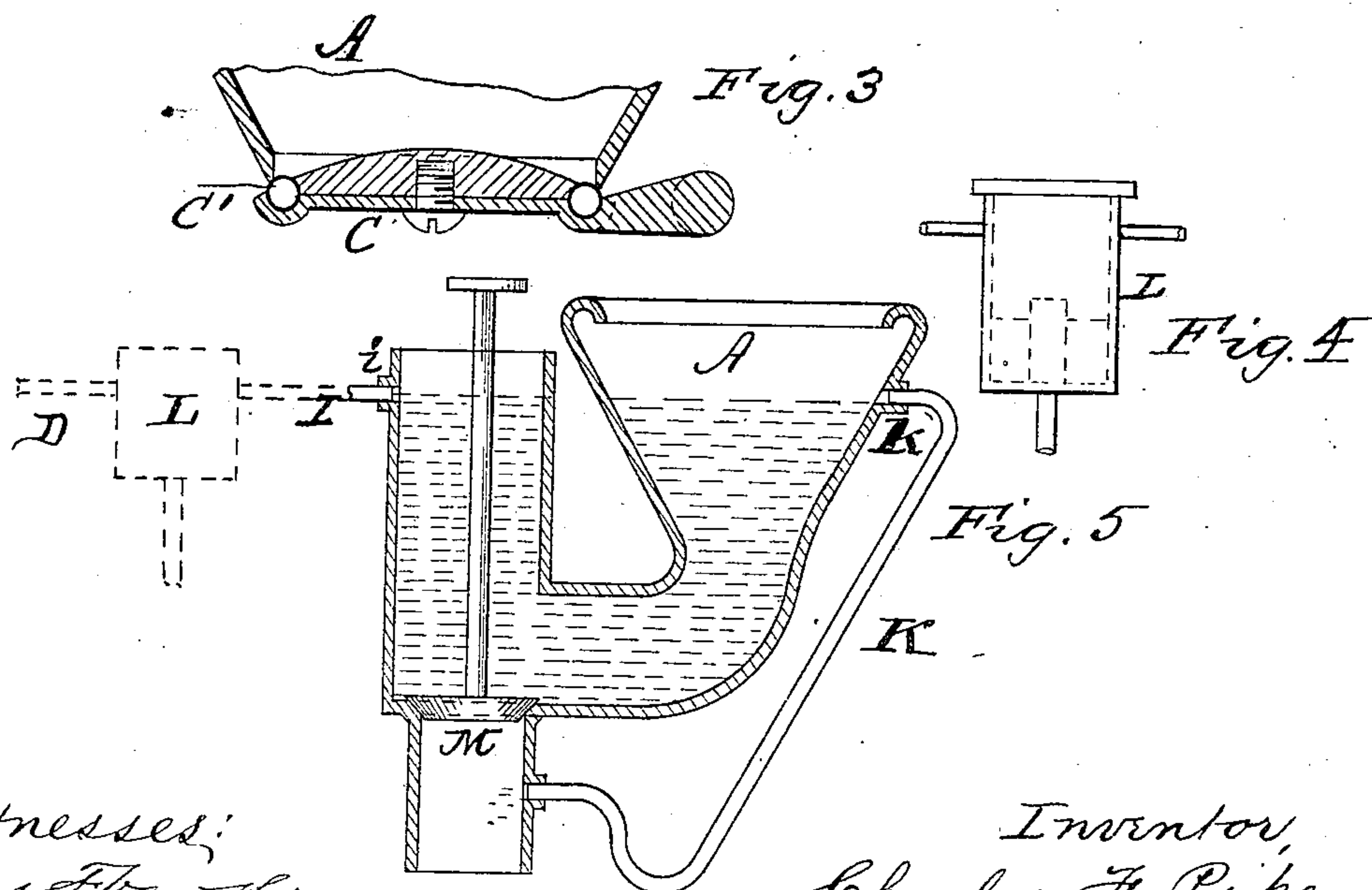
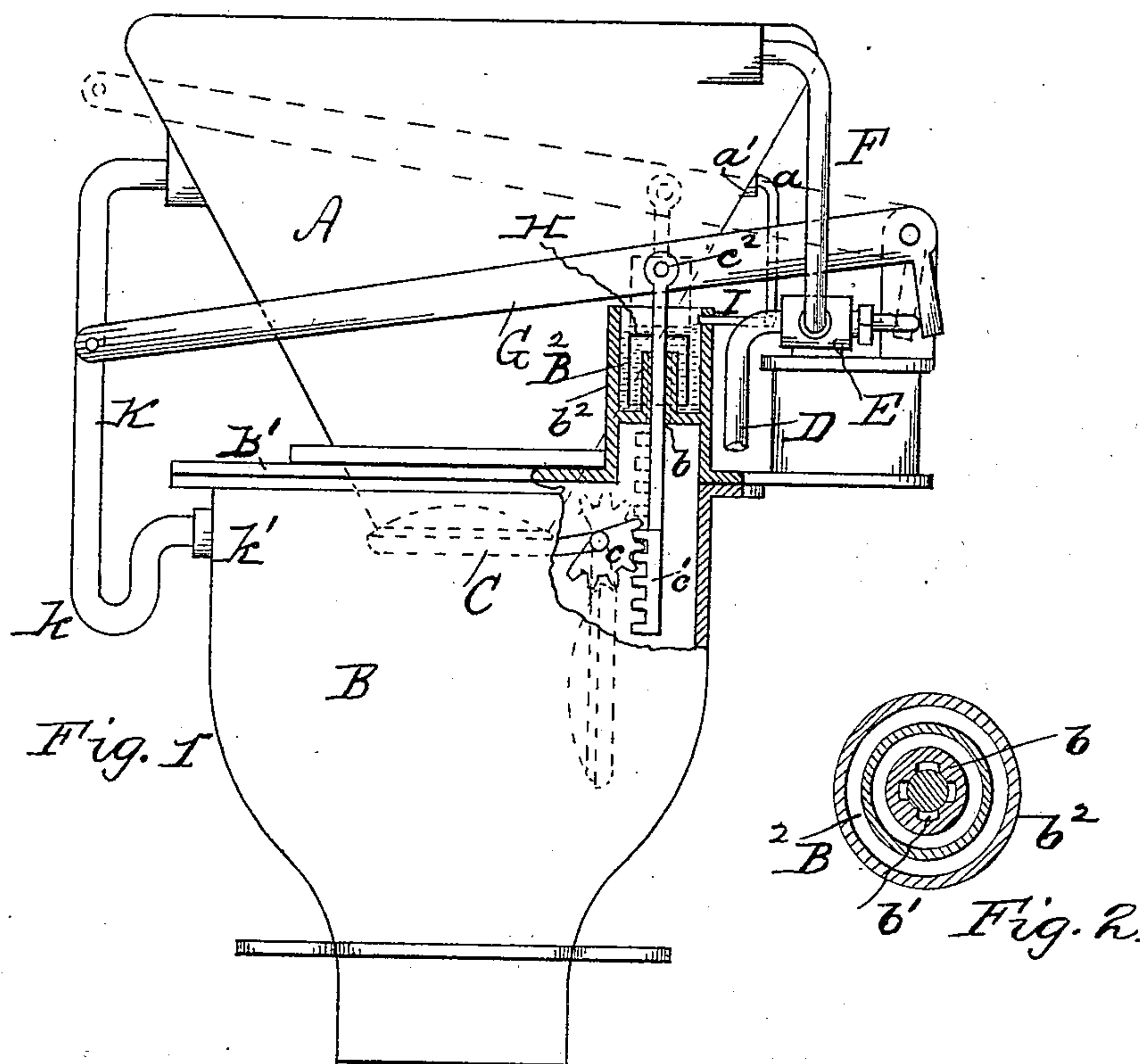


(No Model.)

C. F. PIKE.  
WATER CLOSET.

No. 270,335.

Patented Jan. 9, 1883.



Witnesses:  
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Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES F. PIKE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE  
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## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 270,335, dated January 9, 1883.

Application filed August 7, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. PIKE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Water-Closets, of which the following is a specification, reference being had therein to the accompanying drawings, wherein—

10 Figure 1 is an elevation, partly sectional, of a water-closet embodying my invention. Fig. 2 is a detail section. Fig. 3 is a detail section of lower part of the bowl and the clapper. Fig. 4 is an elevation of a disinfectant-containing reservoir, and Fig. 5 is a section of a plug or valve water-closet embodying my invention.

15 My invention has relation to water-closets, having especial reference to that class of closets wherein a clapper or a plug-valve is employed to hold the sealing-water in the bowl, and has for its object to so construct such closets that a continuously-running seal is provided therefor, and also for the opening in the container or receiver, through which passes the rod or lever operating said clapper or valve.

20 My invention accordingly consists of the novel combination, construction, and arrangement of parts, as hereinafter described and claimed.

30 Referring to Fig. 1 of the accompanying drawings, A represents a water-closet bowl; B, the container; C, the clapper-valve for the bowl, having segmental gear and rack operating mechanism  $cc'$ ; D, the water-supply pipe; 35 E, a suitable cock therefor; F, the flushing-pipe, and G the usual lever or rod for controlling the opening and closing of cock E and the movement of rack-rod  $c'$  to operate the clapper C, said rack-rod being pivoted or loosely 40 secured at  $c^2$  to lever G, as shown, and it passes through a bearing or opening,  $b$ , in the lid  $B'$  of the container. Said bearing is elongated or projects above said lid, and is formed with longitudinal recesses or slots  $b'$  in its eye or 45 opening, as plainly indicated in Fig. 2.

50 Surrounding bearing  $b$  is an annular flange,  $b^2$ , cast on the lid  $B'$ , thereby forming a chamber or receptacle,  $B^2$ . Upon the rod  $c^2$ , and surrounding bearing  $b$ , is placed an inverted cup, H.

I represents a pipe having a small bore, connected at one end to flange  $b^2$  and at its opposite end to water-supply pipe D, through which water is designed to continuously flow into chamber  $B^2$  and seal the edge of cup H to prevent the escape of sewer-gas from opening or bearing  $b$ . When such water rises to the top of said bearing it passes into retainer B by way of the slots  $b'$ , so that a flow of water is constantly passing into and out of chamber  $B^2$  to form a running-water seal therefor.

55  $a$  represents another branch from the water-supply pipe D, having a bore of about the same size, or, if desired, somewhat larger than that of the pipe I. The pipe  $a$  leads into the water-closet bowl A at  $a'$ , or in line with or above the top of the sealing-fluid in said bowl.

60 K represents an overflow-pipe for bowl A, having a trap,  $k$ , formed therein, and is connected to the container, as shown at  $k'$ . The bowl A is flushed in the usual manner, and cock E has the customary or other suitable construction for admitting the sealing-water to the bowl after the clapper C is returned to its seat. The water, constantly flowing through the pipe  $a$  to bowl A, and thence through overflow-pipe K, renews or keeps the seal in said bowl in a comparatively pure state, so that it will absorb any sewer-gas that may find its way through valve C. It is apparent, therefore, that a running-water seal is provided for bowl A and chamber  $B^2$ , and such running the water, passing off to the container B, forms a flowing-water seal for the usual P or S trap below the same and in the soil-pipe.

85 Any suitable form of clapper C may be employed; but I prefer to use the construction shown in Fig. 3, wherein the clapper is provided with a peripheral rubber tube,  $C'$ , which seats against the lower edge of the bowl, as illustrated.

90 If desired, a disinfectant holding tank or receptacle, L, (shown in Fig. 4,) may be located in the paths of the pipes I and  $a$ , so that the water flowing through said pipes passes into such tank L, and becomes charged with the disinfectant therein, thereby converting it into a disinfecting liquid, to provide a running seal of disinfecting fluid or water for bowl A and chamber  $B^2$ .



In Fig. 5 I have shown the application of my invention to a water-closet bowl not having a container, but which is provided with the usual plug-valve, M. The pipe I is connected thereto at *i*, and the overflow-pipe K is arranged as shown. By such construction a running-water seal is provided therefor.

If desired, the branch pipe *a* may be dispensed with and the cock E arranged and constructed as shown and described in an application filed by me October 5, 1881, to permit the flow of water for bowl to pass thereto through the flushing-pipe F. When the last-described construction is employed the disinfectant-containing reservoir L is placed in the path of the flushing-pipe F, for the purpose hereinbefore set forth.

What I claim as my invention is—

1. A water-closet bowl provided with a sealing-valve and a water-supply pipe having a branch which leads into the bowl above said valve, in combination with an overflow-pipe, the lower end of which connects with the bowl below its sealing-valve, substantially as shown and described.

2. In combination with a water-closet bowl, a clapper, C, operating mechanism therefor passing through a bearing in the container, a chamber surrounding said bearing, a water-supply pipe for the bowl, having a branch lead-

ing to said chamber, whereby a running-water seal is provided for said bearing, substantially as shown and described.

3. A water-closet bowl provided with a sealing-valve, a water-supply pipe, a flushing-pipe, an overflow-pipe, and a connection between the supply-pipe and bowl, whereby a flow of water continuously passes from said supply-pipe to the bowl, substantially as set forth.

4. The retainer or receiver B, having bearing or opening *b*, with slots *b'*, in combination with inverted cup H, substantially as shown and described.

5. The combination, with a water-closet bowl, of cock E, flushing-pipe F, supply-pipe D, and branch I, to form a running seal for said bowl, substantially as shown and described.

6. The combination, with a water-closet bowl and its sealing-valve, of water-supply-pipe connections for the bowl, and an overflow-pipe therefor, arranged substantially as shown and described, whereby a running seal is provided for the bowl and for the operating-rod of the sealing-valve, as set forth.

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

CHARLES F. PIKE.

Witnesses:

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CHAS. F. VAN HORN.