March 20, 1928. 1,663,111

C. C. CAMPUS

LAVATORY

Filed Aug. 25, 1925 6 Sheets-Sheet 1

Fig- 1

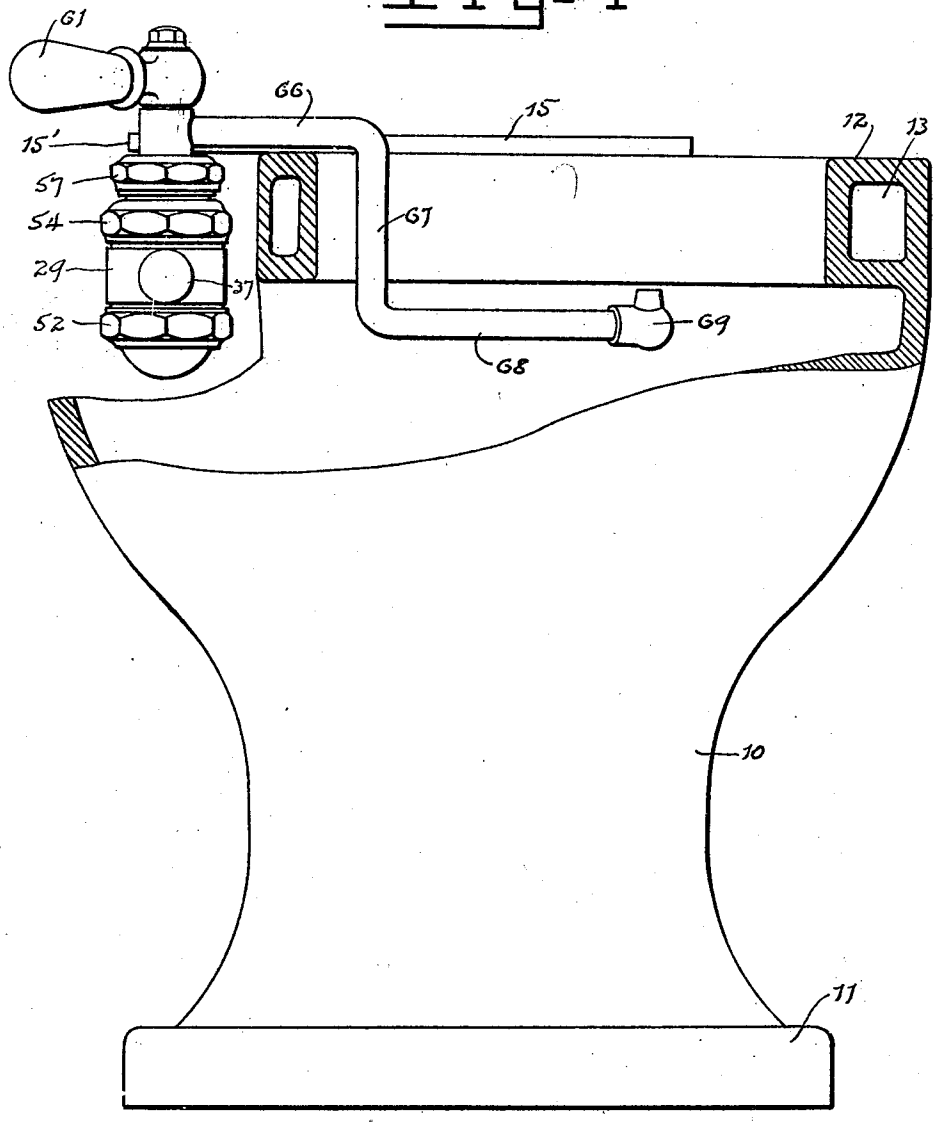

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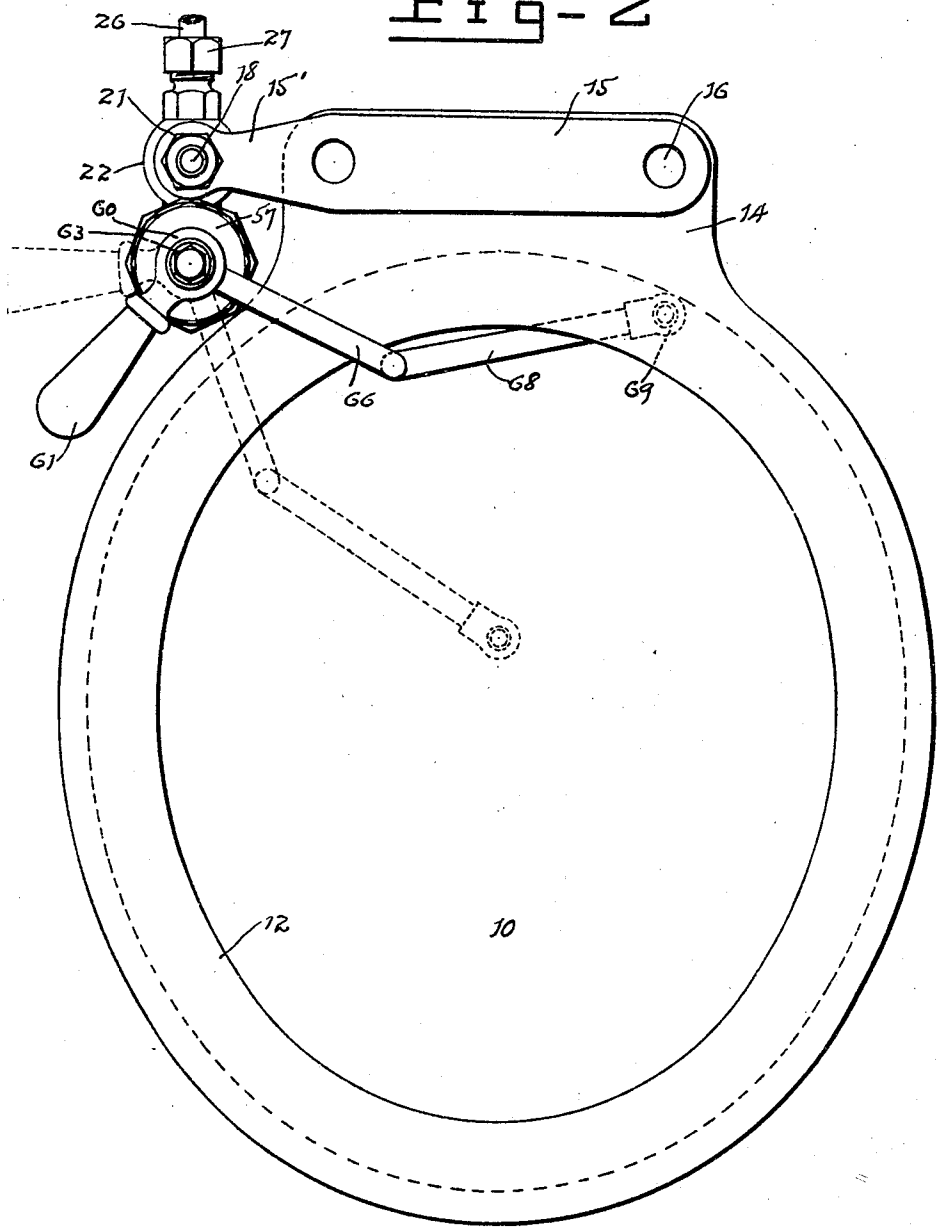
Fig-2



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Filed Aug. 25, 1925 6 Sheets-Sheet 3

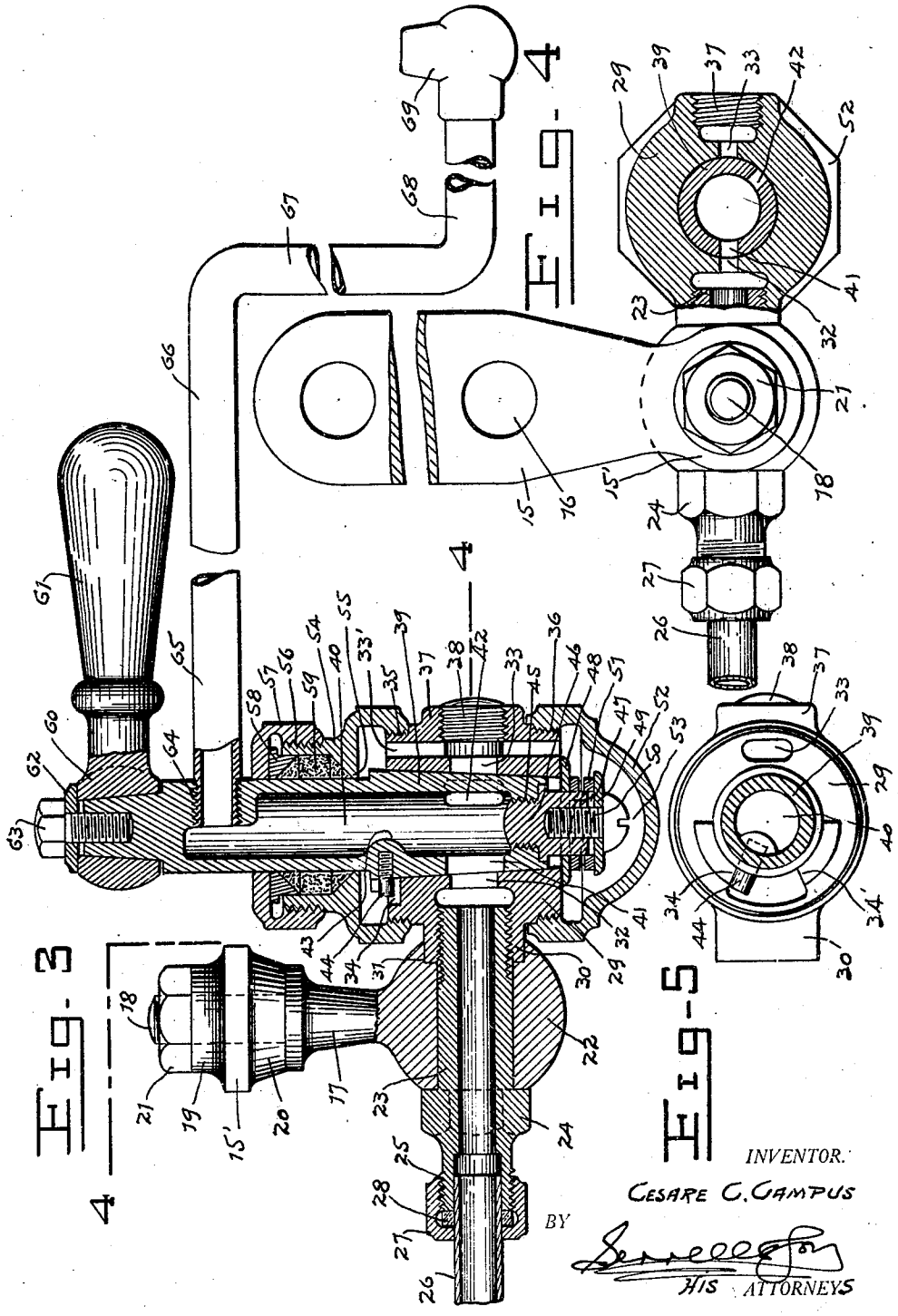

Fig. 3

Fig. 4

Fig. 5

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Fig-6

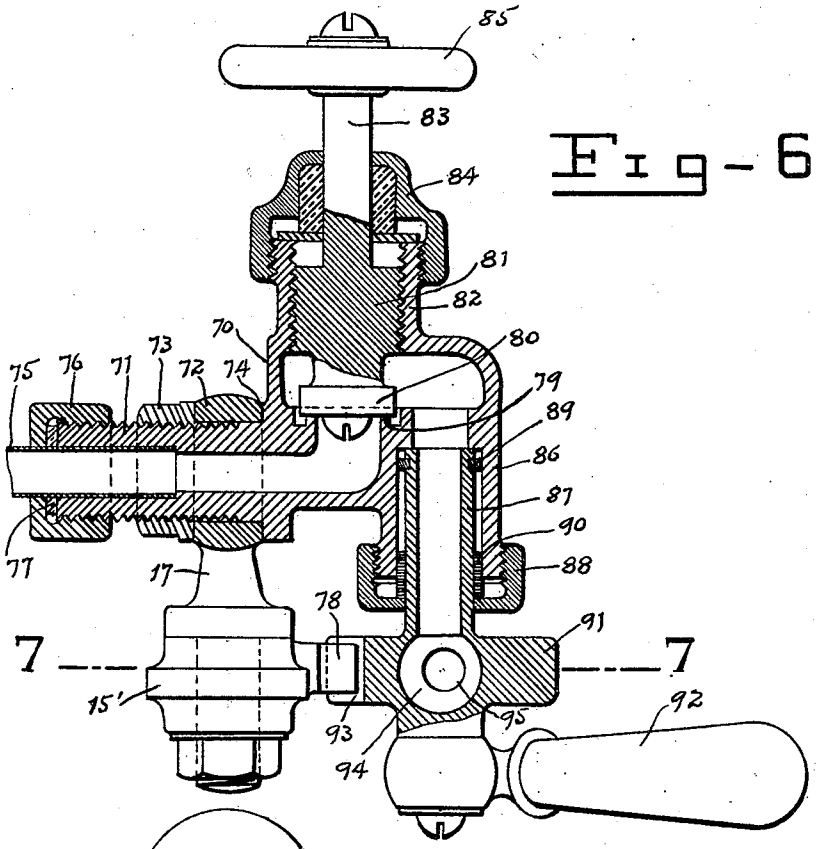

Fig-7-

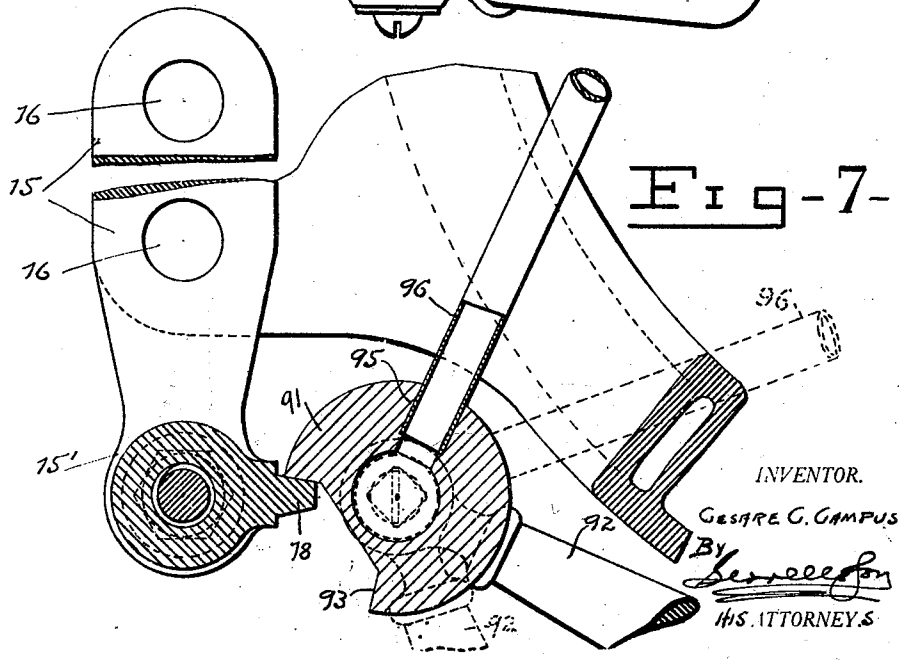

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Fig 8.

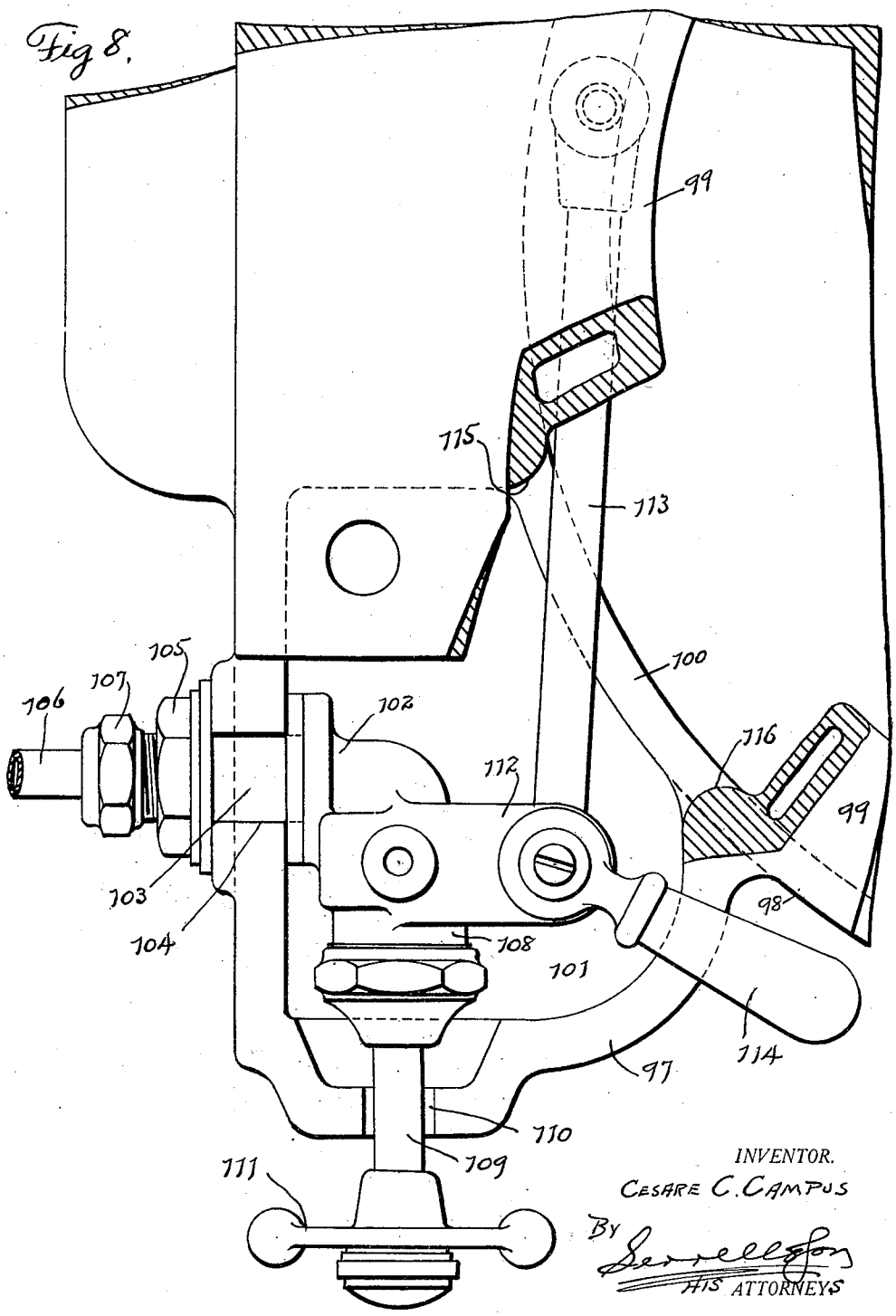

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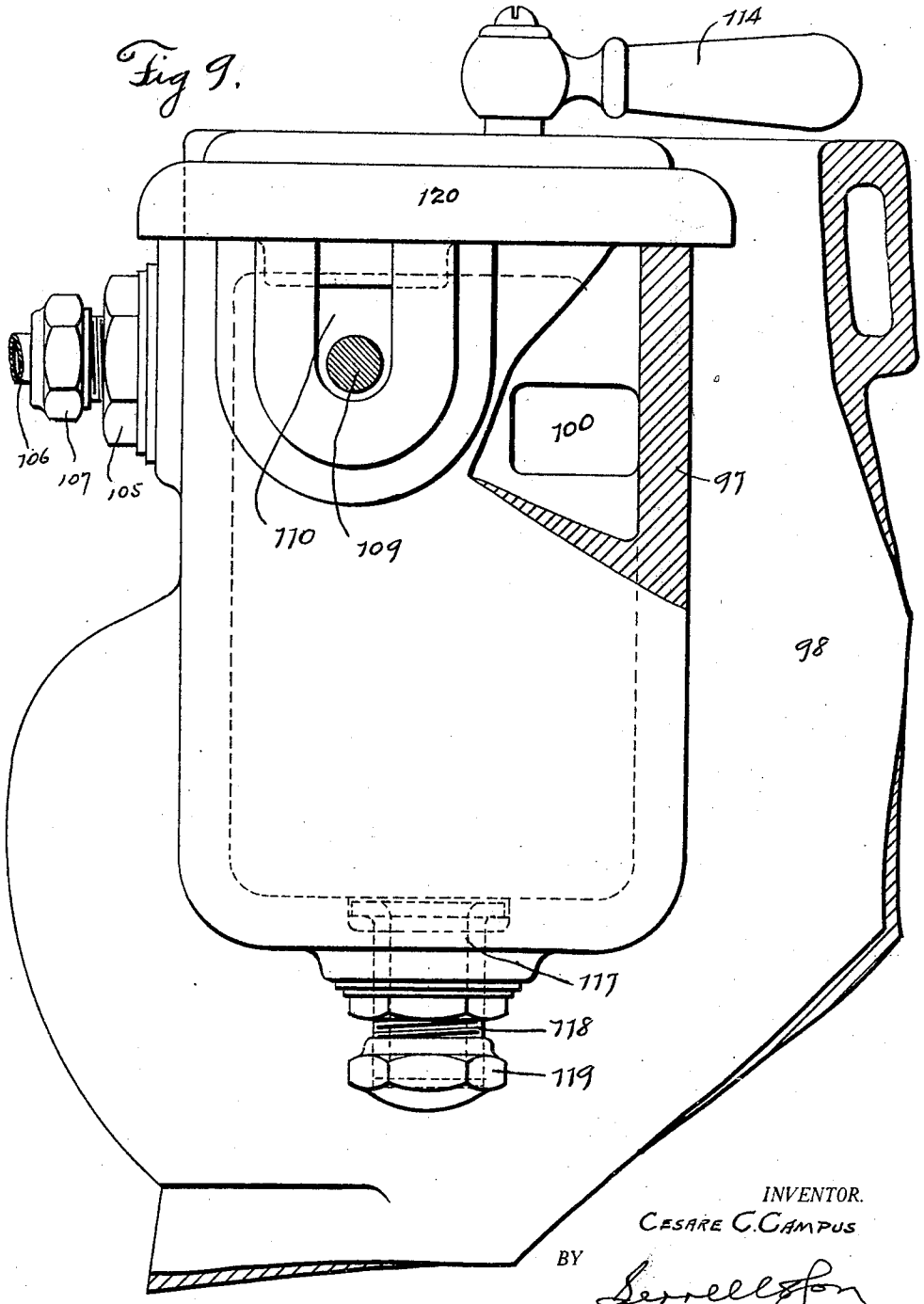
Fig 9.



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Patented Mar. 20, 1928. 1,663,111

UNITED STATES PATENT OFFICE.

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Application filed August 25, 1925. Serial No. 52,357.

In carrying out my invention, I employ a device for delivering water or other cleansing fluid to a centrally disposed position, and which is normally maintained in a non-use position out of the way, adjacent the rim of the bowl, but may be moved into position for use in which the discharge end of the device assumes a position approximately in the center of the bowl and at a predetermined height. The invention also contemplates suitable devices for shifting the delivery device to and from its position for use and for supplying the necessary liquid for the intended purposes, as will be hereinafter more particularly described.

In the drawing Fig. 1 is a sectional elevation of a toilet bowl showing an attachment embodying a form of my present invention.

Fig. 2 is a plan of the same.

Fig. 3 is a central longitudinal sectional elevation of the form of attachment shown in Figs. 1 and 2.

Fig. 4 is a sectional plan on line 4—4 Fig. 3.

Fig. 5 is a plan of the valve body showing the valve stem in section.

Fig. 6 is a sectional elevation showing another form of the invention.

Fig. 7 is a section on line 7—7 Fig. 6.

Fig. 8 is a sectional plan showing another form of the invention, and

Fig. 9 is a sectional elevation illustrating the structure shown in Fig. 8.

Referring to the drawings and particularly to Figs. 1 to 5 inclusive, it will be seen that I have herein illustrated my present invention as applied to a toilet bowl. The toilet bowl is indicated at 10. As illustrated, this toilet bowl is of the usual construction and includes a base 11 and a rim 12 in which there is a passage 13 through which the water flows from any suitable source of supply and is caused to enter the bowl in any customary manner in flushing the same. Also, as is customary the upper portion of the bowl, at the rear, is provided with a flange or boss, 14, by which, and by suitable brackets or otherwise, the seat and cover are hinged to the bowl. The flange 14 is provided with holes 16 through which the bracket bolts pass in securing the seat and the cover in their respective positions.

In attaching my invention to toilet bowls which are already set in place, it is necessary to employ a suitable support therefor. As shown in these figures of the drawing, this support may include a strap or bracket 15 in which there are holes spaced to correspond and register with the holes in the flange 14 so that the bracket bolts by which the seat and cover are attached to the bowl may also be employed to fix this strap 15 in place. At one end the strap 15, is provided with an extension 15^1 and in this extension there is mounted a hanger or support bracket 17. As illustrated this support bracket 17 includes a stud bolt 18 which passes through an opening in the extension 15^1 and is fitted with washers 19 and 20 and is fixed to the extension by a nut 21 turned to place on the bolt 18. The support bracket 17 also includes a head 22 in which there is a transverse bore.

Passing through the bore in the head 22, I employ a supply pipe fitting 23; adjacent one end this fitting 23 is provided with a nut head 24 at the extremity of which there is a screw threaded portion 25. The opening at this end of the fitting is preferably of slightly enlarged diameter, and is adapted to receive the end portion of a supply pipe 26 leading from the service pipes or any suitable source of supply. As illustrated a water tight joint is made with the supply pipe 26 by means of a nut 27 and a suitable packing 28 or otherwise.

The attachment proper in this form of the invention comprises a suitable valve for making and breaking communication with the source of supply, and a discharge pipe by which when the valve is opened the necessary water is available for the intended purposes. This valve, as illustrated, comprises a body member 29. Extending from one side of the body member is a tapped boss 30. This boss is formed to fit within a recess 31 provided for this purpose in the head 22 of the support 17 and the screw threaded end of the pipe fitting 23 is adapted to turn down in the boss 30 so as to secure the parts in their associated relationship. The body member of the valve is provided with a tapered valve seat, and at one side of the body member there is an inlet port 32, and at the opposite side there is a discharge or drain port 33. Also in this side of the body member there is a drain passage 33^1. At the upper or outer end of the valve body, there is a recess portion making provision at the end thereof for stops 34 and 34^1. At the outer end of the body member the same is exteriorly screw threaded, as indicated at

35, and the opposite end of this body member is also exteriorly screw threaded as indicated at 36. In a position, preferably opposite the boss 30, the valve body is provided with a boss 37, which is tapped, and thus adapted to receive a plug 38.

Associated with the valve body, there is a valve stem 39. At the inner end of this valve stem, the surface thereof is tapered to fit the tapered valve seat in the body member. Interiorly the valve stem is provided with a chamber or passage 40. In the wall of the valve stem there is an inlet port 41 adapted to register the inlet port 32, and in an offset position, oppositely disposed to the inlet port 41 there is an outlet or discharge port 42. Interiorly the valve stem is reinforced as indicated at 43 in order to provide for a tap to receive a stop bolt or pin 44. This stop pin 44 is placed in such a position that it may be made to contact with the stop 34 when the inlet port 41 is in register with the inlet port 32 and to contact with the stop 34^1 when the outlet 42 is in register with the outlet port 33.

The inner or lower end of the valve stem is tapped as indicated at 45, and is thus adapted to receive the screw threaded shank 46 of a plug 47, adapted to close the inner end of the chamber in the valve stem, and to co-act with other parts in maintaining the valve stem in its proper position, longitudinally in the body member. As illustrated, these parts include a washer 48 fitting over the plug 47, a washer 49, a screw 50 and a spring washer 51. The washer 48 bears against the inner end of the body member, the washer 49 is adapted to fit over the shank of the screw 50, the spring washer 59, extends between the washers 48 and 49, and therefore, as will be understood, the spring washer tends to yieldingly maintain the valve stem in an operative position in the body member. Connected to the lower or inner end of the body member, is a base cap 52 which encloses the washers 48, 49, the spring washer 51 and the head of the screw 50, and provides a chamber 53, the purposes of which will be hereinafter indicated. This base cap, as illustrated is connected to the body member by being turned down on the screw threaded portion 36 thereof.

At the other end of the body member, there is a gland nut 54, turned down and thus secured in position on the screw threaded portion 35 thereof; this gland nut 54 is provided with an internal flange 55 through which the valve stem 39 passes, and which acts as a bearing to maintain the valve stem in its proper position. The outer portion of the gland nut 54, is exteriorly screw threaded, as indicated at 56, and on this screw threaded end portion of the gland nut there is a packing nut 57, which by means of a gland 58, and a suitable packing 59 a water tight joint is made between the valve stem and the gland nut 54.

The outer end of the valve stem is preferably of reduced diameter and may be flat sided to receive the end of portion 60 of a handle 61, which is secured to the valve stem by means of a washer 62 and a bolt 63 or otherwise. The valve stem may be turned by the handle from one to the other of the limits of the revoluble movement thereof as determined by the pin 44 and the stops 34 and 34^1.

At the outer end, exteriorly of the nut 57, the valve stem is provided with a tapped opening 64. This opening is adapted to receive the end of the discharge pipe 65, and to put the interior thereof into communication with the chamber 40 in the valve stem.

In the form of the invention, as illustrated, the parts are so placed, and the diameter of the discharge pipe 65 is such that it will pass freely through the space between the upper edge or rim of the closet bowl, and the under face of the seat when the same is in position or use. The discharge pipe therefore includes the portion 66, which extends across the top of the rim of the bowl, a portion 67 which extends downwardly into the bowl, and a portion 68 which extends in a direction in a plane substantially parallel to the plane of the portion 66 of the discharge pipe. At its extremity and within the bowl, the discharge pipe is fitted with a nozzle 69.

In the use of the device hereinbefore described, the valve member is so placed that the handle will assume a position in which it is readily available, and in their normal positions, as indicated in Figs. 1 and 2 of the drawing, the upright portion 67 of the discharge pipe lies adjacent the vertical edge of the rim of the bowl, and the nozzle 69, preferably lies against the surface of the bowl and beneath the rim, so that all of the parts are normally in such a position, as not to interfere with the usual and customary use of the toilet. In this position, the inlet port 41 is out of registry with the inlet port 32, so that the supply of water is cut off. Furthermore in this position the discharge port 42 is in registry with the discharge port 33, so that any water which may leak into the chamber 40 will pass through the ports 42 and 33 and by way of the channel 33^1 to the chamber 53 at the lower end of the valve. In order to operate the attachment, the handle is turned in a clockwise direction from the position indicated in full lines Fig. 2 to the dotted line position. In thus turning the handle a corresponding movement is imparted to the valve stem; this movement of the valve stem swings the discharge pipe 65 from its normal position, as indicated in full lines in

Fig. 2 to its operative, or useful position, as shown in dotted lines. This turning movement of the valve stem also causes the inlet port 41 to register with the inlet port 32, and to move the outlet port 42 out of register with the outlet port 33 whereby the chamber 40 in the valve stem is placed in communication with the source of supply and the water flows directly to the discharge pipe 65 and is delivered through the nozzle 69. As hereinbefore stated, the primary object of this attachment is for hygienically cleaning the anus, making it possible to dispense with the unsanitary use of paper for this purpose. It will be evident that the attachment may be used for other similar purposes, for example in taking enemas or in douche baths, or similar purposes, and that these and other uses may be made possible by the employment of simple attachments, such as for example, catheter tubes, adapted for the particular purpose for which at any time it is desired or necessary to employ the apparatus. It will be furthermore understood that the supply pipe may be fitted with a suitable mixing valve, by means of which hot or cold water, or water at any intermediate temperature may be obtained for use with the attachment.

In Figs. 6 and 7 I have illustrated the invention as applied to a faucet valve construction. In this device the valve body is indicated at 70. In a suitable position the valve body is provided with an inlet connection 71. To support the attachment this inlet connection passes through an opening provided therefor in the head 72 of a support bracket 17, which is fixed in position at the end 15^1 of the strap 15, and is secured in place at the rear of the bowl by the bracket bolts in the same manner as that hereinbefore described in connection with the other form of the invention. The valve body is secured in place by a nut 73 turned down against the outer face of the head 72, so as to force the inner face against the shoulder 74 at the base of the inlet connection 71. A supply pipe 75 leading from any suitable source of supply extends into the inlet connection 71, and a water tight joint is made between them by means of a nut 76 and a gasket or packing 77 or otherwise. In this structure, the extension 15^1 and the washers associated therewith are provided with a tongue 78 which acts as a stop, as will be hereinafter described.

Interiorly the body of the valve is provided with a valve seat 79 against which a valve 80 is adapted to bear when the valve is closed. The valve 80 is connected in the usual manner with a drum 81 adapted to turn in the head 82 of the valve body, the drum 81 having a stem 83 passing through a cap nut 84 and adapted to be turned by a disk 85 or otherwise.

The valve body 70 is also provided with a discharge connection 86. This is fitted with a pipe 87 which is maintained in position by a nut and suitable packing rings 89 and 90, whereby the pipe 87 is revoluble within the discharge connection and a water tight joint is made between these parts. The pipe 87 is provided with a head 91 and a handle 92. The head 91 is recessed as indicated at 93, and the recessed portion is so placed that the faces defining the ends of the recess, act as stops by coming into contact with the tongue 78. The pipe 87 leads to a chamber 94 in the head 91, and the head 91 is provided with an opening 95 adapted to receive the end of the discharge pipe 96.

In the use of the device, shown in Figs. 6 and 7, the valve 80 is normally closed and the handle 92 in the position in which the discharge pipe 96 lies adjacent the back of the bowl and preferably with the nozzle end thereof beneath the rim of the bowl. In this position the parts of the attachment do not interfere in any way, with the usual and normal use of the toilet. It will be apparent, however, that by swinging the handle 92 from the full line position, as shown in Fig. 7 to the dotted line position, the discharge pipe will have imparted thereto a corresponding swinging movement, so as to assume a position as shown in dotted lines in which the nozzle end of the discharge pipe will be in position for use, irrespective of what the particular use may be; then, as will be equally apparent, the disk 85 may be turned and the valve 80 opened to make communication between the inlet pipe 75 and its source of supply, and the pipe 87 and thence to the discharge pipe 96.

It will be understood that the attachments for toilet bowl as hereinbefore described are only illustrative of the invention, inasmuch as various other forms may be employed without departing from the nature and spirit of the invention. While I prefer to mount the discharge pipe so as to swing from a nonuse position to a position for use within the bowl, in some forms of the invention the discharge pipe may be in a fixed position either interiorly of the bowl or lavatory, or so as to deliver a predetermined stream of water at a substantially central position within the toilet bowl or lavatory. It will also be understood that the invention is entirely independent of any source of liquid supply, that is to say: The liquid supply may be taken directly from the usual service pipes, or indirectly from a flush tank or flush valve or other apparatus, and that in any event the temperature of the water supply may be controlled by a suitable mixing valve in the supply pipe or a heater or other apparatus.

It will furthermore be understood that while in the foregoing description I have re-

ferred specifically to the use of water, that the apparatus may be employed for administering other liquids or even fluids for certain purposes for which the attachment may be utilized. Still furthermore it will be understood that toilet bowls and other similar structures may be manufactured to have my improvement directly connected thereto. In such structures a boss may be provided for the attachment of the improvement, and the discharge pipe carried into or through a slot or recess made in the wall or rim of the bowl, for this purpose, or otherwise, as may be required for any particular construction, as shown in Figs. 8 and 9.

As illustrated in Figure 9, the boss to which reference has just been made preferably comprises a wall 97 integral with the wall 98 of the bowl which as is customary is provided with an internal rim or flange 99 at the top thereof. In the wall of the bowl there is an aperture 100 making communication between the interior of the bowl and a pocket 101 formed within the wall 97 comprising the boss.

The fixture parts employed in this structure are located in this pocket 101 and consist of a valve and connections similar to those shown in Figures 6 and 7. In Figures 8 and 9 the valve body is designated by 102. This is provided with an extension 103 adapted to pass through a slot 104 provided in the wall of the boss and to be secured in position by means of a nut 105 or otherwise. A supply pipe 106 is connected to the extension 103 by means of a clamp nut 107 or otherwise. This valve body also includes an extension 108, in this instance leading laterally therefrom and containing the valve structure, the valve stem 109 of which extends through a slot 110 in the wall of the boss and exteriorly thereof is provided with a handle 111 by which the valve is operated to turn on and shut off the supply of water or other liquid employed.

The valve body is also provided with an extension 112 in which the discharge pipe 113 is connected in a manner similar to that shown and described in the form of the invention as shown in Figures 6 and 7. In this instance, however, the discharge pipe 113 extends through the aperture 100 in the wall of the body of the bowl and is turned from its initial or inoperative position to its operative position by means of a handle 114 or otherwise. The aperture 100 in the wall of the bowl extends between the points indicated at 115 and 116 so that when the discharge pipe is in its normal inoperative position the nozzle end thereof lies entirely beneath the rim or flange 99 of the bowl and is adjacent the end 115 of the aperture, whereas in its operative position the discharge pipe 113 assumes a position in which the nozzle end thereof lies approximately in a central position in the bowl and the discharge pipe is then adjacent the end 116 of the slot or aperture 100. In this structure as will be understood, the attachment is neatly housed and is so mounted as to be unseen when in its normal position and also in such a manner that it will in no wise interfere with the normal use of the closet bowl. It will also be understood that the boss may be provided in its lower end thereof with an opening 117 in which a discharge pipe 118 may be fitted and provided with a cap 119 so that any leakage may be drained from the pocket 101, and that in any event, should the leakage become sufficient to reach the height of the opening 100, it will pass by way of the same to the interior of the bowl. Still furthermore, as illustrated, the boss may be provided with a suitable cover 120 by means of which normally the pocket 101 therein and the fittings placed in the pocket are closed.

In the structure shown in Figures 8 and 9, the valve body and the fittings associated therewith are connected to the walls forming the pocket in the bowl. Obviously, however, the valve in this structure may be mounted in a manner equivalent to that shown and described in connection with the other forms of the invention.

I claim as my invention:—

1. In an apparatus of the class described, a closet bowl having a seat attachment flange at the rear thereof, a support member, means for attaching the support member to the seat attachment flange at the rear of the bowl, a valve carried in the said support member, a delivery pipe connected to the said valve to extend into the said bowl to be movable horizontally at the top of the same from a position in which the free end of the delivery pipe lies beneath the rim of the bowl to a position for use in which the free end of the delivery pipe lies approximately centrally of the bowl, and means for moving the delivery pipe from its non-use position to its position for use and vice versa.

2. In an apparatus of the class described, a closet bowl having a seat attachment flange at the rear thereof, a support member, means for attaching the support member to the seat attachment flange at the rear of the bowl, a valve carried in the said support member, a delivery pipe connected to the said valve to extend into the said bowl to be movable horizontally at the top of the same from a position in which the free end of the delivery pipe lies beneath the rim of the bowl to a position for use in which the free end of the delivery pipe lies approximately centrally of the bowl, means for moving the delivery pipe from its non-use position to its position for use and vice versa, and means for determining the extent of the movement of the said delivery pipe.

3. In an apparatus of the class described, a closet bowl, a seat therefor, a support member, a fluid supply device carried by the support member, a delivery pipe connected to the fluid supply device and adapted to be moved into and out of operative position in the bowl, and means for simultaneously connecting the support member and the seat to the said bowl.

4. In an apparatus of the class described, a closet bowl having a seat attachment flange therefor, a support member, means for attaching the support member to the seat attachment flange of the bowl, a fluid supply device carried by the support member, a delivery pipe connected to the said fluid supply member, and means for actuating the said delivery pipe to move the same to and from an inoperative position in which the end of the delivery pipe lies beneath the rim of the bowl and an operative position in which the end of the delivery pipe assumes a position substantially centrally of the bowl.

5. In an apparatus of the class described, a closet bowl having a seat attachment flange thereon, a closet seat, a support member, means for connecting the support member and the closet seat to the seat attachment flange of the bowl, a valve carried by the support member, a delivery pipe connected to the valve to extend into the bowl, and means for actuating the said delivery pipe to move the same to and from a non-use position in which the end of the delivery pipe lies beneath the rim of the bowl and a position for use in which the end of the delivery pipe lies in a substantially central position relatively to the bowl and in a plane immediately beneath the rim of the bowl.

6. In an apparatus of the class described, a closet bowl having a seat attachment flange thereon, a closet seat, a support member, means for connecting the support member and the closet seat to the seat attachment flange of the bowl, a valve carried by the support member, a delivery pipe connected to the said valve to extend into the bowl and to be movable horizontally at the top of the bowl from a position in which the free end of the delivery pipe lies beneath the rim of the bowl to a position for use in which the free end of the delivery pipe lies approximately centrally of the bowl and in a plane immediately below the rim thereof, and means for moving the delivery pipe from its non-use to its position for use and vice versa.

7. In an apparatus of the class described, a closet bowl having a seat attachment flange thereon, a closet seat, a support member, means for connecting the support member and the closet seat to the seat attachment flange of the bowl, a valve carried by the support member, a delivery pipe connected to the said valve to extend into the bowl and to be movable horizontally at the top of the bowl from a position in which the free end of the delivery pipe lies beneath the rim of the bowl to a position for use in which the free end of the delivery pipe lies approximately centrally of the bowl and in a plane immediately below the rim thereof, means for moving the delivery pipe from its non-use to its position for use and vice versa, and means for determining the extent of the movement of the delivery pipe.

Signed by me this 20th day of August, 1925.

CESARE C. CAMPUS.