J. A. MANAHAN.

BIDET.

APPLICATION FILED APR. 12, 1915.

1,187,759.

Patented June 20, 1916.

2 SHEETS—SHEET 1.

Fig. 1,

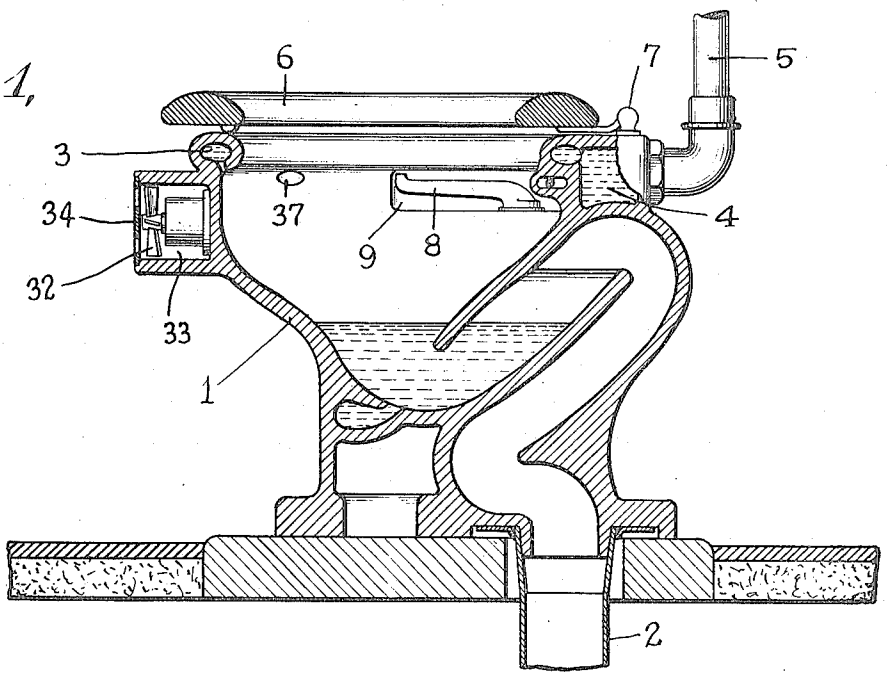


Fig. 2,

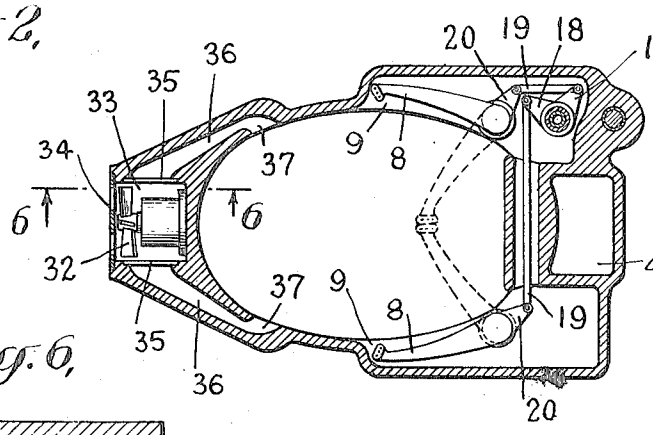


Fig. 3,

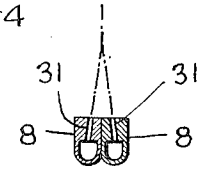


Fig. 6,

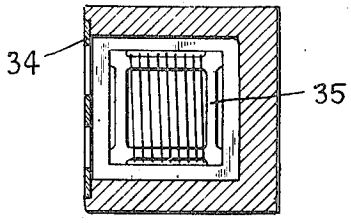
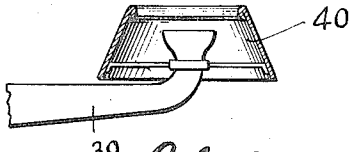


Fig 7,



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2 SHEETS—SHEET 2.

Fig. 3.

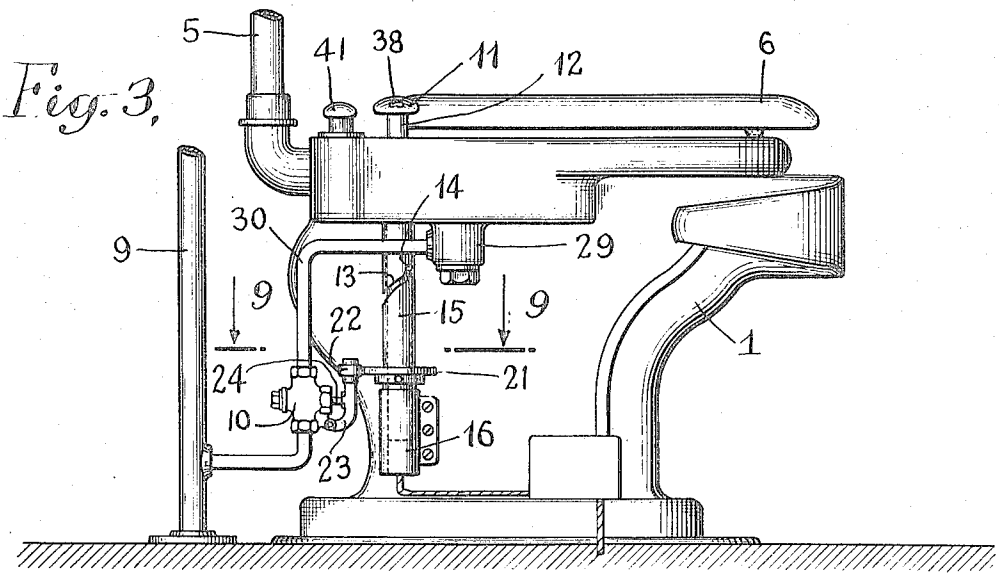


Fig. 4.

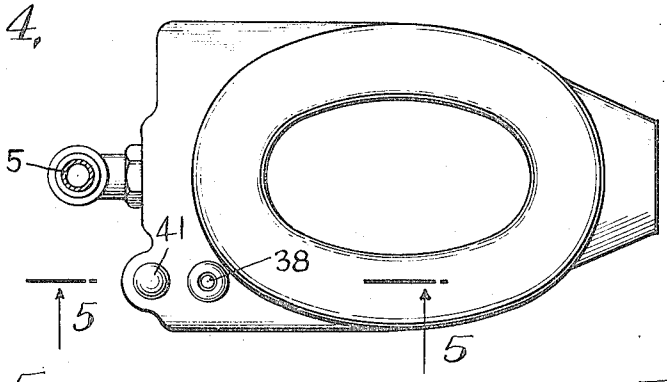


Fig. 5.

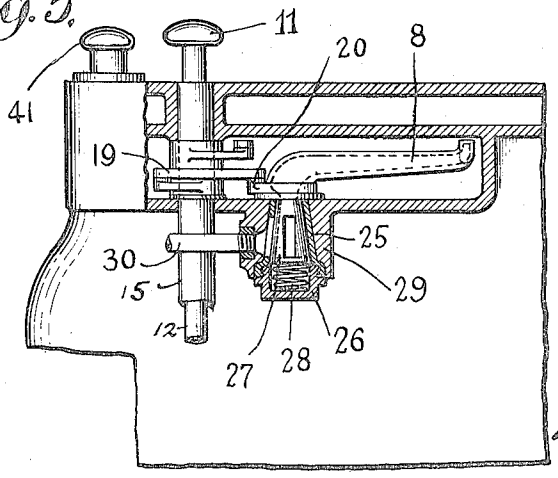
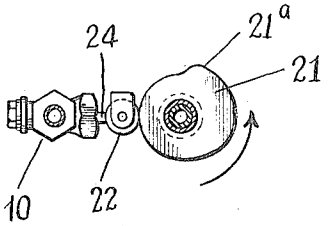


Fig. 9.



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BIDET.

1,187,759. Specification of Letters Patent. Patented June 20, 1916.

Application filed April 12, 1915. Serial No. 20,800.

To all whom it may concern:

Be it known that I, JOHN A. MANAHAN, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bidets, of which the following is a specification.

My present invention relates to a bidet, having numerous advantages, only a few of which need be indicated here. In the first place, by its use, a really clean, sanitary condition is obtained, not secured by the mere use of paper, as ordinarily employed. Next, the necessity of the use of paper is eliminated, thereby eliminating all stoppages of plumbing arising from this source. Further, it eliminates a difficult sewage problem of most cities, towns and the like as to how to dispose of the immense accumulations of paper arising from this source; and this problem is all the more serious because it has been found to be impracticable, either to burn these paper accumulations or to disintegrate them chemically.

In the drawings, which illustrate one of the embodiments my apparatus may take, Figure 1 is a vertical mid-sectional view of said apparatus; Fig. 2 is a horizontal section partly in plan through the apparatus of Fig. 1; Fig. 3 is a side elevation of the reverse side of same; Fig. 4 is a plan view of same; Fig. 5 is an enlarged vertical section partly in elevation on the line 5—5 in Fig. 4, looking in direction of arrows; Fig. 6 is a section on the line 6—6 in Fig. 2; Fig. 7 is an enlarged detail of a modification; Fig. 8 is a vertical cross-section of the delivery ends of the two spraying arms when located together in spraying position; and Fig. 9 is a horizontal section partly in plan in the line 9—9 in Fig. 3 looking in the direction of the arrows.

I will now describe my process in its preferred form and the specific apparatus illustrated by the drawings.

Instead of using paper after defecation, the person will move a spraying tube into position and deliver a cleansing stream of water of suitable temperature against the anal portion of the body. This accomplished, the person will then turn on a stream of suitably temperatured air against this portion of the body to dry it.

Referring now to the drawings, 1 is a water closet bowl connected as usually by a trap with the sewage pipe 2. The bowl may have the usual hollow flushing rim 3 connected by the chamber 4 with the water service pipe 5.

6 is the usual seat hinged to the bowl at 7.

8—8 are a pair of horizontally swinging spraying arms or tubes normally located in recesses 9 in the sides of the bowl, as shown by the full lines in Fig. 2, but which are adapted to be moved into the dotted position wherein their delivery ends are positioned to deliver a cleansing stream of water against the anal portion of the person using the water closet. This water comes from a service pipe 9 by way of a valve 10 (Fig. 3). The water supply with which the pipe 9 connects may be maintained at body heat or warmer, if desired.

11 is a plunger at the rear of the bowl on the right side which, when pressed downwardly, swings the arms 8 as aforesaid outwardly into spraying position, and after that turns on the water through them by opening the valve 10.

The mechanical details by which the above is accomplished are as follows: The plunger consists of the knob 11 on the end of a sleeve 12 (Fig. 3) having a pin 14 projecting into an inclined cam-slot 13 in an outer sleeve 15 supported for rotation in the bearing 16. On the other hand, it is arranged that the first named sleeve 12 can move vertically, but not rotatably. The net result is that when the knob 11 is pressed downwardly, its pin 14 acts on the side of the cam-slot 13 to cause its sleeve 15 to rotate. A spring not shown elevates the sleeve 12 when the knob 11 is released and rotates the sleeve 15 in the reverse direction. Now this rotatable sleeve 15 has crank-arms 18—18 (Fig. 2) connected by links 19 to other crank-arms 20 on the spraying arms 8, the arrangement being such that when the knob 11 is depressed, the spraying arms are simultaneously swung outwardly to the dotted positions in Fig. 2 and vice-versa returned to their full line positions when the knob is released. 21 is a cam-disk (Figs. 3 and 9) on this same rotatable sleeve 15 bearing against a roller 22 on the pivoted operating handle 23 of the valve stem 24 of the

valve 10. A spring in the valve keeps the roller in contact with the cam; and when it bears against the low part of the cam, as in Figs. 3 and 9, the valve is closed so that no water is delivered from the service pipe 9 to the spraying arms 8. This is the normal condition existing when the knob 11 is elevated. On the other hand, when it is depressed, the sleeve 15 being rotated, as aforesaid, carries the cam 21 with it until its high position 21^a bears against the roller 22 and valve-operating handle, whereby the valve is opened and water admitted to the spring arms 8 which meanwhile it will be remembered have been swung into their dotted line spraying position shown in Fig. 2.

The pivotal mounting for each spraying arm is best shown in Fig. 5 and comprises a stationary conical sleeve 25 in a similar hole in a boss 29 on the bowl, said sleeve having a screw cap 26. 27 is a hollow conical plug within the sleeve 25, said plug being attached to spraying arm 8 so as to swivel therewith. Compression spring 28 keeps the plug seated in the sleeve. The pipe 30 (Figs. 3 and 5) delivers the cleansing water controlled by the valve 10 through an opening in the wall of the aforesaid stationary sleeve 25 to the interior of the hollow plug 27, and thence to the spraying arm 8, from which it is delivered in fine jets or streams from the plurality of small orifices 31. Fig. 8 shows how these orifices of the two arms incline toward each other so as to concentrate the streams on the anal surface of the person sitting on the bowl.

Describing now the drying part of apparatus, this consists of an electric motor driven intake-fan 32 located in a recess 33 in the front of the bowl which when operated, sucks in the air from the room through the apertured plate 34 and delivers it through the electric heater 35 to the passages 36 in the sides of the bowl whence said air is delivered by the openings 37, in a heated stream which quickly dries the person using the bowl.

38 is the button of an electric switch located in a depression in the top of the plunger 11 suitably wired to the fan, heater and electricity supply-mains, so that as long as said button is depressed, it energizes said fan and heater, but vice-versa when released, deënergizes them.

The entire procedure, in short, is as follows: The person remaining seated after defecation, will depress the plunger 11 with the right hand, which will position and operate the cleansing jets. After holding down this plunger for a sufficient interval to effect the cleansing, it will be released and will be automatically returned into its normal elevated position and at the same time will cut off the jets and return the arms 8 to their recesses in the sides of the bowl. The person will then press the electric switch button in the top of the plunger and will hold it until dried by the current of heated air delivered by the electric fan.

Fig. 7 shows a modification wherein there is only one spraying arm 39, having a hollow shield 40 (shown in mid-vertical section) mounted in surrounding position on its delivery end. The top of this shield is supposed to be positioned by the arm 39 when in use, close up to the anal portion of the person, so that the rebound of the jets from the body will be contained within the sides of the shield and thereby prevented from spreading outwardly.

41 is the plunger (Figs. 3 and 4) which permits the bowl to be flushed in the ordinary way.

What I claim is:

1. The combination with a swinging tubular jet projecting arm, of a supply conduit communicating therewith, a valve in the conduit, an actuating plunger and a rotatable sleeve, one having a spiral portion and the other having an engagement with the spiral portion, a crank connection between the sleeve and the arm, and a cam carried by the sleeve for actuating the valve.

2. The combination with a closet seat, of means for projecting a cleansing jet of liquid in one direction against the occupant of the seat, and means other than said projecting means for directing a drying jet in another direction against the occupant of the seat.

3. The combination with a closet bowl having a fan chamber in its front portion and oppositely extending conduits leading from the chamber and opening into opposite portions of the bowl, of an electric fan located in the chamber, an electric heater extending across each conduit, and common means for simultaneously operating the fan and heater.

4. The combination with a closet seat, of means for delivering a cleansing fluid against the occupant thereof, said means including an actuating plunger, electrical means for delivering a drying fluid against the occupant, and a controlling device for the electrical means including a switch button mounted on the plunger.

5. The combination with a closet bowl having an air delivery conduit in its walls opening into the bowl, of a fan, means for controlling the operation of the fan, a swinging liquid delivery nozzle independent of the air delivery conduit and pivoted in the bowl, said nozzle being movable to and from an operative position in said bowl, a liquid supply device connected to the noz-

zle, a valve controlling the liquid supply, an actuating plunger, means operated by the plunger for swinging the nozzle, and means also actuated by said plunger for operating the valve.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this tenth day of April, 1915.

JOHN A. MANAHAN.

Witnesses:
AMBROSE G. TODD,
E. W. SCHERR, Jr.