

[54] **APPARATUS FOR CLEANING BEDPANS**

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**FOREIGN PATENTS OR APPLICATIONS**

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[30] **Foreign Application Priority Data**

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[51] Int. Cl. ....B08b 3/02, B08b 9/08

[58] Field of Search .....134/143, 152, 171, 57 DL, 58 R, 134/58 DL, 94, 95, 99

[56] **References Cited**

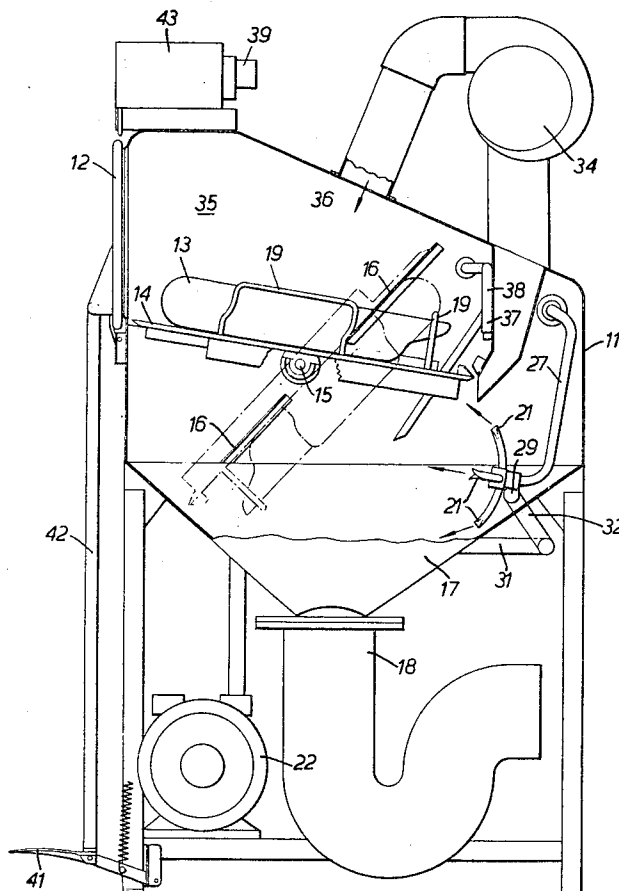
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[57] **ABSTRACT**

This invention is an automatic cleaning unit for emptying, cleaning and sterilizing bedpans in hospitals. The nurse puts the full bedpan straight into the cabinet and an automatic cleaning cycle is initiated by the closing of the door, which first turns the pan over so that the contents falls into a collecting chamber from which it runs to sewage. Then cold water is sprayed on to the surfaces of the pan and it is turned upright and sterilizing fluid is directed at its surfaces for sterilizing it and drying it.

**3 Claims, 2 Drawing Figures**



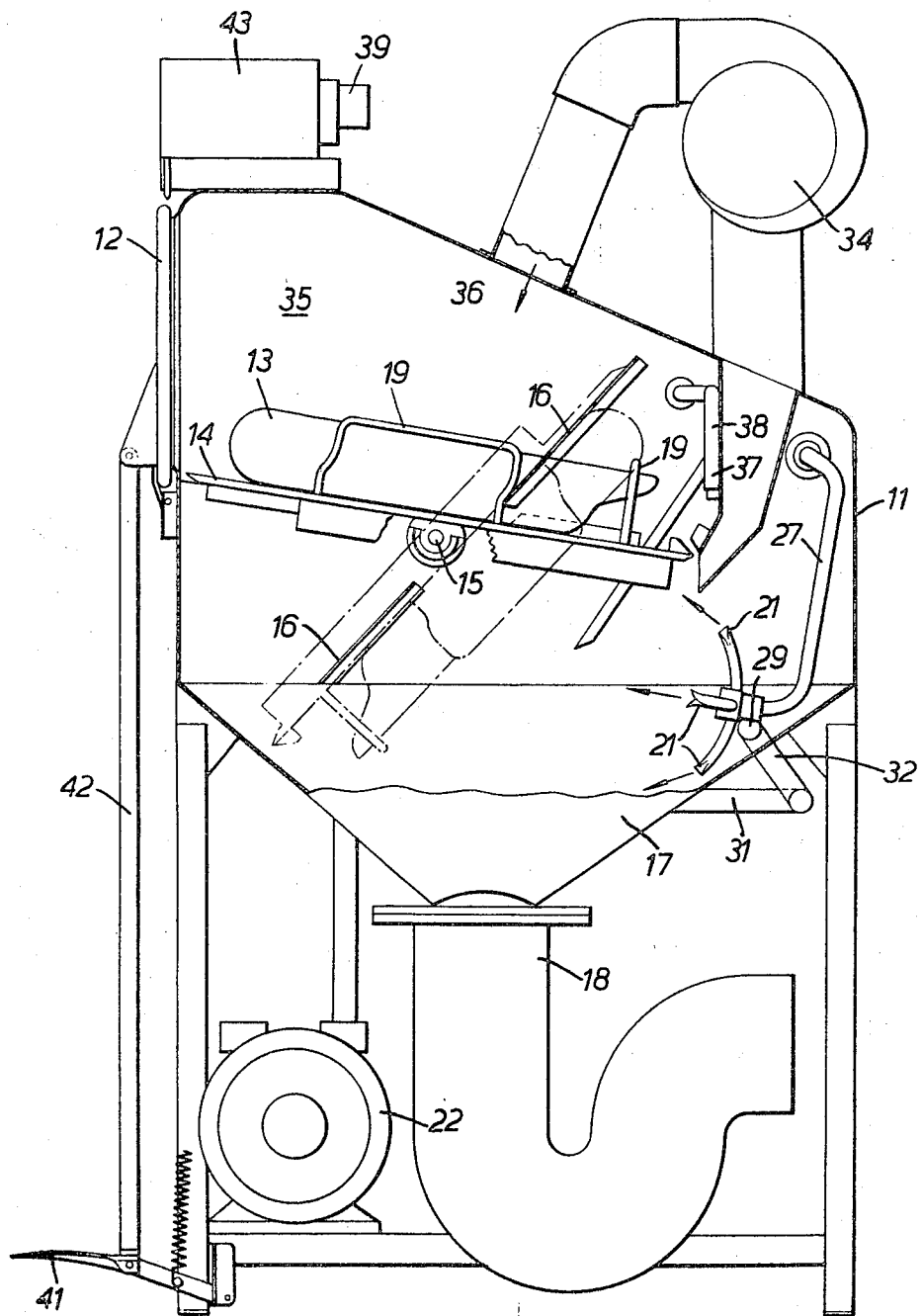


FIG. 1.

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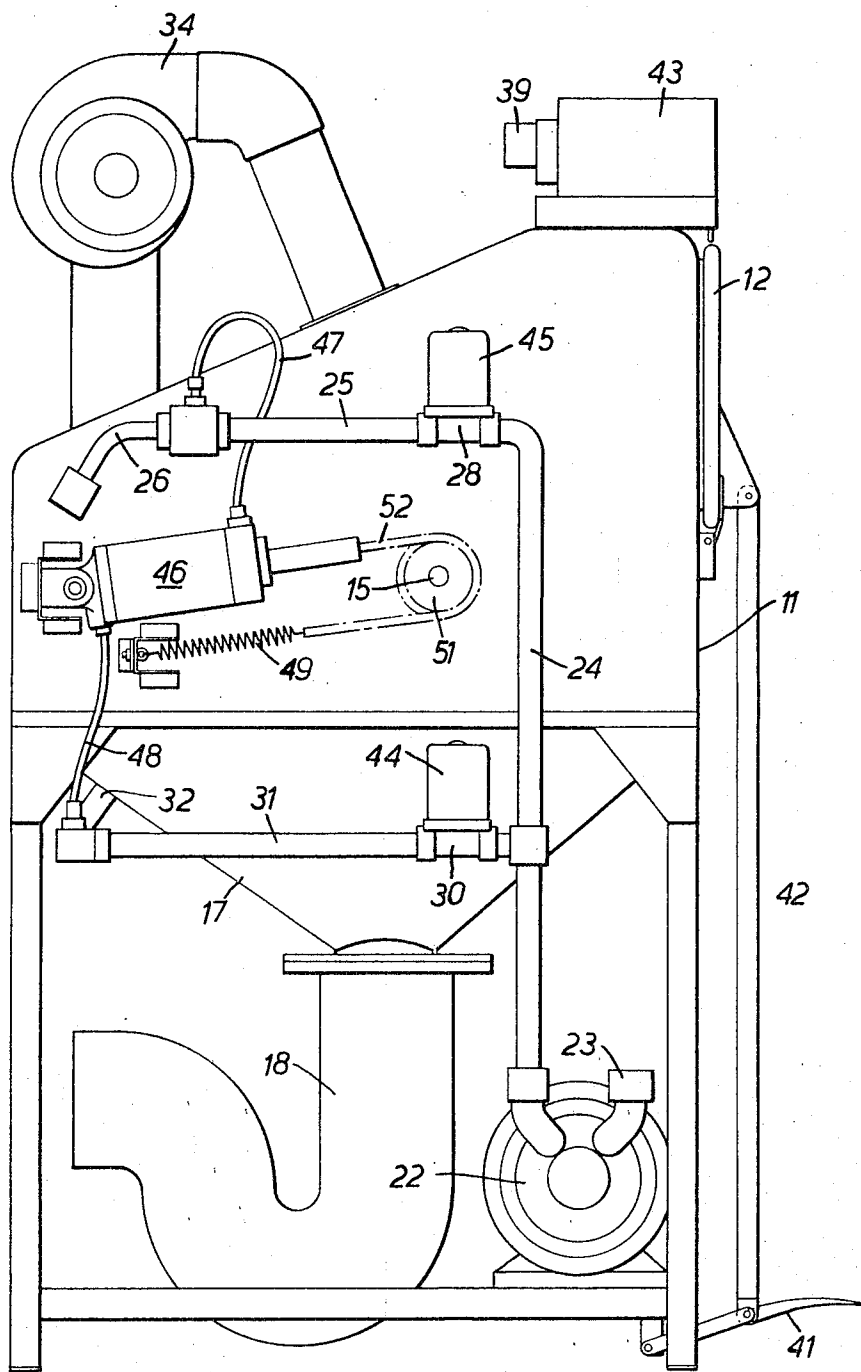


FIG. 2.

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APPARATUS FOR CLEANING BEDPANS

This invention relates to the cleaning of bedpans or other receptacles, for example those used in hospitals and other places in which clean and sterile containers are used and have to be reused.

According to the present invention apparatus for emptying and cleaning receptacles includes a casing, a holder in the casing for a receptacle and mounted in a manner to be at least partly inverted to empty the receptacle into a collecting chamber in the casing and a fluid jet system arranged to thereafter direct cleaning fluid at the receptacle.

The receptacle may therefore be placed within the casing and emptied, cleaned and sterilized in a single operation without the need for any intermediate handling.

Preferably the apparatus includes a pivoted tray inside the receptacle on which the receptacle may be placed, the tray being arranged to be tilted in order to empty the container.

The cycle of operations, e.g., emptying, cleaning and sterilizing, may be controlled automatically from outside the apparatus and the different stages in the cycle may be timed so that the stages in the cycle may take different times depending on the type of container which is being used.

The invention may be carried into practice in various ways and one embodiment will be described by way of example with reference to the accompanying drawings, of which;

FIG. 1 is an elevation of apparatus embodying the invention showing the interior; and

FIG. 2 is an elevation of the outside from the opposite side.

The bedpan cleaning unit is in a cabinet 11 having a front door 12 near the top through which the bedpan 13 can be placed on a tray 14. The tray is arranged to pivot about a horizontal axis 15 through an angle of about 130° to a position shown in chain lines in FIG. 1 against stops 16. In this position the contents of the bedpan can fall out into a lower chamber 17 from which it flows through a bend pipe 18 to the sewage system. Clips 19 on the tray 14 prevent the bedpan 13 from falling from the tray when it is inverted.

In the inverted position any residue in the bedpan can be swilled out and the surfaces of the bedpan and the inner surfaces of the lower chamber 17 can be swilled with cold water directed from nozzles 21. These nozzles are supplied with water from a pump 22 drawing water from the water mains at 23 and supplying water through pipes 24, 25, 26 and 27 by way of an electrically operated valve 28. A further nozzle 29 is supplied with water from the pump by way of pipes 31 and a similar valve 30.

After this operation the tray 14 with the bedpan is turned back to its upwardly open position and then sterilizing fluid is pumped from the blower 34 into the upper chamber 35 at 36 from which it is directed on to the bedpan to sterilize it, dry it and warm it. Further sterilizing fluid can come through the jet 37 by way of the pipe 38.

After a time interval determined by a clock 39, the blower is switched off and a lamp is operated to indicate that the bedpan is cleaned and sterilized and ready for use. The operator can then open the door 12 by use of a foot pedal 41 and a conventional link 42 and remove the bedpan for further use

leaving the upper compartment of the tray ready for cleaning another bedpan.

The various operations are automatically initiated in sequence in a cleaning cycle which is started when the door 12 is closed. This operates a switch in a bank of switches and relays indicated generally at 43 which controls in an appropriate sequence operation, the pump 22, controls 44 and 45 for the water valves 28 and 30, and the blower 34. The relay bank 43 includes the clock 39 which determines the time interval between successive stages in the cycle of operation.

Inversion of the tray 14 is by means of a hydraulic actuator 46 which can be operated in one direction or the other by means of water from lines 47 and 48 tapped off the pipes 25 and 31. Operation of this actuator turns a gearwheel 51 on a shaft on the axis 15 by means of a chain 52 pulling against a spring 49. Thus, as the water starts to flow into the lower chamber 17, the gear 51 is turned to invert the tray while the bedpan remains in the lower compartment being swilled with cold water for a time determined by the clock 39, after which the actuator 46 returns the tray to the initial position and the water supply to the nozzles 21 and 29 is cutoff. Then the next contact closes to energize the blower 34 for a preset time determined by the clock 39 and when this has expired the blower is turned off and the indicating lamp is operated.

It will be clear that such apparatus is easy to use and enables laborious and unpleasant work in hospitals to be avoided and also reduces the danger of cross infection from different patients using the same bedpan in succession.

Although in the embodiment described the tray 14 holds a single bedpan it would also be possible to empty and sterilize a number of bedpans in one operating cycle.

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

1. Apparatus for emptying and cleaning bedpans including a casing, a tray, bearings mounting the tray for rotation about a horizontal axis through more than 90° between its upright and its inverted positions, clips on said tray for retaining the bedpan thereon in all positions of said tray, a motor operatively connected with said tray for rotating same, a collecting chamber in said casing for receiving the contents of the bedpan when inverted with said tray, a fluid jet system disposed in alignment with said tray when inverted to direct cleaning fluid at the bedpan in its inverted position, a fluid system disposed above the tray in its upright position for directing a drying fluid at the bedpan in its upright position, and cyclic means controlling a cleaning cycle and operatively interconnected with said motor, said fluid jet system and said fluid system for automatically inverting said tray and bedpan, cleaning the bedpan with the cleaning fluid, returning said tray and bedpan to the upright position and drying the bedpan with the drying fluid.

2. Apparatus as claimed in claim 1 including a door in the casing and means responsive to closing of the door to start the cycle.

3. Apparatus as claimed in claim 1 including a pipe for leading the emptied contents of the receptacle from the collecting chamber to a sewage system.

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