacle and its discharge pipe or tube, of an interposed flexible connection, D, lever or arm E, having fork *a*, with a return, *a′*, carrying a compression-bar, *b*, and bars or rods *d e* for compressing the tube, substantially as and for the purposes specified.

2. The combination, with a bowl or receptacle and its discharge pipes or tubes, of a flexible tube, D, weighted arm or lever E E′, fork *a a′*, bar *b*, and bars or rods *d e*, substantially as and for the purposes specified.

3. The combination, with a bowl or receptacle and its discharge pipe or tube, of the flexible tube D, arm or lever E, fork *a a′*, bars or rods *b d e*, and lift F, substantially as and for the purposes specified.

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