

(No Model.)

S. S. HELLYER.

WATER CLOSET.

No. 244,893.

Patented July 26, 1881.

FIG. 1.

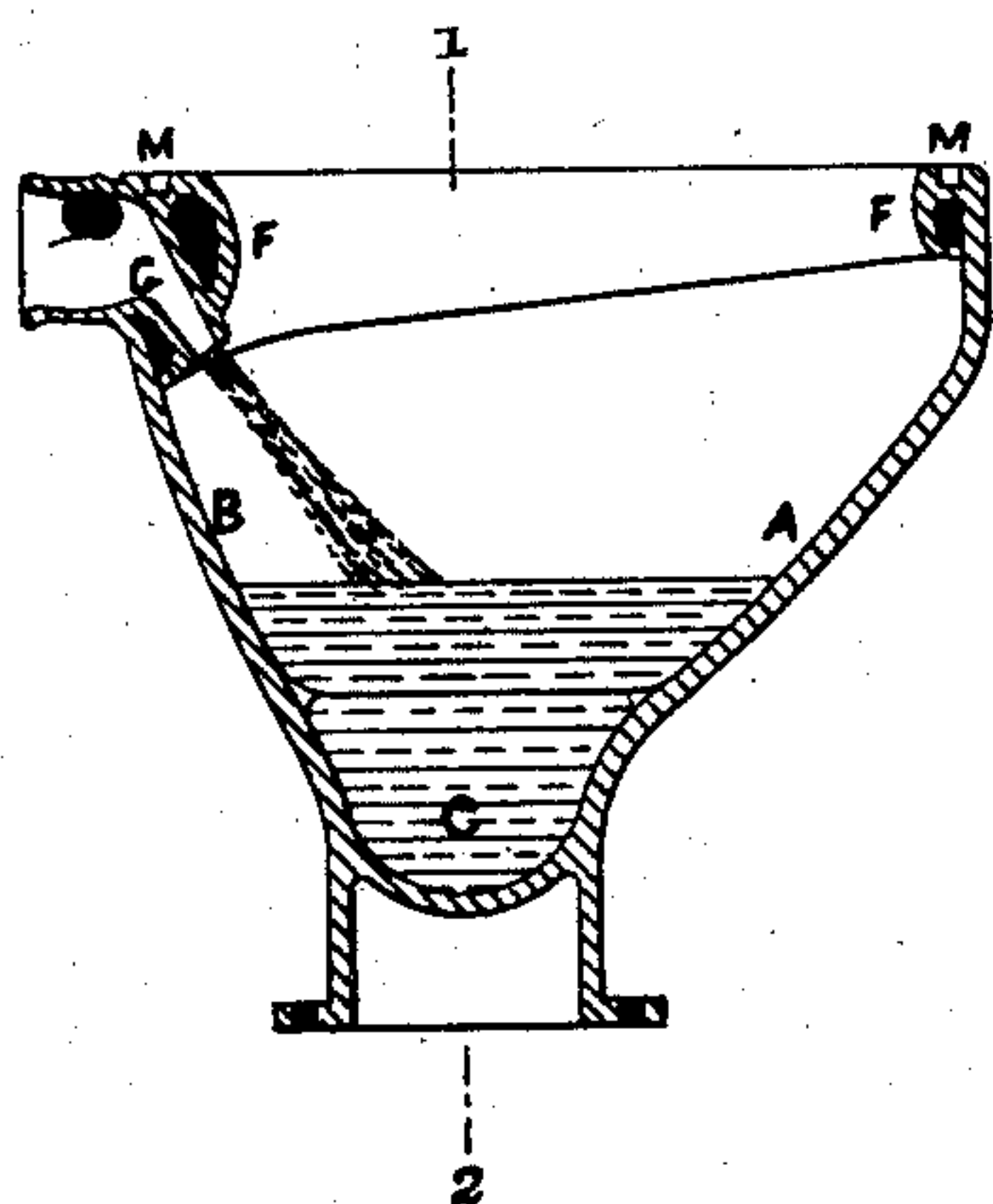


FIG. 2.

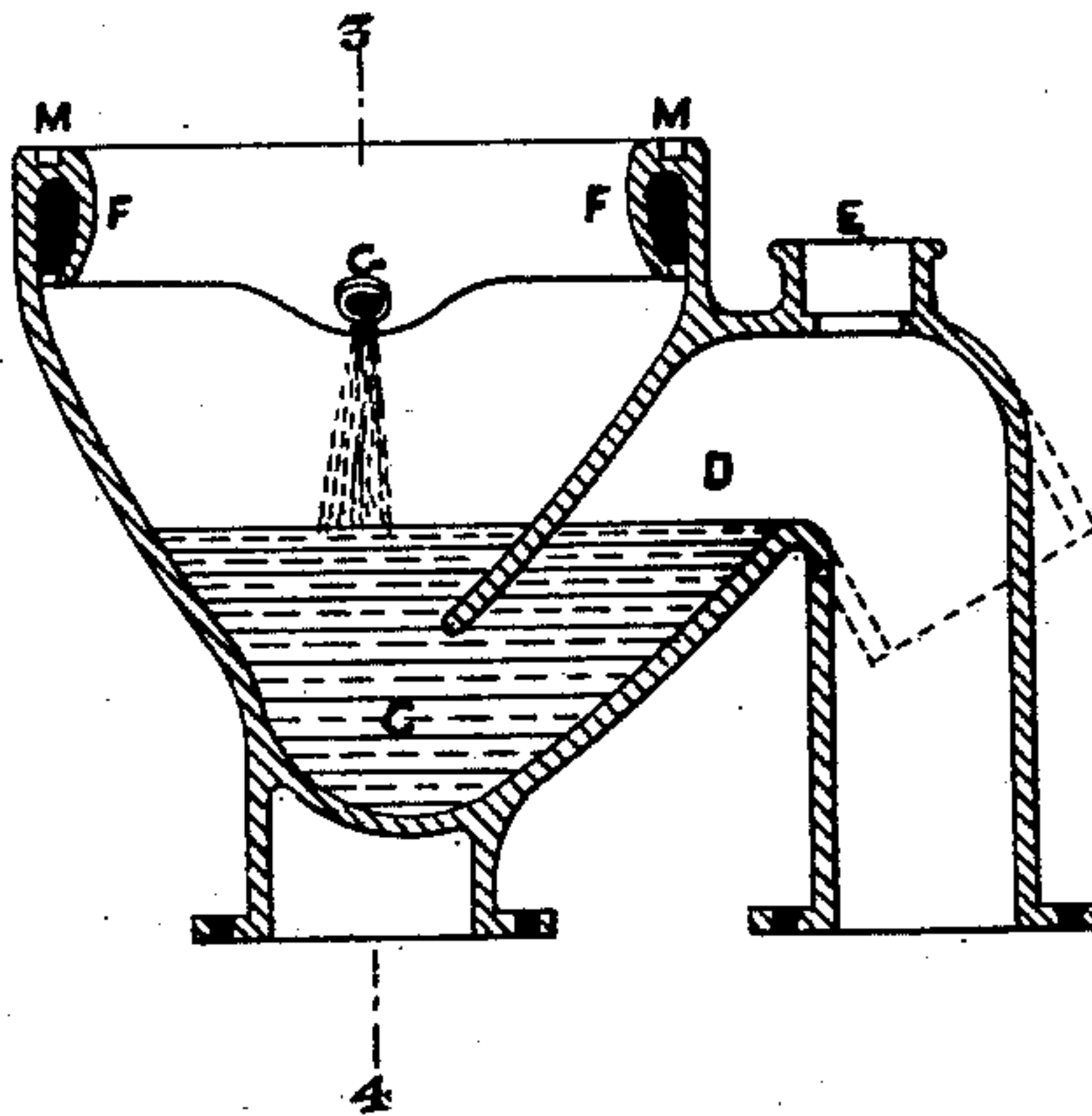


FIG. 3.

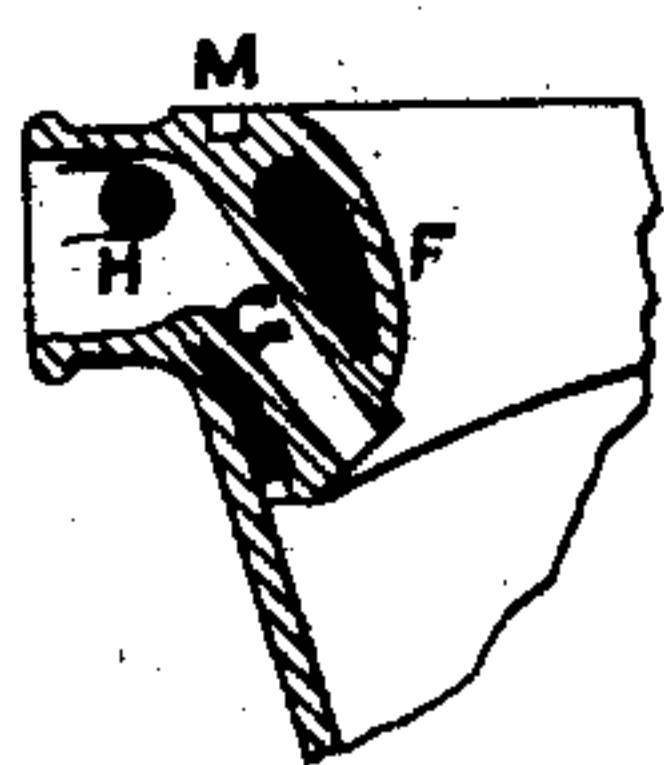


FIG. 5.

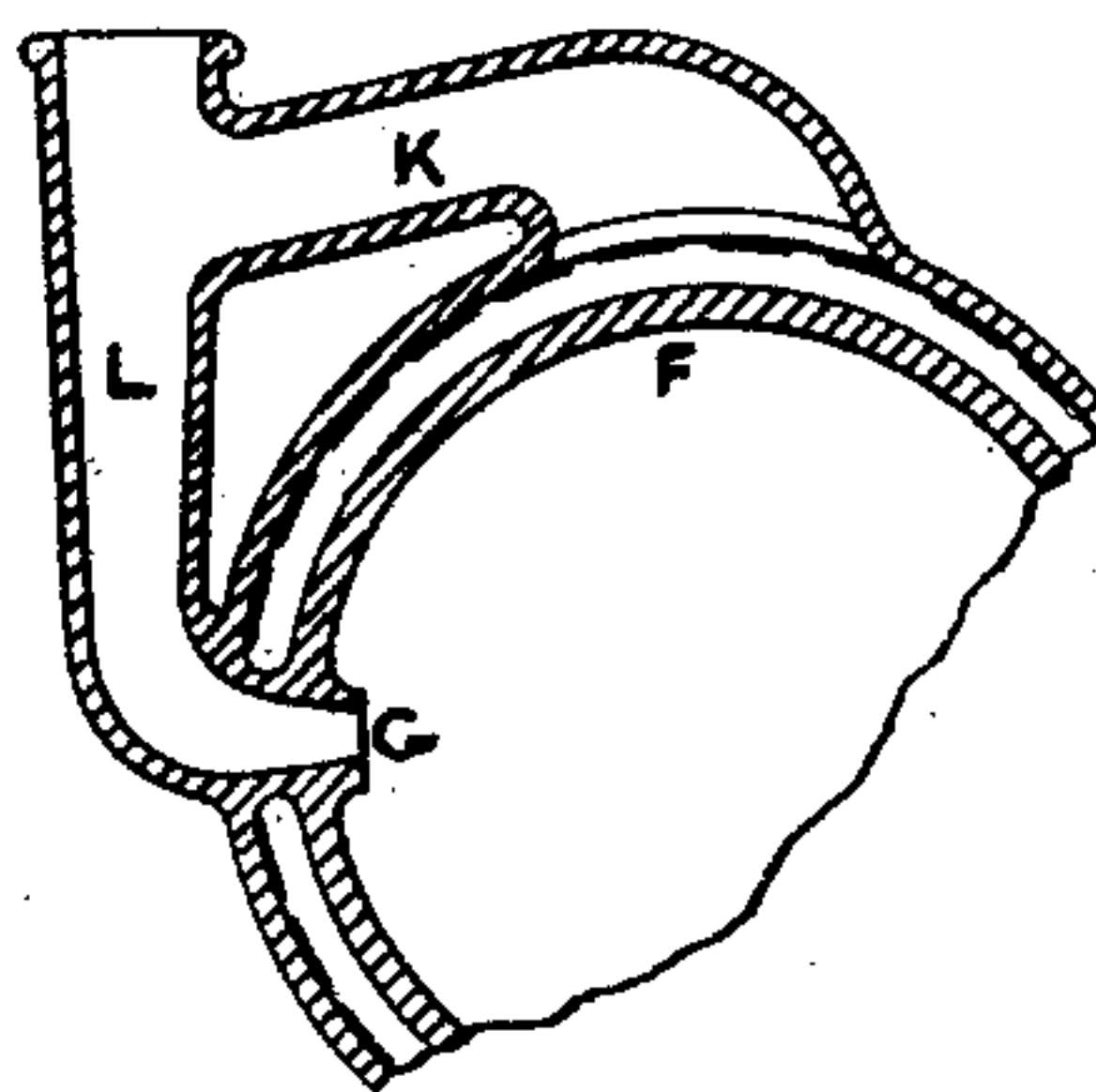
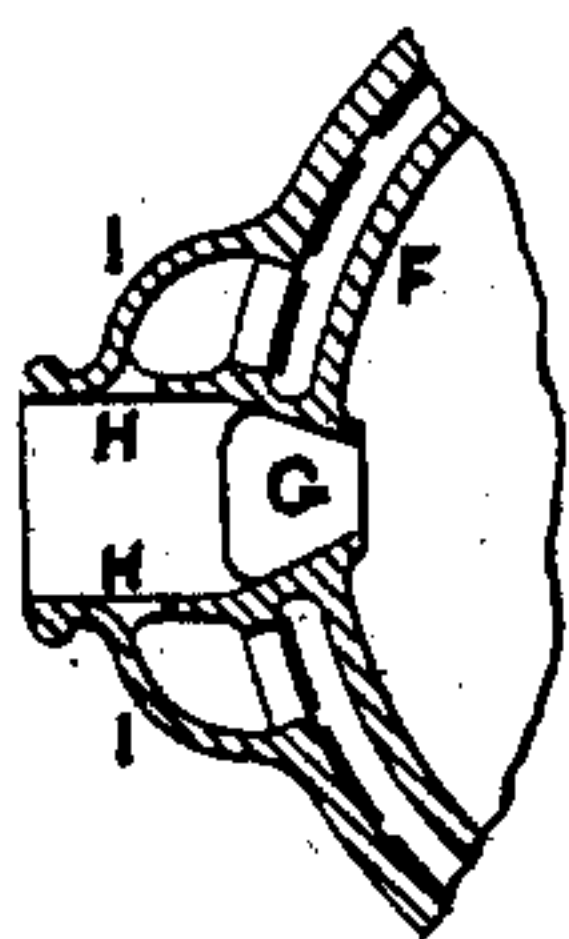


FIG. 4.



Witnesses

Charles New Flood

Henry Meyer

Inventor

Samuel Stevens Kelly



# UNITED STATES PATENT OFFICE.

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## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 244,893, dated July 26, 1881.

Application filed September 20, 1880. (No model.) Patented in England December 2, 1878.

*To all whom it may concern:*

Be it known that I, SAMUEL STEVENS HELLYER, of the firm of Beard, Dent & Hellyer, a citizen of England, residing at Newcastle Street, Strand, in the county of Middlesex, England, engineer, have invented Improvements in Water-Closets, (for which I have obtained a patent in Great Britain, No. 4,913, bearing date December 2, 1878,) of which the following is a specification.

My invention relates to improvements in what is known as the "Artizan" water-closet basin and other hopper water-closet basins, referred to in the specification of my United States Patent dated October 28, 1879, whereby a more effectual cleansing and flushing of the basin is insured than has hitherto been obtained. It is very desirable to have the water-line higher in the basin than in the said Artizan closet, so as to insure the presence in the bottom of the basin of a sufficient amount of water to cover the lower part of the front sloping surface; but in order, with this increased depth of water, to insure that the paper shall, nevertheless, be readily carried away, in lieu of tending to float on the surface and remain in the basin, I employ, according to my present invention, in combination with a water-closet basin, or with the usual flushing-rim of the said Artizan basin, or (which I prefer) with the modified form of rim hereinafter referred to, and shown in my drawings, one or more auxiliary jet-nozzles, passing either through, under, or over the flushing or other rim of the basin, and disposed at such an angle or angles as to throw one or more separate jets down into the center of the basin, which auxiliary jet or jets, falling directly and with considerable force upon the center, or thereabout, of the floating paper, causes it to be instantly submerged or forced by the strength of the said jet or jets down to the bottom of the basin or trap-mouth, whence it is instantly carried away by the vigorous flushing obtained from the apertures made all round the flushing-rim or other means employed for flushing the basin, assisted by the configuration of the basin itself. I attain these objects by the combination of basin and trap and auxiliary jet nozzle or nozzles, illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section, taken along the line 3 4 in Fig. 2, of my improved water-closet basin and trap complete, with auxiliary flushing jet-nozzle and rim combined. Fig. 2 is a corresponding transverse vertical section of the same, taken along the line 1 2 in Fig. 1. Fig. 3 is a detail vertical section, on a large scale, showing the auxiliary jet-nozzle and a portion of the flushing-rim. Fig. 4 is a corresponding detail horizontal section of the same; and Fig. 5 is a horizontal section, showing a modified arrangement of the flushing appliance, wherein the rim is supplied by the usual pipe opening into a saucer, as is well understood, such pipe branching out from the pipe which supplies the auxiliary jet-nozzle.

The same letters of reference indicate corresponding parts in all these figures.

A is the front sloping side of the basin; B, the steep back portion thereof; C, the mouth of the trap; D the trap, which is represented as in one piece with the basin, but it may be made in a separate piece, if desired. This trap may either terminate short off above the floor, as shown by the dotted lines in Fig. 2, or it may be carried down to the floor and formed with a flange and screw-holes for fixing, as shown in the full lines.

E is the ventilating-pipe socket. This trap may be disposed at the back or front, or, as will be most generally used, on either side of the basin. (See Fig. 2.)

F is the flushing-rim, which, for greater convenience of use, I prefer to make narrower at the front part of the basin. (See Fig. 1.) I also make the slits or openings round the rim narrower than heretofore, in order that the force of the auxiliary jet or jets supplied by the special nozzle or nozzles G may not be in anywise weakened. This nozzle may be either made separately or in one piece with the basin, or basin and flushing-rim. It passes through, over, or under the hollow saucer and flushing-rim, as shown, (when a flushing-rim is used,) and its discharge end should be more or less tapered, in order to increase the force of the auxiliary jet.

The special nozzle G and rim F (when the latter is employed) may both be supplied from one and the same flushing-pipe, as shown in



- Fig. 4, in which case I make two apertures, H, Fig. 4, on the upper sides of the nozzle, as far back from the orifice as is practicable, but well within the surrounding saucer I, so that
- 5 some of the water supplied to the nozzle direct may flow freely through the said lateral apertures into the rim, while the jet from the nozzle G impinges directly on the center of the standing water in the basin. Free space is left
- 10 all round the nozzle inside the rim, as shown in Fig. 3, to afford an unimpeded passage or course to the water round the interior of the rim, and thereby facilitate the washing of the sides of the basin; or, if desired, the flush-
- 15 ing-rim (when employed) may be supplied by the usual pipe, K, opening into a saucer, as is well understood, such pipe branching out from the pipe L which supplies the special jet-nozzle G. (See Fig. 5.)
- 20 The nozzle G may be situated at any point round the basin or round the flushing-rim, (when a flushing-rim is employed;) but I prefer to place it on the side of the basin or rim opposite to the outgo.
- 25 In order to prevent drafts, and to check the escape of effluvium under the seat, I make my improved or other water-closet basins with a

groove, M, all round the top edge or flushing-rim, and insert within such groove a rubber packing, upon or against which the seat is 30 caused to bed.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In combination with the hopper or basin of a water-closet in which the discharge of the 35 basin's contents is effected wholly by a flushing operation, means for discharging directly into the standing water, and clear of the walls of the basin, one or more jets of water, auxiliary to the main supply of flushing-water, and 40 discharged into the basin simultaneously with said main supply, all substantially as and for the purpose set forth.

2. In combination with the hopper or basin, a flushing-rim and means for the discharge of 45 one or more auxiliary jets of water directly onto the standing water, all substantially as and for the purposes described.

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Witnesses:

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