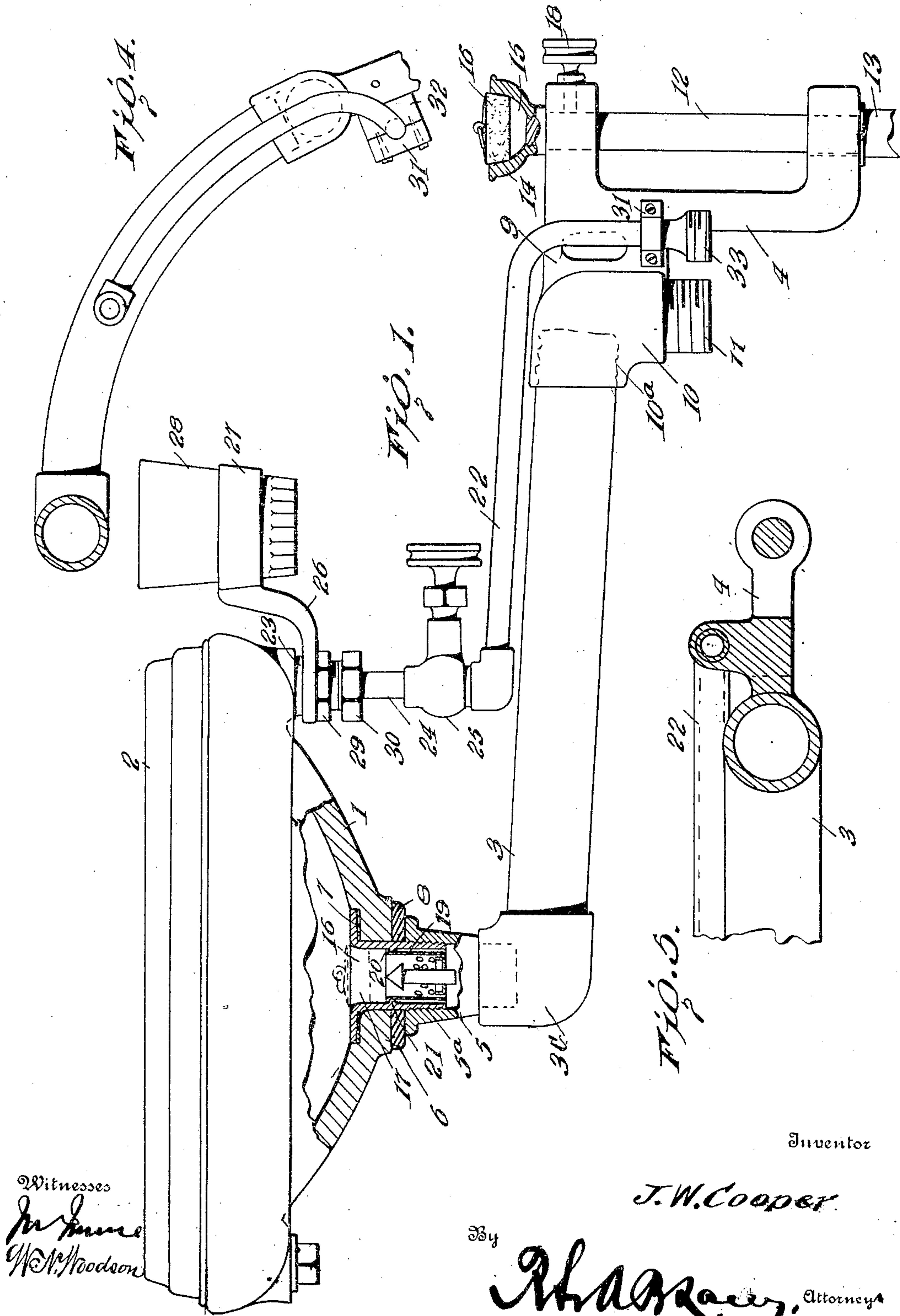


No. 824,287.

PATENTED JUNE 26, 1906.

J. W. COOPER.
FLUSHING CUSPIDOR.
APPLICATION FILED AUG. 17, 1905.

2 SHEETS—SHEET 1.

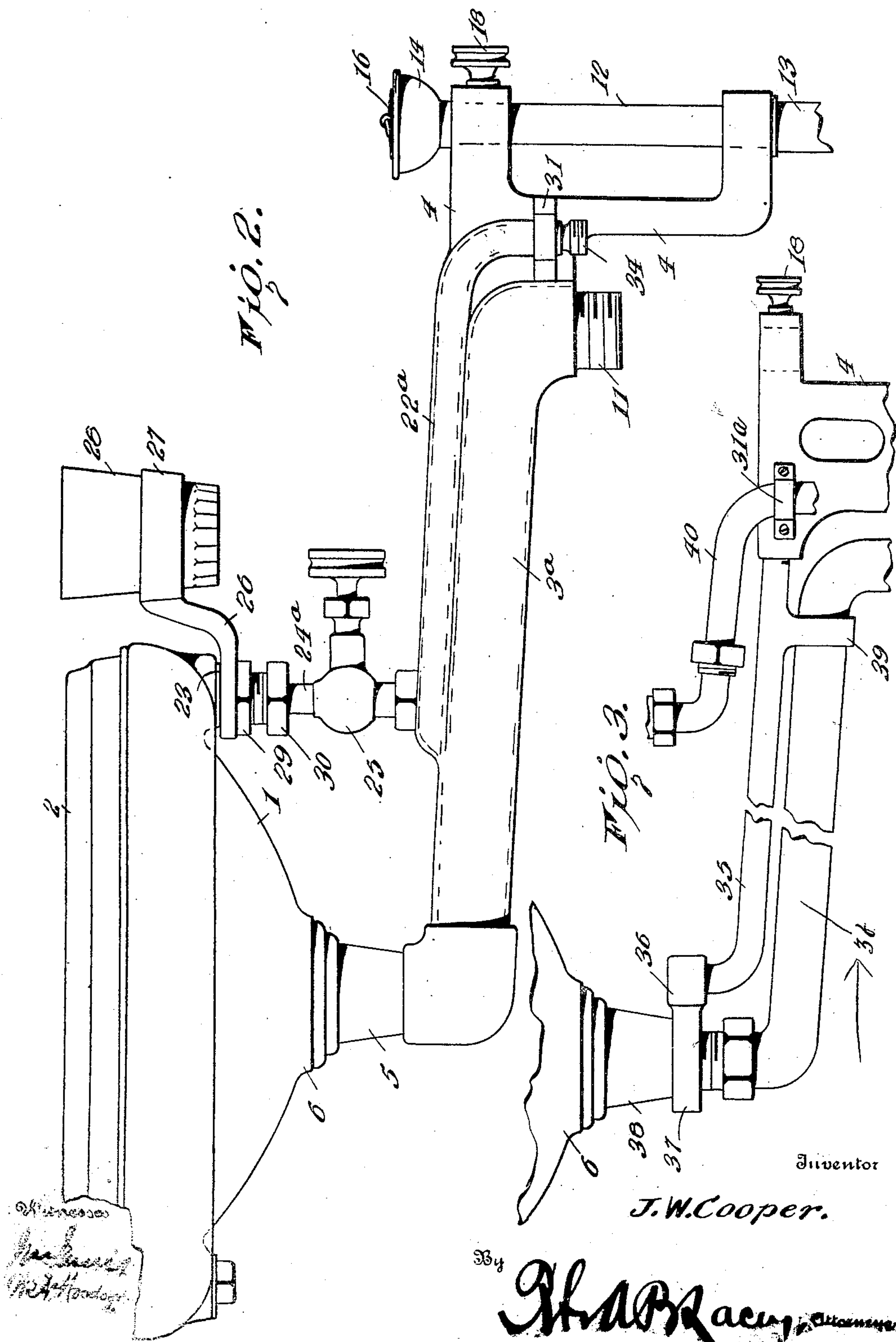


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2 SHEETS—SHEET 2



UNITED STATES PATENT OFFICE.

JOHN W. COOPER, OF BOSTON, MASSACHUSETTS.

FLUSHING CUSPIDOR.

No. 824,287.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed August 17, 1905. Serial No. 274,818.

To all whom it may concern:

Be it known that I, JOHN W. COOPER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Flushing Cuspidors, of which the following is a specification.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a side elevation of a cuspidor embodying the invention, portions being shown in section. Fig. 2 is a side elevation of a modification of the invention. Fig. 3 is a side elevation of a further modification of the invention, the bowl being omitted. Fig. 4 is a plan view of the waste and water pipes supported by the swinging bracket and connected with the bowl. Fig. 5 is a broken horizontal section of the construction shown in Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

This invention involves novel improvements in flushing cuspidor apparatus.

In its general embodiment the invention includes the usual bowl or basin 1, which may be of any construction now in common use, said bowl being provided at its upper portion with a water-ring 2, by which the water used to flush the bowl is deflected, so as to thoroughly cover the interior thereof in the flushing operation. As is customary in this class of apparatus the bowl 1 is provided with a waste-pipe 3, said pipe being connected with the central portion of the bottom of the bowl.

In the construction shown in Fig. 1 the pipe 3 is utilized as a supporting means for the bowl, connecting the same with a horizontal swinging bracket 4. At one end of the waste-pipe 3 is an elbow-coupling 3^a, and a short pipe-section 5 connects the coupling 3^a with the bowl 1, the section 5 being screwed at its lower end into the coupling 3^a and internally threaded at its upper end, as shown at 5^a, to receive the lower threaded end of a bushing or sleeve 6. The bushing or sleeve 6 is flanged at its upper portion, as shown at 7, the flanged portion 7 being located at the bottom of the bowl 1 interior of

the same. The bushing or sleeve 6 forms a connection between the section 5 of the waste-pipe 3 and the bowl, a suitable washer 8 being interposed between the bowl and the upper enlarged end portion of the pipe-section 5 aforesaid. The waste-pipe 3 screws into a head or enlargement 9 at the upper portion of the bracket 4 integral therewith. The head 9 of the bracket 4 is formed with a curved passage 10 of somewhat L form, and the pipe 3 screws into the outer end of the horizontal portion of said passage, as shown at 10^a, an externally-threaded thimble 11 screwing into the lower end of the vertical portion of the passage 10 and admitting of connection to the coupling end of a flexible tube by which the waste is carried off to a suitable point of discharge, said tube not being illustrated. The bracket 4 is a horizontally-swinging bracket, as before mentioned, said bracket being supported by means of a vertical pintle 12, which pintle will be carried by a suitable supporting-arm (not shown) attached to the chair or other support upon which the flushing apparatus may be mounted. As the invention is primarily designed for use in dental or surgical operations, the apparatus is particularly adapted to be attached to a chair, in which instance the arm carrying the pintle 12 would be attached to said chair. The pintle 12 is formed with a shoulder 13 just below the bracket 4 to properly position the bracket thereon, and the upper portion of said pintle is threaded to admit of attachment of a cup-shaped holder 14 thereto. The holder 14 is provided with a socket 15, which is adapted to receive a plug 16, which may be used to close the opening 17 in the bottom of the bowl 1, which opening is formed by the sleeve or bushing 6, before described. The provision of the member 14 is advantageous in that the same is always conveniently arranged with regard to the bowl and affords a desirable supporting means for holding the plug 16 when the latter is not in use. In order that the bracket 4 may be held from turning when it is desired to fix the position thereof temporarily, a suitable set-screw 18, carried by the bracket, may be manipulated so as to engage and bind against the pintle 12 to accomplish the above. Arranged in the opening 17, leading to the waste-pipe 3 of the bowl 1, is a suitable trap 19, particularly designed for catching gold or the like as it passes from the bowl to the waste. The trap 19 comprises a suit-

able tubular body flanged at its upper end, as shown at 20, and the flange 20 is adapted to rest on a shoulder 21, formed annularly on the interior of the bushing or sleeve 6, the trap 19 being supported by said shoulder 21. In addition to the waste-pipe connection between the bracket 4 and the bowl 1 it is designed that a suitable water-supply pipe 22, connected at one end with the bowl, as shown at 23, shall extend from the bowl 1 to the bracket 4. The water-supply pipe 22 consists of a main section and has a vertical portion 24 extending directly to the point of connection with the bowl 1, such vertical portion 24 having a valve 25 in its length adapted for governing the supply of water to the bowl in an evident manner. The vertical portion 24 of the supply-pipe 22 is adapted to support a glass-holding arm 26, said arm curving upwardly from the pipe 24 and outwardly from the peripheral portion of the bowl 1, as shown clearly in Fig. 1 of the drawings. The arm 26 has a ring 27 at its upper end to hold the drinking-glass 28, and the lower end of said arm 26 is formed with an opening through which the pipe 24 passes, a jam-nut 29 being screwed on the pipe-section 24, engaging the under side of the arm 26 at the portion in which the opening is provided to clamp the arm against the lower portion of the bowl 1 to hold it in position. The vertical portion 24 of the pipe 22 is preferably made in two parts, one part permanently attached to the bowl 1 and the other connected directly with the pipe 22, the two parts being connected by a suitable nut 30. In Fig. 1 the pipe 22 is entirely separate from the pipe 3 and is preferably disposed just above said pipe 3. The end portion of the pipe 22, connected with the bracket 4, being attached to the latter by plate 31, attached to a lug 32, projected from the side of the bracket 4, as shown in Fig. 4 of the drawings. The adjacent sides of the lug 32 and the plate 31 are recessed to permit of passage of the pipe 22 therebetween, and the lower end of the pipe 22 is threaded, as shown at 33, to admit of attachment to a flexible hose or tube directly connected with the water-supply. (Not illustrated.)

In Fig. 2 the same general principle of construction of the invention is carried out so far as the arrangement of the water-supply and waste-passages is concerned. In this figure, however, the bracket 4 is formed integrally with the waste-pipe 3^a, and said waste-pipe 3^a is formed upon its upper side with a water-supply passage, (indicated at 22^a), said passage 22^a terminating at the point of jointure intermediate the ends of the waste-pipe and being connected at the end nearer the bowl 1 by a vertical pipe-section 24^a with said bowl. The pipe-section 24^a is exactly the same substantially as the sec-

tion 24 and adjacent parts and connections described with reference to Fig. 1. A thimble 11 is used in the construction in Fig. 2, the lower end of the passage 22^a, however, having a coupling member 34 screwed into the same, to permit of connecting the passage 22^a with the water-supply hose or tubing.

Fig. 3 illustrates still another embodiment of the invention, in which the bracket 4 has a horizontally-extending supporting-arm 35 attached thereto, the outer end of the arm 35 extending to a point beneath the bowl 1, (not shown,) and having a laterally-projecting supporting member 36 applied thereto. The member 36 is formed with a ring 37, through which the vertical-extending pipe-section 38 of the waste-pipe 3^b passes. The section 38 of the pipe 3^b is screwed thereto, and thereby secures the pipe 3^b and the supporting member 36, so that the waste-pipe is carried by the arm 35 in the construction in Fig. 3. The section 38 of the waste-pipe 3^b in Fig. 3 is connected with the bowl 1 (not shown) in a way similar to that described with reference to the connections between the section 5 and the bowl 1 in the construction in Fig. 1. In Fig. 3 the waste-pipe 3^b may be made of flexible tubing or hose, and the arm 35 is provided near its inner end with a downwardly-projecting loop 39, through which the waste-pipe 3^b passes. The water-supply pipe 40 in Fig. 3 is likewise supported by the bracket 4, said bracket having a clamp-plate 31^a applied to a side thereof to hold the water-supply pipe 40 connected with the said bracket. The water-supply pipe 40 is connected with the bowl 1 by a connection, such as shown in Fig. 1.

It will be understood that the waste-pipe, as well as the water-supply pipe passage, may be curved, as shown in Fig. 4, with regard to the portion thereof between the bracket and the bowl, or this pipe and passage may be straight. The arrangement of the waste and supply passages between the bracket and the bowl is adjustable, for the reason that the waste and water-supply tubing which is ordinarily connected with flushing cuspidors of this type will be arranged adjacent the latter, and therefore not be likely to get into the way of the operator. In the majority of cuspidors at present in use the waste-tubing connects at one side of the bowl and the water-supply tubing at the other side. In adapting the position of the bracket to the bowl supported thereon the last-mentioned arrangement of the tubing connections is disadvantageous for obvious reason. The cuspidor embodied in this invention will be sanitary and cleanly, and the same may be adjusted so as to swing toward and from the patient without likelihood of interference on the part of the tubing connections. The cuspidor may be readily utilized as a washbasin by placing

the plug 16 in the opening 17 and opening the valve 25, so as to fill the bowl 1, as desired. This last-mentioned feature is one of particular advantage. It will be noted from the foregoing that the constructions shown embody the use of the adjacent water and waste passages extending from the swinging bracket horizontally, a portion of the former terminating at a point between the ends of the latter and having connection by a vertical extension thereof with the bowl of the cuspidor. The vertical portion of the water-passage is so connected with the bowl that the same braces the waste-pipe, so far as the connection thereof with the bowl 2 is concerned, in a manner which will be evident. Further, the means for attaching the vertical portion of the water-supply pipe to the bowl coact with the arm 26 in securing the same in a position convenient to support the tumbler or glass, as hereinbefore described. In addition to the above the valve 25 is also mounted upon the vertical portion of the water-supply pipe, and the arrangement of the parts just described is one possessed of the utmost convenience, at the same time simplifying the construction and manner of attachment of the parts in an advantageous way.

Having thus described the invention, what is claimed as new is—

1. In a flushing cuspidor having a bowl and provided with a suitable waste-passage leading from said bowl, a swinging bracket to support the bowl, and a pintle for said bracket having a socket adapted to receive a plug by which the waste-passage aforesaid may be closed.

2. In means of the class described, the combination of a swinging bracket, a horizontal waste-pipe attached thereto at one end, a bowl connected at its bottom with the other end of the waste-pipe and supported by the bracket, a water-supply passage being

provided for the bowl and extending from the bracket horizontally of the waste-pipe, said water-supply passage having its horizontal portion terminating at a point between the ends of the waste-pipe and having a vertical portion projecting upwardly from said terminal and forming a brace for the bowl, attaching means securing the vertical portion of the water-supply pipe to the upper portion of the bowl, a tumbler-supporting arm provided at its lower end with an opening through which the vertical portion of the water-supply passage passes, the attaching means of said vertical portion of the water-supply pipe engaging and holding the tumbler-supporting arm in position, and a valve in the length of the vertical portion of the water-supply passage.

3. In a device of the class described, the combination of a swinging bracket, a rigid arm extending horizontally from the bracket and attached at one end thereto, a laterally-projecting supporting member at the other end of the supporting-arm, a vertical supporting member carried by the arm adjacent the point of attachment thereof to the bracket, a waste-pipe passing through the vertical and laterally-projecting supporting members of the horizontal arm aforesaid, a bowl having the bottom thereof connected with the outer end of the waste-pipe, a water-supply pipe extending horizontally of the supporting-arm and connected at its outer end with the upper portion of the bowl aforesaid, and detachable clamp means secured to the bracket for attaching the adjacent end portion of the water-supply pipe thereto.

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

JOHN W. COOPER. [L. s.]

Witnesses:

FRED B. WHEELER,
JAMES F. PENNELL.