Dec. 20, 1927. 1,653,242

W. B. UNDERWOOD

BEDPAN CLEANER AND STERILIZER

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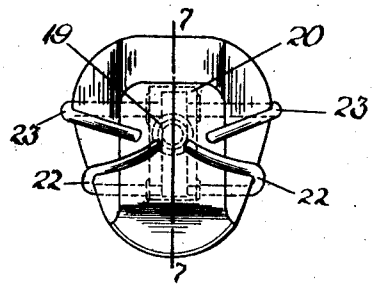


Fig. 6

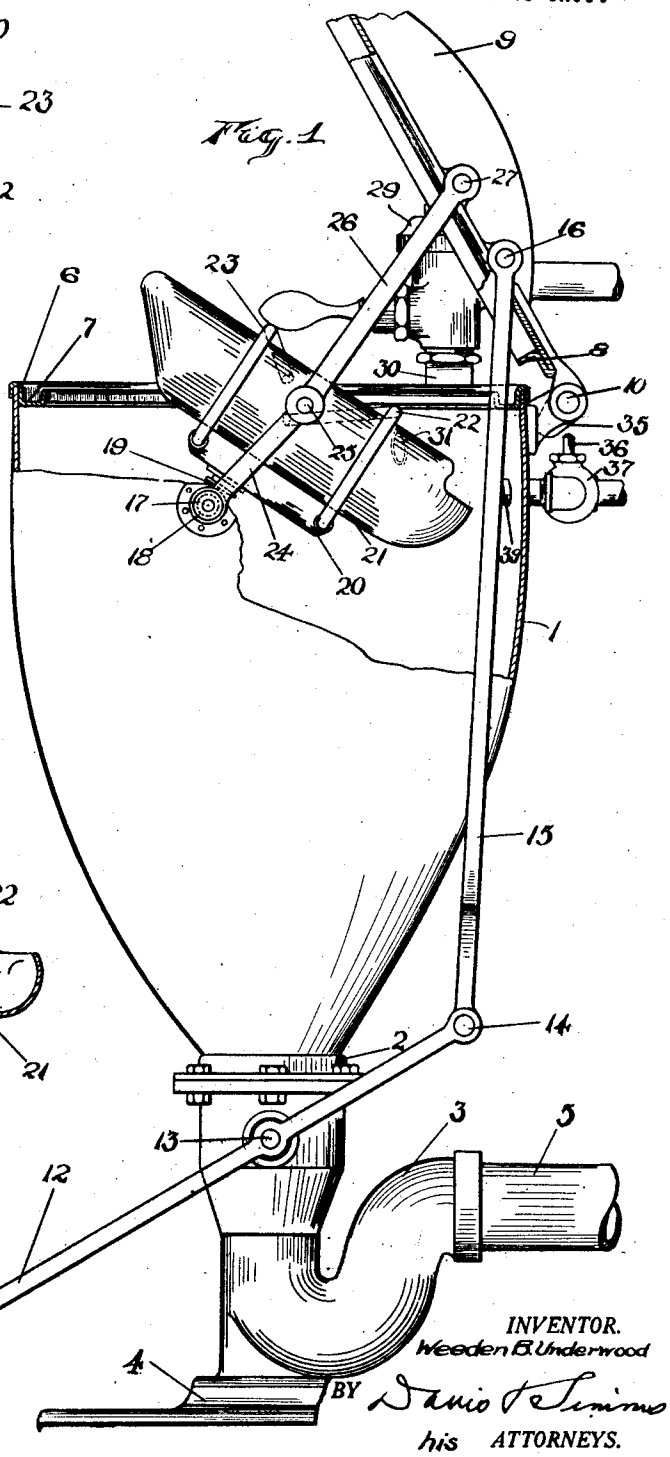


Fig. 1

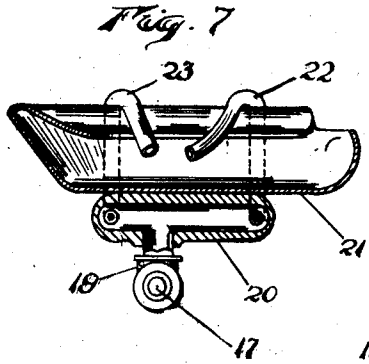


Fig. 7

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Fig. 2

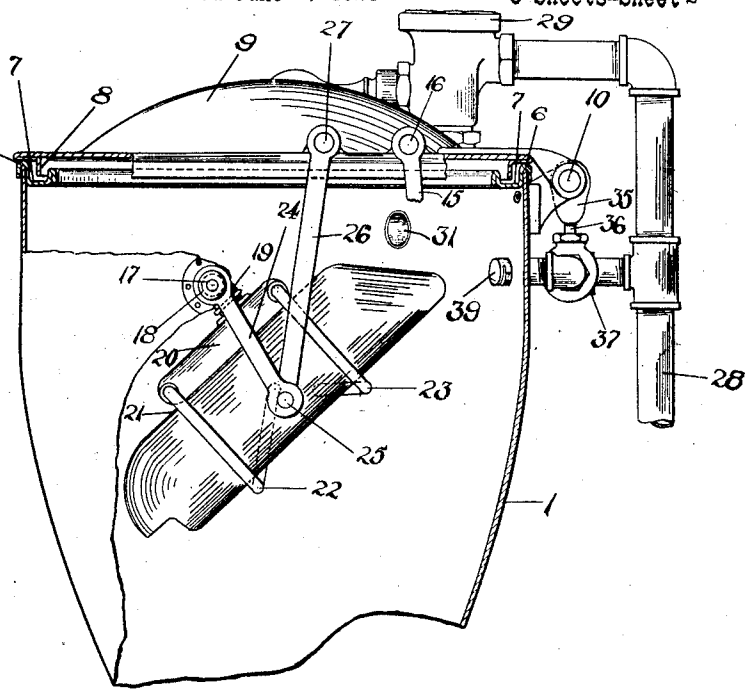
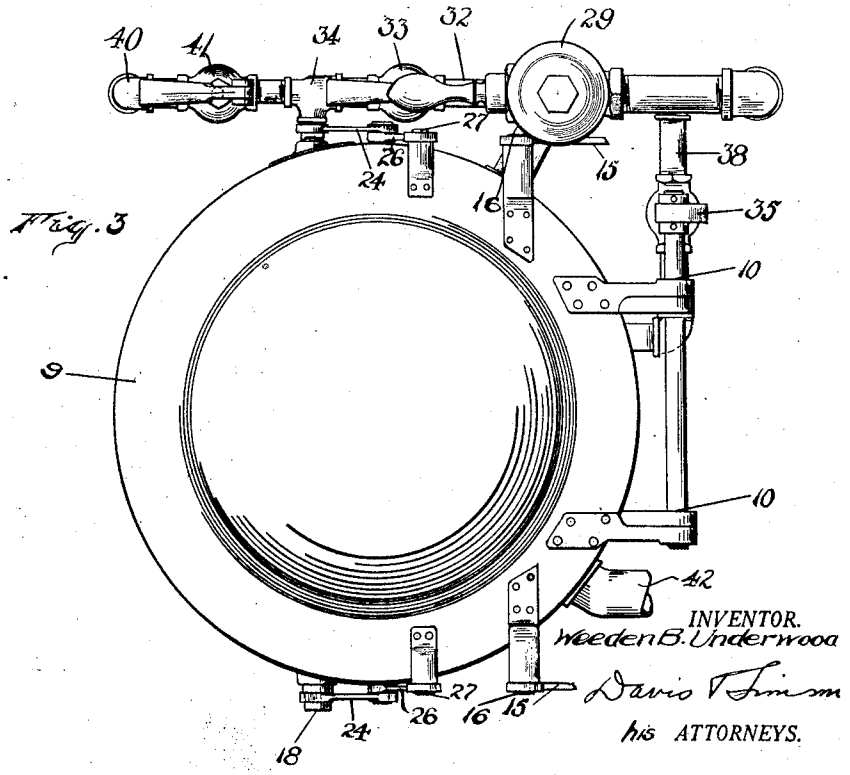


Fig. 3



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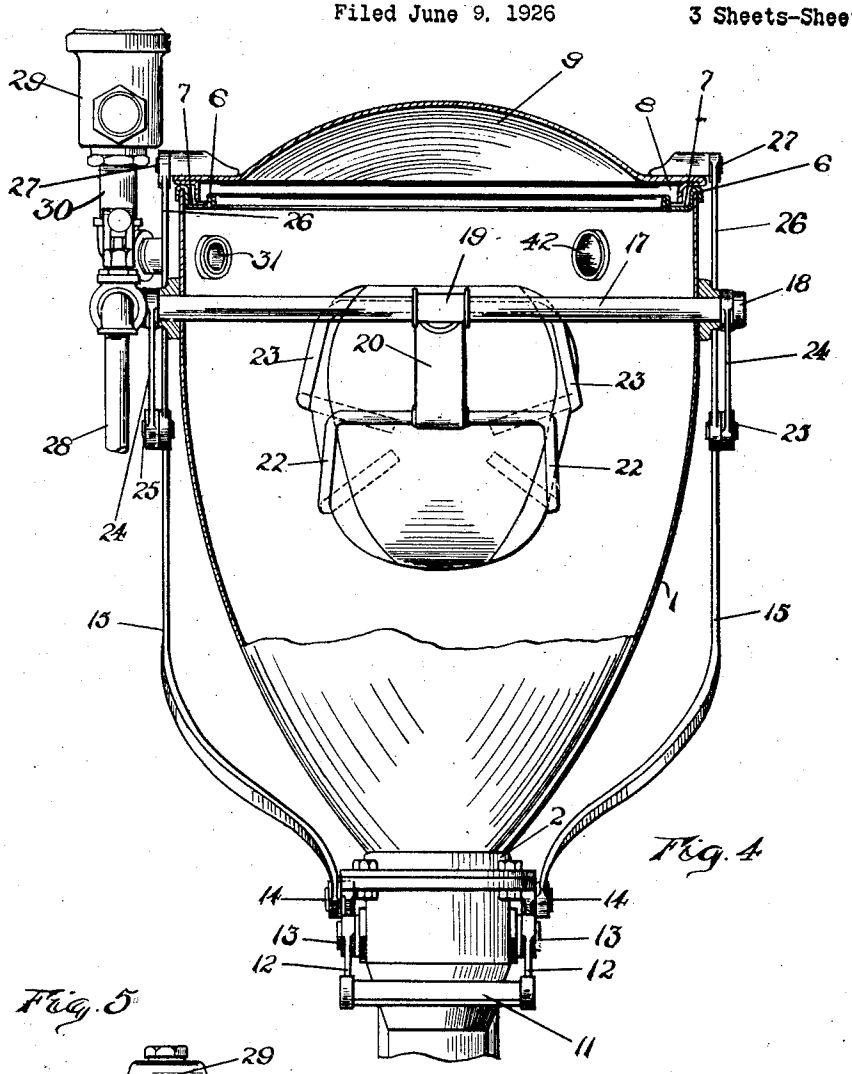
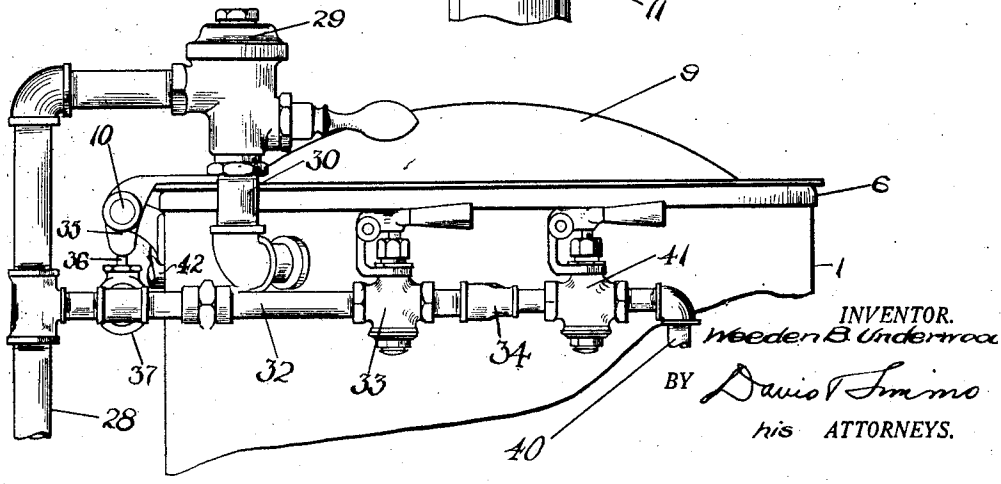


Fig. 4

Fig. 5



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UNITED STATES PATENT OFFICE.

WEEDEN B. UNDERWOOD, OF ROCHESTER, NEW YORK, ASSIGNOR TO WILMOT CASTLE COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

BEDPAN CLEANER AND STERILIZER.

Application filed June 9, 1926. Serial No. 114,793.

The present invention relates to a bed pan cleaner and sterilizer and an object of the invention is to provide a construction having a bed pan support which occupies a position where the bed pan may be fitted thereto when the cover is opened and which automatically moves to discharge the contents of the bed pan with the closing of the container. Another object of the invention is to provide a construction in which provision is made for supplying water or steam over the entire inner surfaces of the bed pan. Another object of the invention is to provide a movable bed pan support equipped with nozzles for supplying a fluid to the interior of the pan supported on the support.

To these and other ends, the invention consists of certain parts and combinations of parts, all of which will be hereinafter described: the novel features being pointed out in the appended claims.

In the drawings:

Fig. 1 shows the apparatus in elevation with parts in section, the cover of the apparatus being open and in the position it occupies when receiving a bed pan;

Fig. 2 is a similar view showing the cover closed and the bed pan discharging its contents;

Fig. 3 is a plan view of the apparatus;

Fig. 4 is a front view of the apparatus showing the cover closed;

Fig. 5 is a detail view of the valve arrangement for supplying the water and steam;

Fig. 6 is a detail view showing the manner in which the pan is held on the support; and

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

In the illustrated embodiment of the invention, 1 indicates the washing and sterilizing tank or recovering container which has its lower end bolted at 2 to a goose neck seal 3 mounted on a base 4 and connected with an outlet 5. A ring 6 is secured to the upper edge of the combined washer and sterilizer container 1 and has an annular depression 7 formed therein for the reception of an annular flange 8 of a cover 9 which is hinged at 10 to the rear side of the washer and sterilizer container 1.

The cover may be controlled in any suitable manner but, in this instance, a treadle 11 is provided on a lever 12 pivoted at 13 on opposite sides of the goose neck seal 3, the two arms of this lever 12 being extended in rear of the pivot and being pivotally connected at 14 with two links 15 which in turn are pivoted at 16 to opposite sides of the cover. It is apparent that the depression of the treadle 11 acts upwardly on the links 15 and swings the cover 9 to an open position on its hinge 10. The weight of the cover is sufficient to return the cover 9 to its closed position where the flange 8 thereof will lie in a sealing groove 7 which may contain water or other liquid.

A bed pan support is provided which is movable to a position where it may readily receive the bed pan without spilling the contents, and which is movable to a position where the entire contents may be discharged into the combined sterilizer and washing container 1. This support comprises preferably a rock shaft 17, in this instance, in the form of a tube which is journalled at opposite ends in the opposite sides of the sterilizer and washing container 1. This tube projects from both sides of the chamber and has one end closed by a plug 18, its opposite end being rotatably connected to a suitable fluid supply as will be hereinafter set forth. The tube 17 has a T coupling 19 therein which connects with a hollow support 20 on which the bottom of the bed pan 21 may rest. In order to hold the bed pan on this support, retaining arms are provided. In this instance, four of such arms are provided, all of them in the form of hooks. The arms 22 which are nearest the rear portion of the support when the latter is in the position shown in Fig. 1 are closer together than the hooked arms so that the bed pan which is narrower at its discharge end may be readily placed on the support 20 with the discharge end toward the rear of the receptacle 1. All of the arms are preferably in the form of tubes or nozzles, the arms 22 being deflected one toward the other downwardly and away from the discharge of the bed pan, and the arms 23 being deflected one toward the other downwardly toward the discharge portion of the bed pan. As a consequence fluid issuing from the four nozzles is effectively distributed over the entire surface of the bed pan.

Any suitable means may be employed for moving the bed pan support from its upper receiving position to its lower discharge position. In this instance, the hollow rock shaft 17 has two arms 24 rigidly secured to opposite ends thereof and pivotally connected at 25 to two links 26 which in turn are pivoted at 27 to opposite sides of the cover 9. It is apparent that, with this arrangement, when the cover 9 is opened, the bed pan support will be swung upwardly to an inclined receiving position as illustrated in Fig. 1, and, when the cover 9 is closed, the bed pan support will be swung downwardly to a discharging position, as shown in Fig. 2.

Provision is made for delivering flushing water to the apparatus. This flushing water is received by way of a supply pipe 28 which leads to a hand pressure valve 29 that connects by a piping 30 with a discharge opening 31 arranged above the bed pan support when the latter is in its lower position. This bed pan support delivers a large stream of water over the exterior of the bed pan while the latter is in inverted position, completely flooding all exterior parts thereof. The piping 28 also connects with a piping 32 with a hand valve 33 connecting with a coupling member 34 in which the hollow shaft 17 turns and to which it has a connection which permits water from the piping 32 to pass to the hollow rock shaft 17 and from the latter to the arms 22 and 23, so that the interior of the receptacle may be flushed at will when the latter is in its lowered position. It is desirable also to flush the walls of the receptacle 1 with the opening of the cover 9 and to this end the rock shaft 10 of the cover has a cam 35 which cooperates with a plunger 36 of a valve 37 in a piping 38 which leads to a spray nozzle 39 delivering a wide flat stream in immediate proximity to the interior face of the receptacle 1, the valve being opened when the cam 35 moves off the plunger 36 and closed with the depression of the plunger.

In the use of the invention, the container being opened as shown in Fig. 1, a bed pan is placed on the support 20 and the cover is lowered. With the lowering of the cover the bed pan assumes its position as shown in Fig. 2 and discharges its contents. At the same time, the valve 37 is closed. Then the valve 33 is manually operated to discharge water through the nozzles 22 and 23 into the bed pan. thus effectively washing the interior of the latter. After the interior is washed, the valve 29 is operated to draw a large stream through the opening 37 on the exterior of the receptacle, whereby both the interior and the exterior of the bed pan are thoroughly flushed. After this flushing, the bed pan is sterilized, this being effected through a steam supply 40 which connects with the manually operated valve 41 in turn connecting with the couplings 34 so as to supply steam by way of the coupling 34 to the nozzle arms 22 and 23. This steam not only plays directly on the interior of the bed pan but the entire container 1 becomes charged with steam so that an effective sterilization of the pan is secured. With the opening of the cover, the interior of the container is flushed by the nozzle 39. The steam and odors pass out of the container through a vent 42 at the rear of the container leading to any suitable vent pipe.

It is apparent that the invention may also be employed for cleaning and sterilizing urinal receptacles, a hooked nozzle 22 being inserted in such receptacle and serving to hold the latter thereon during cleaning and sterilizing.

What I claim as my invention and desire to secure by Letters Patent is:

1. The combination with a receiving container and a movable cover therefor, of a support for a bed pan or the like having means for detachably holding a bed pan and movable about a fixed axis on the container from an upper receiving position to a lower discharging position, and mechanism for opening and closing the cover having connection with the movable support for moving the latter to a receiving position when the cover is open and for moving it to a discharging position when the cover is closed.

2. The combination with a receiving container and a hinged cover therefor, of a swinging support for a bed pan or the like, an arm connected to said support and arranged on the exterior of the container, and a link pivoted to said arm and to said cover so as to cause the support to move to receiving position when the cover is moved to open position and to move the support to discharging position when the cover is moved to closed position.

3. The combination with a receiving container, of a movable support for a bed pan or the like pivotally mounted in the container, nozzles carried by said support for discharging into said bed pan or the like and means for supplying a fluid to said nozzles.

4. The combination with a receiving container, of a rock shaft mounted in the container having a passageway therethrough connected with a suitable fluid supply, and a support for bed pans or the like mounted on said rock shaft and provided with nozzles communicating with said rock shaft for discharging into the bed pan or the like.

5. The combination with a receiving container, of a movable hollow support for a bed pan or the like arranged within the container and having hollow arms communicating with said support for engaging a bed

pan or the like, said arms being provided with nozzles discharging into said bed pan or the like, and means for supplying the fluid to said support from the exterior of the container.

6. The combination with a receiving container, of a hollow rock shaft connecting with a suitable fluid supply, a hollow support for a bed pan or the like connected with said rock shaft and communicating therewith, and hollow arms communicating with said hollow support and having nozzles for discharging into the bed pan or the like.

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