

E. G. WATROUS.

WATER CLOSET.

APPLICATION FILED OCT. 6, 1904.

Fig. 1.

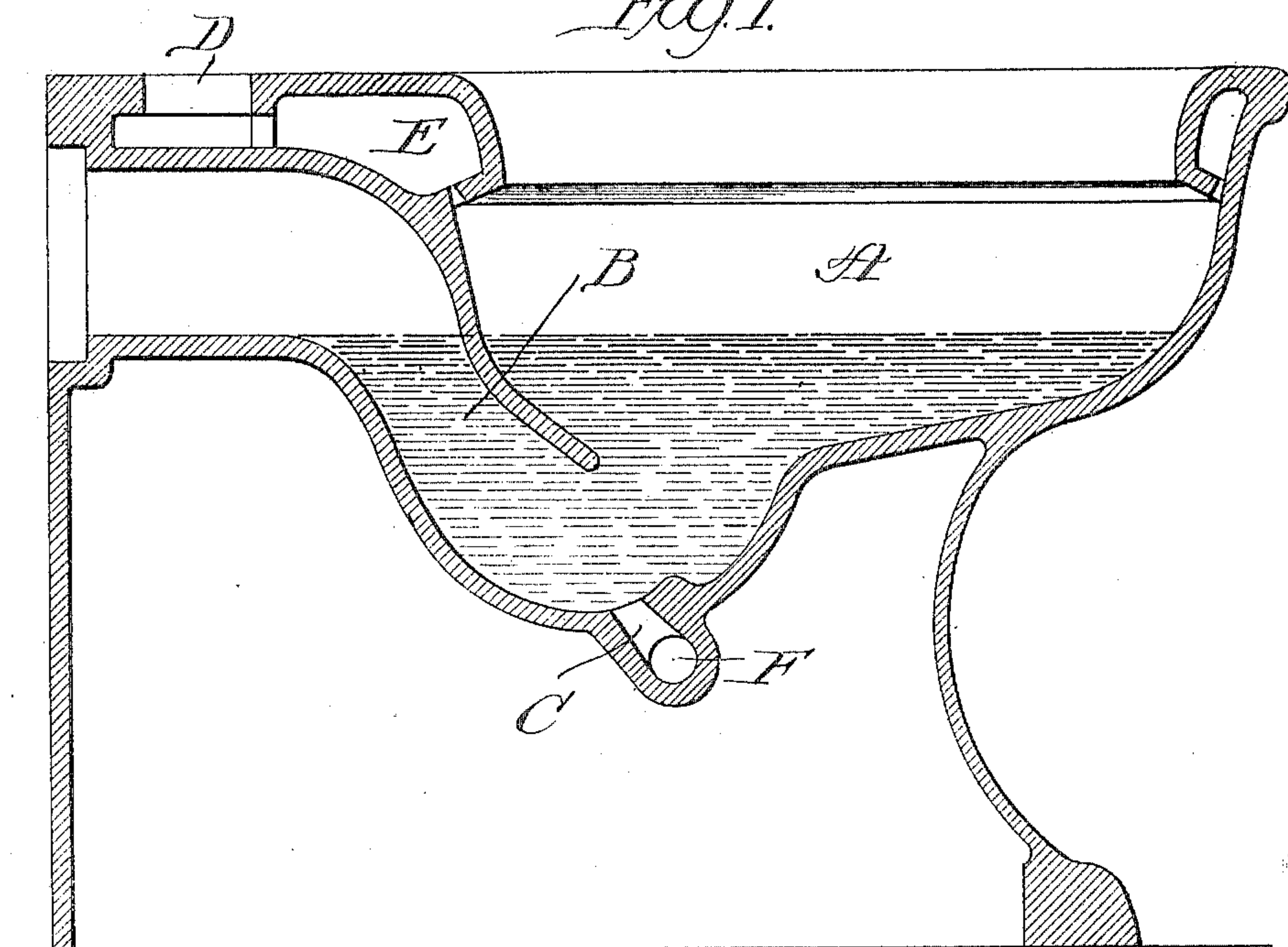
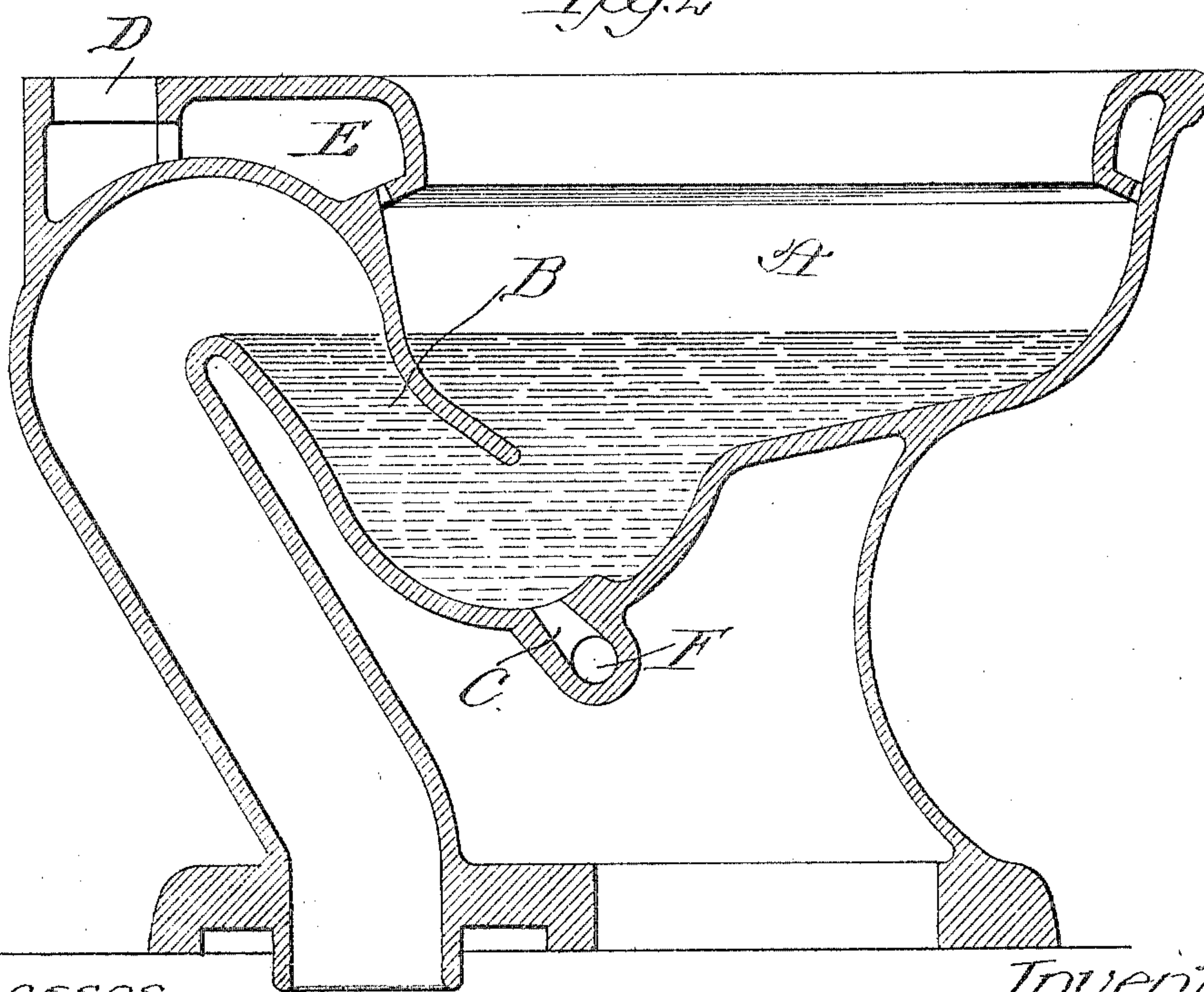


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

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WATER-CLOSET.

No. 804,644.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed October 6, 1904. Serial No. 227,478.

To all whom it may concern:

Be it known that I, EARL G. WATROUS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Water-Closets, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention has for its object the provision of novel and improved means for flushing said closets, whereby they may be flushed more quickly, certainly, and thoroughly than in the constructions heretofore employed.

My invention is equally applicable to closets having a rearward discharge, as is commonly the case with what are known as "prison-closets" and to closets having downward discharge, as in the more common and conventional forms of water-closets.

Figure 1 of the accompanying drawings shows my invention embodied in the former style of closet, while Fig. 2 shows it embodied in one of the latter styles.

The gist of my invention consists in the provision of a discharge-passage from the closet-bowl of such a nature and the combination with it of a jet of such a character that upon admitting the water-supply to the closet the water issuing from the jet will move the water through the discharge-passage in a substantially solid column or plug, and thereby entrain behind and carry with it both the solid and liquid contents of the bowl and deliver them to the outlet from the closet.

In the accompanying drawings, A represents the closet-bowl, B the discharge-passage, and C the jet-opening through the bottom of the bowl and directed toward the mouth of the passage B. The water-supply is admitted to the closet at D, whence part of it passes into the closet-rim E and thence through the small orifices of the latter to the interior of the closet-bowl, while the remainder of the supply is led through the usual passage (not shown) formed in the wall of the closet to the passage F, formed in the bottom wall of the closet-bowl and leading to the jet C.

The middle portion of the passage B is contracted, so as to present an enlarged and flaring inlet or mouth to said passage from the closet-bowl and facing the jet C, and the proportions and relations of the parts are such

that the spreading jet of water issuing from the orifice C will enter the flaring mouth of the discharge-passage B and cause a substantially solid column or plug of water to move through such passage, thereby entraining and drawing behind and with it all the contents, both liquid and solid, of the closet-bowl and delivering them to the discharge-outlet of the closet, whether such outlet be a rearward one, as in Fig. 1 of the drawings, or a downward one, as in Fig. 2.

The exact proportions and relations of the parts are not material so long as they are such as to bring about the mode of operation and accomplish the results which I have described; but I have found that a discharge-passage B two and one-half inches in diameter at its contracted portion and from three to three and one-fourth inches in diameter at its flaring mouth, in combination with a jet three-fourths of an inch in diameter and located as shown, work well in practice.

I have found that in such a closet constructed in accordance with my invention the flushing action is so strong as to not only efficiently flush the closet of its usual liquid and solid contents, but to discharge from it any heavy foreign substances which may be dropped into it, such as pieces of stone or metal or objects formed from them, thereby insuring the instant and thorough flushing of the closet whenever the water-supply is admitted to it.

I am of course aware that it is common in "siphon-jet" closets to employ a jet in the bottom of the closet-bowl for the purpose of aiding the discharge from the closet-bowl through the short leg of the siphon; but in such closets the formation of a water-plug in the long leg of the siphon is relied upon to withdraw the water from the short leg of the siphon and closet-bowl and effect the flushing of the latter, and I am not aware of any instance in which the short leg of the siphon or the upward discharge-passage of the closet has been of such a nature or combined with a jet of such a character as to produce the mode of operation and accomplish the results of my improved closet.

As will be obvious from the foregoing, my invention simplifies the construction of water-closets, eliminates objections and annoyances incidental to the use of siphon-closets—such as clogging of the siphon, flooding of the

closet upon oversupply of water, &c.--and permits the convenient employment of closets in positions and relations where siphon and other closets having a downward discharge
5 cannot be employed.

Having thus fully described my invention, I claim—

1. In a water-closet bowl, the combination, with an upward discharge - passage leading
10 from the bowl and having a contracted portion and a flaring mouth portion, of a jet lo-

cated below and directed upwardly into the passage, substantially as described.

2. In a water-closet bowl, the combination of the upward discharge-passage B having the
15 contracted portion and flaring mouth, and the jet C coöperating therewith in the manner and for the purpose described.

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