

No. 685,621.

Patented Oct. 29, 1901.

H. S. MADDOCK.
SIPHON CLOSET BOWL.
(Application filed Apr. 14, 1900.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

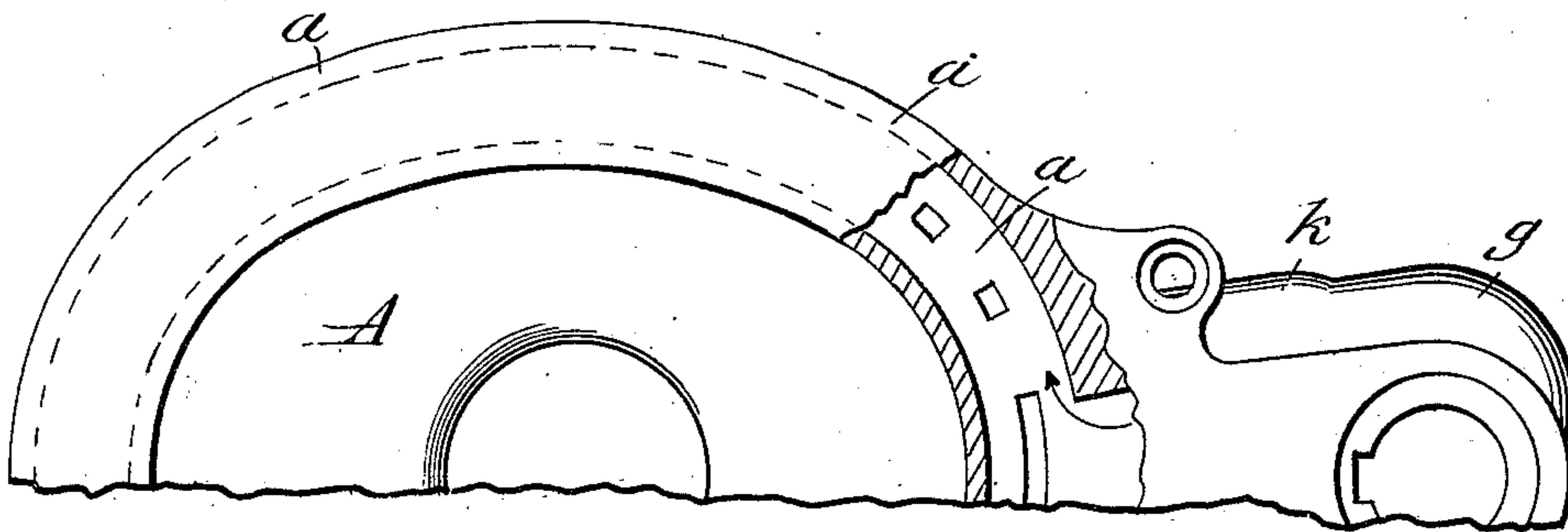
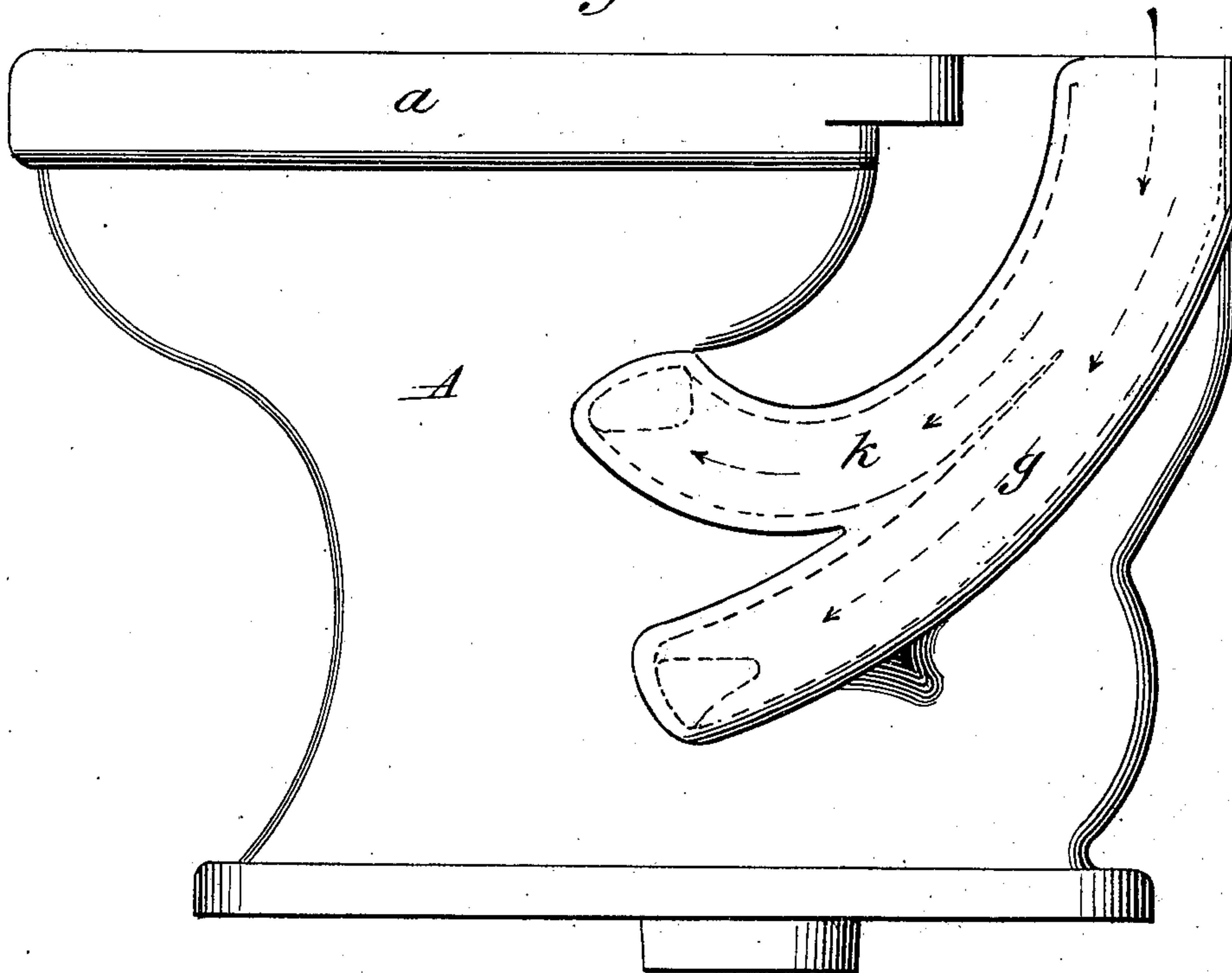


Fig. 2.



Witnesses

J. H. Schott
J. B. Hutchinson

Inventor,

Harry S. Maddock,
by *Lennie & Goldborough,*
Attorneys.

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Fig. 3.

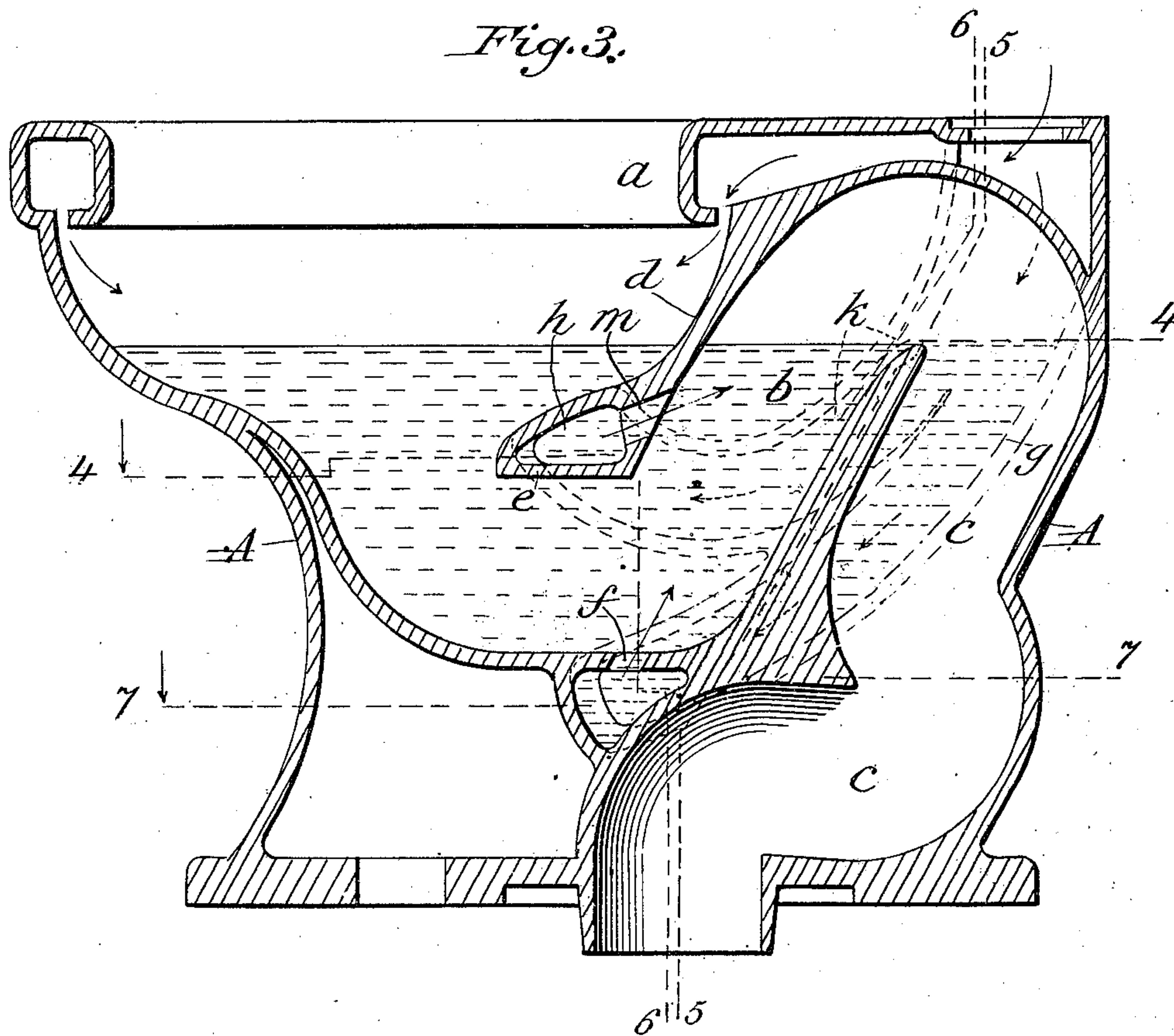
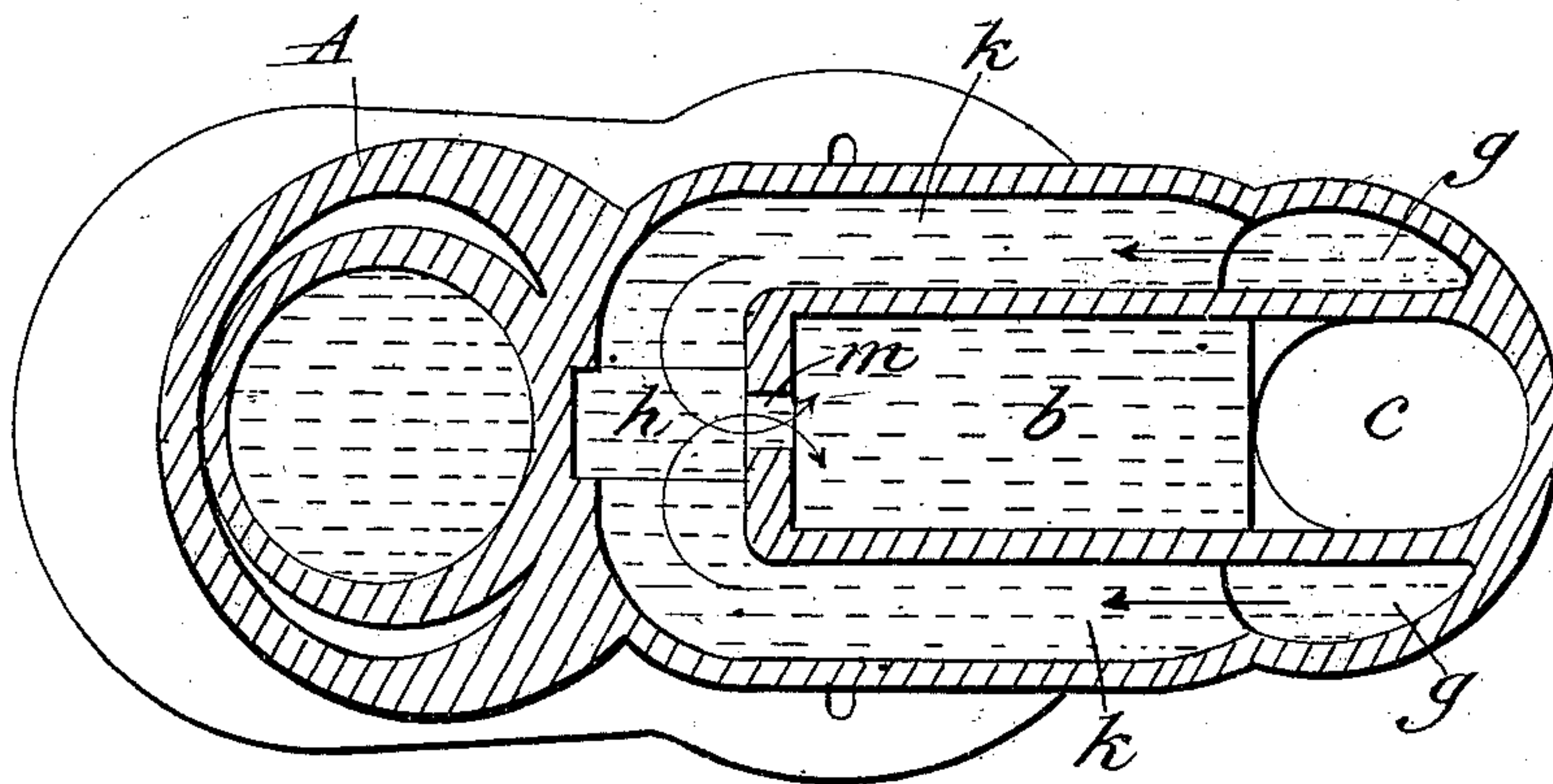


Fig. 4.



Witnesses

H. H. Schott
J. C. Hutchinson

Inventor;

by Harry S. Maddock,
Hume & Goldsborough,
Attorneys.

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Fig. 5.

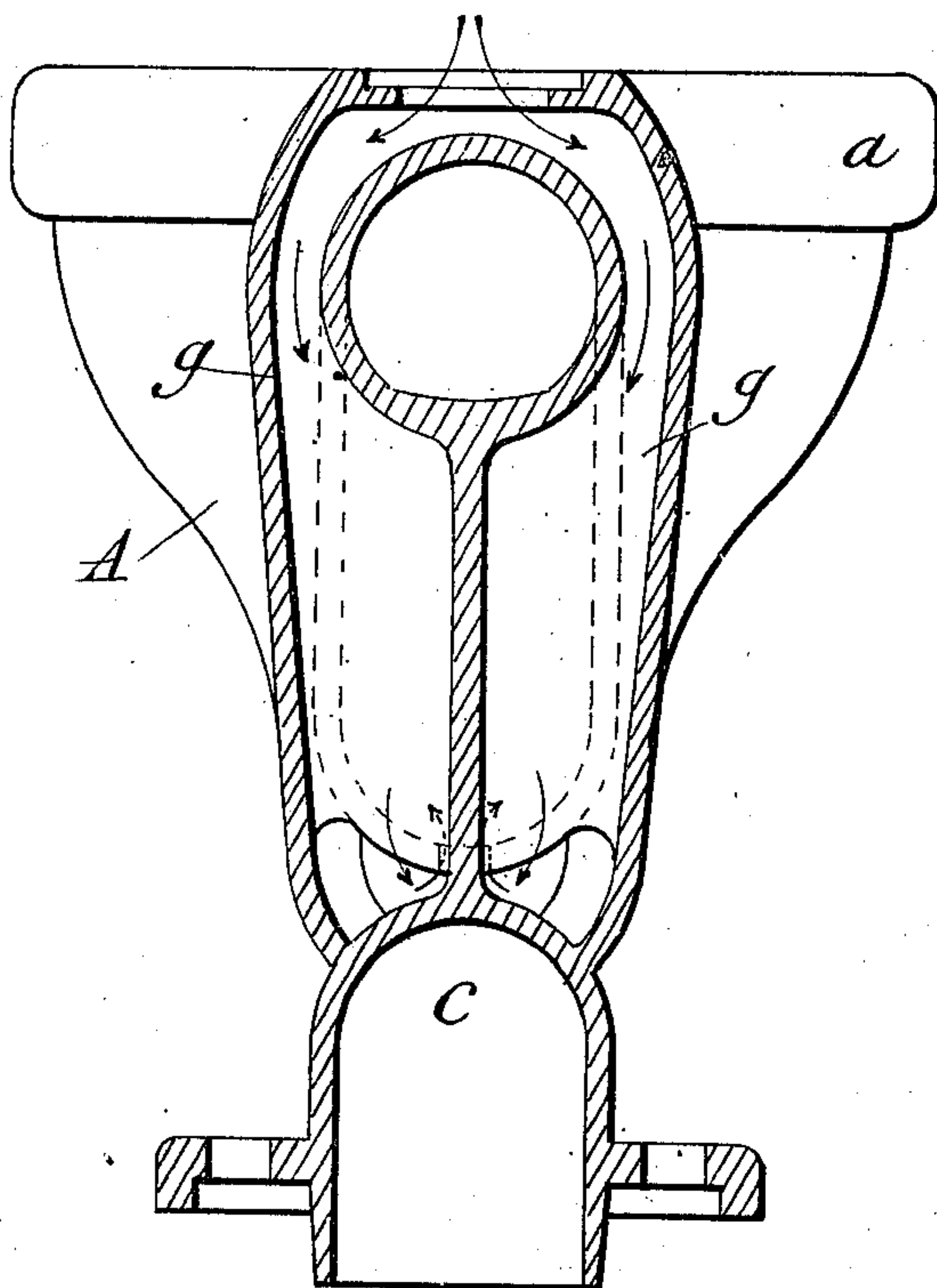


Fig. 6.

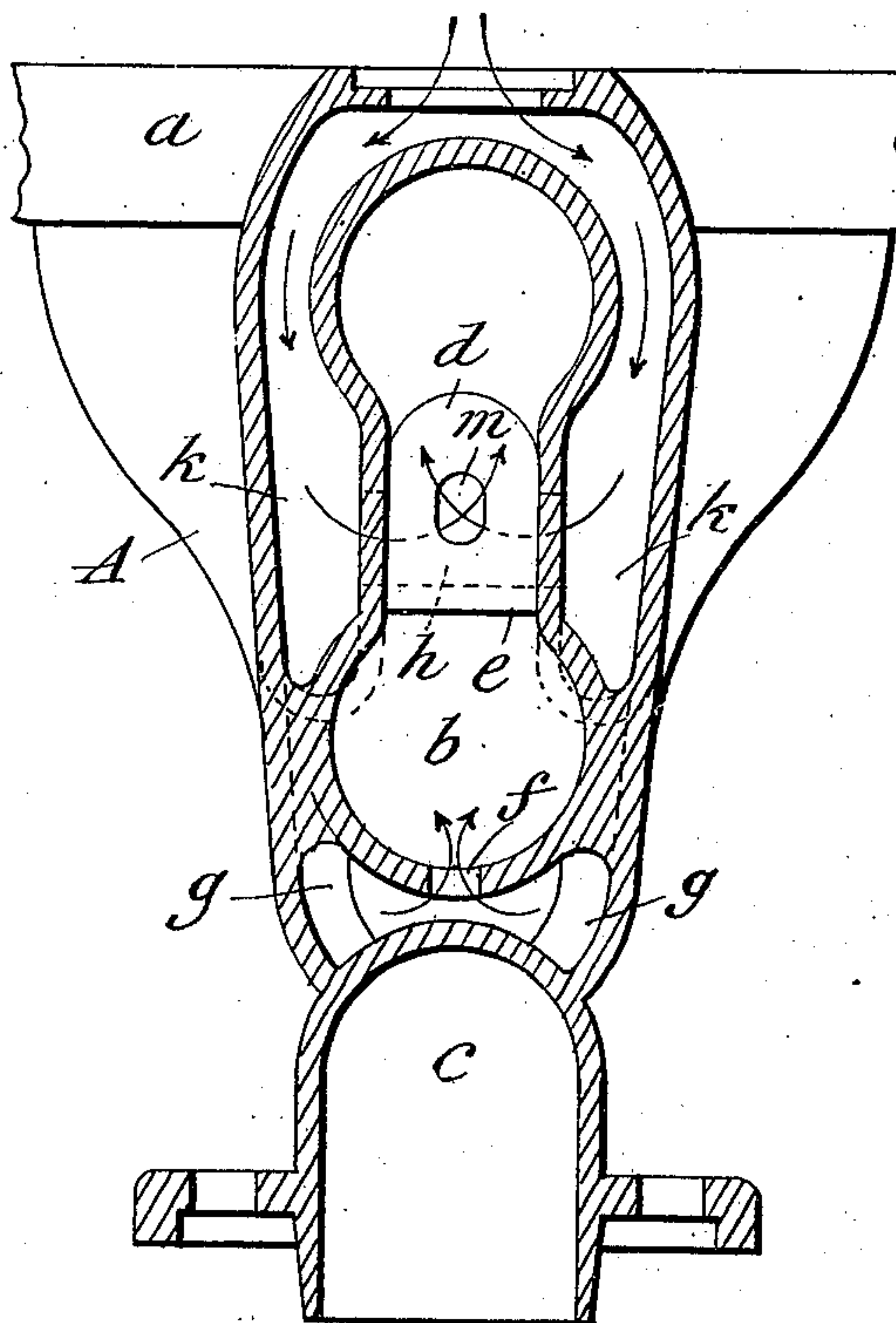
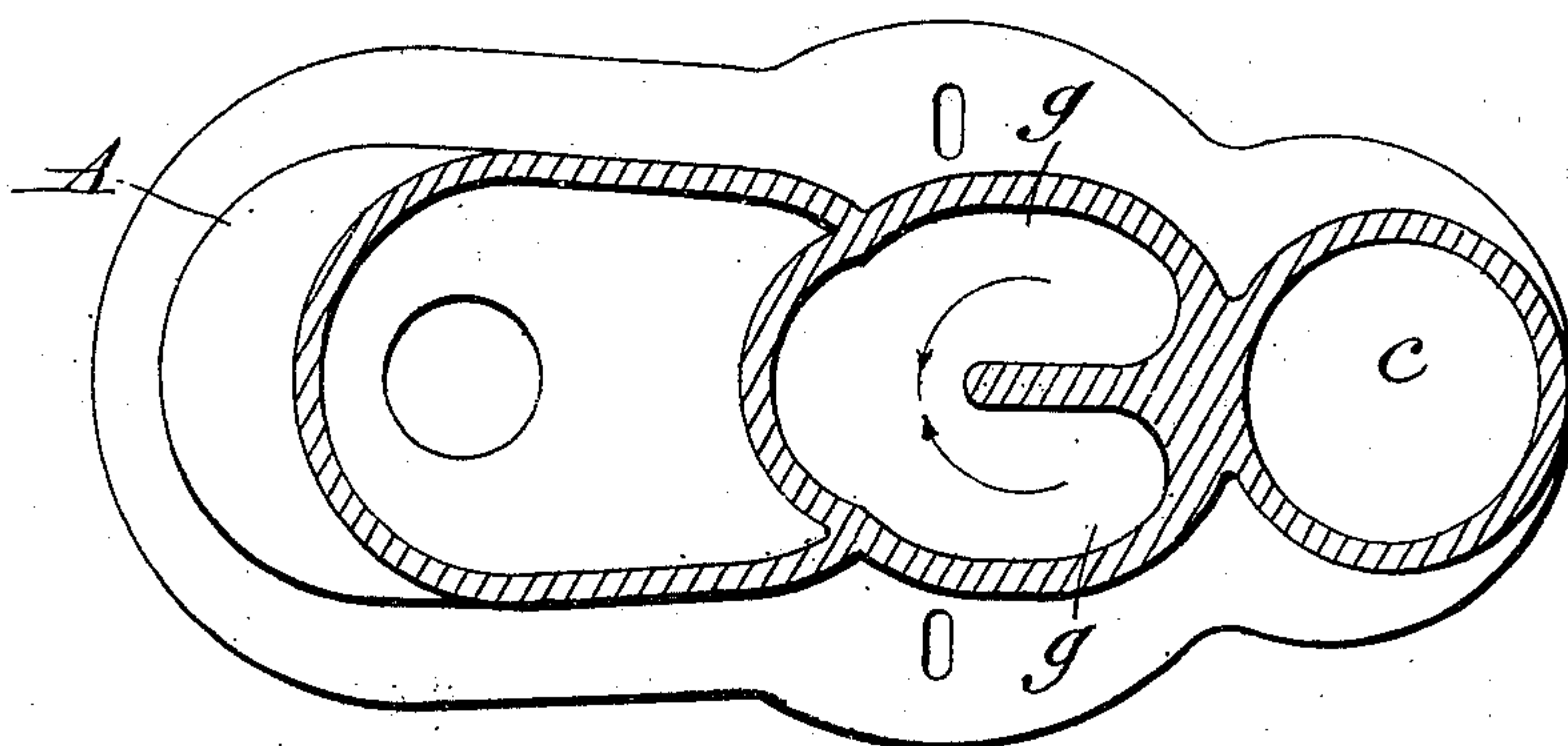


Fig. 7.



Witnesses

H. H. Schott
J. E. Hutchinson

Inventor;
Harry S. Maddock,
by *Levine & Goldborough,*
Attorneys.

UNITED STATES PATENT OFFICE.

HARRY S. MADDOCK, OF TRENTON, NEW JERSEY.

SIPHON CLOSET-BOWL.

SPECIFICATION forming part of Letters Patent No. 685,621, dated October 29, 1901.

Application filed April 14, 1900. Serial No. 12,800. (No model.)

To all whom it may concern:

Be it known that I, HARRY S. MADDOCK, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Siphon Closet-Bowls; 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.

My invention relates to certain new and useful improvements in water-closet bowls, and particularly to bowls of the siphon type, wherein the downtake-leg of the siphon is primed by a jet in starting the siphonic action.

In the accompanying drawings, Figure 1 represents a top plan view of a portion of a closet-bowl embodying my invention. Fig. 2 represents a side elevation thereof. Fig. 3 represents a vertical longitudinal section. Figs. 4, 5, 6, and 7 represent, respectively, sections taken on the lines 4 4, 5 5, 6 6, and 7 7 of Fig. 3.

Similar letters of reference indicate similar parts throughout the several views.

Referring to the drawings, A indicates the main body portion or basin of the bowl, having the flushing-rim *a*, uptake-leg *b*, and downtake or discharge leg *c*.

Heretofore, so far as I am aware, it has been customary to construct the dividing-partition forming the seal between the basin and the uptake of the bowl as a single thin wall, descending at a sharp incline and having a thin lower edge extending well down toward the bottom of the basin. As a consequence there has always been a tendency for the paper used in the bowl to clog the comparatively narrow opening thus afforded and particularly to catch on the thin edge referred to. Moreover, this construction involves a deep uptake and a considerable depth of water in the bowl and necessitates a correspondingly powerful jet and water-head to initiate the siphonic action. In my improved bowl I obviate these disadvantages by making the incline of the dividing-wall much more gradual and giving it a broad and preferably flat under surface, thereby forming at the bottom of the basin a substantially horizontal chan-

nel. This construction preserves and even increases the length of the seal, furnishes ample room below the partition for the passage of the outflowing material, and reduces the depth of water in the bowl, and consequently the depth of the column in the uptake-leg to be lifted over the dam by the action of the jet, and therefore permits the downtake-leg to be primed by a jet of much less power.

In the drawings, *d* indicates the dividing-wall, having the under surface *e* extending rearwardly to a distance substantially equal to the depth of its rear edge below the water-level. The effective extent of the seal against backflow of sewer-gas from the soil-pipe is therefore double the distance from the water-level to the under surface of the dividing-wall, and this long seal I obtain with a correspondingly low level of water in the basin and a correspondingly short uptake.

I preferably provide the bowl with the customary bottom jet *f*, receiving its supply through the channels *g*, and, in fact, may employ this bottom jet alone to start the siphon. In addition to or in substitution for said bottom jet, however, I hollow out the lower portion of the dividing-wall at *h* and lead thereinto the water-supply channels *k* and establish from the space *h* a jet *m*. The jet *m* is of itself sufficient to start the siphon, although with a water-head too great to be ordinarily desirable. In conjunction with the jet *f*, however, I find that the siphon may be effectively started and the downtake promptly primed by an amount of water much less than would be required by either jet working alone. Moreover, should the bottom jet become clogged (which frequently happens in our western States owing to the alkaline deposits from the water when permitted to stand long in the bowl) the jet *m* remains unclogged and in full operative condition.

A further advantage of the jet *m* is that it furnishes an absolute safeguard against overflow of the bowl, for the reason that should the bottom jet and outlet from bowl become clogged, thereby increasing the flow of water into the bowl through the flushing-rim, the temporary excess would be carried off by a flow through the channels *k* and the jet-aperture *m*, thence to the siphon.

Having thus described my invention, what I claim is—

5 1. A siphon-jet closet-bowl having its dividing-wall provided with an under surface extending rearwardly in a substantially horizontal direction to a distance substantially equal to its depth below the water-level, substantially as described.

10 2. A siphon-jet closet-bowl having its dividing-wall provided with an under surface extending rearwardly in a substantially horizontal direction to a distance substantially equal to its depth below the water-level, the lower portion of said wall being provided with
15 a jet-aperture, and a channel for supplying water to said jet-aperture, said channel having a connection with the bowl; substantially as described.

20 3. A siphon-jet closet-bowl having its dividing-wall provided with an under surface extending rearwardly in a substantially horizontal direction to a distance substantially equal to its depth below the water-level, said bowl being provided with a jet-aperture at

the bottom of its uptake-leg, and a channel 25 for supplying water to said jet-aperture, said channel having a connection with the bowl; substantially as described.

4. A siphon-jet closet-bowl, having its dividing-wall provided with an under surface extending rearwardly in a substantially horizontal direction to a distance substantially equal to its depth below the water-level, said bowl being provided with two jet-apertures and channels for supplying water thereto, 35 one of said jet-apertures being at the bottom of the uptake-leg and the other in the lower portion of the dividing-wall, said latter aperture being connected with the bowl by way of its supply-channel whereby overflow of 40 the bowl is prevented, substantially as described.

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

HARRY S. MADDOCK.

Witnesses:

EDWARD D. ANDERSON,
CHARLES J. BOHLINGER.