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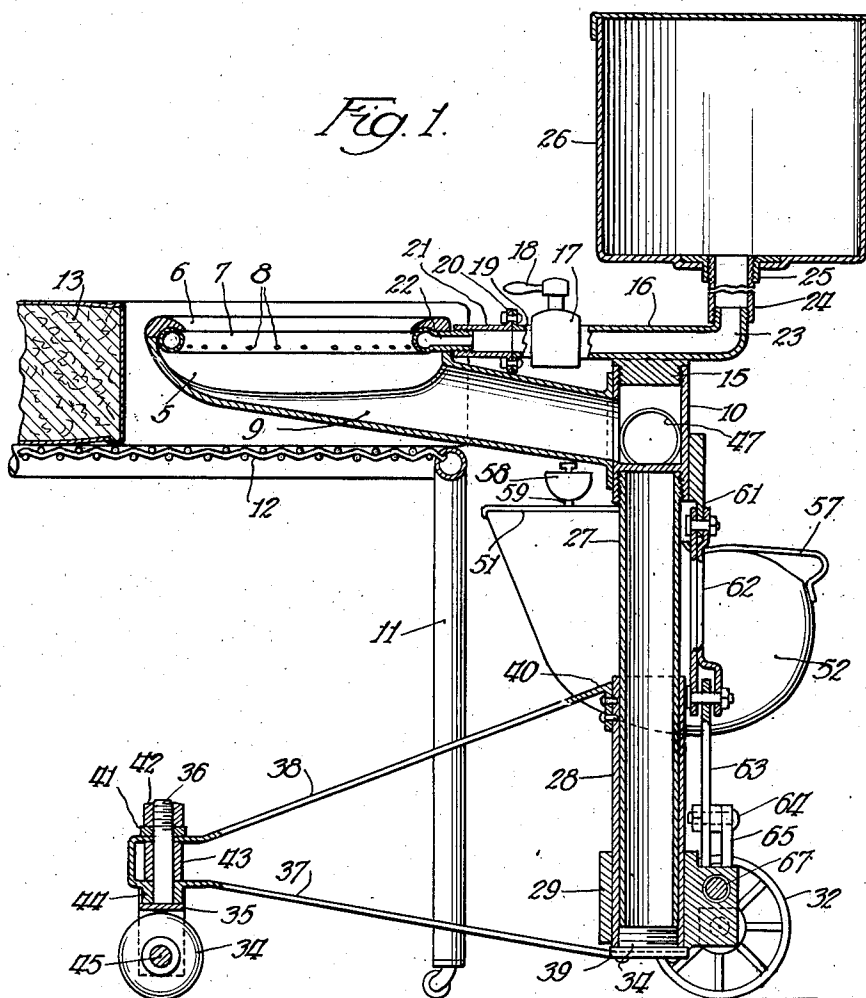
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2,394,091

HOSPITAL EQUIPMENT

Filed Sept. 11, 1944

2 Sheets-Sheet 1



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Fig. 2.

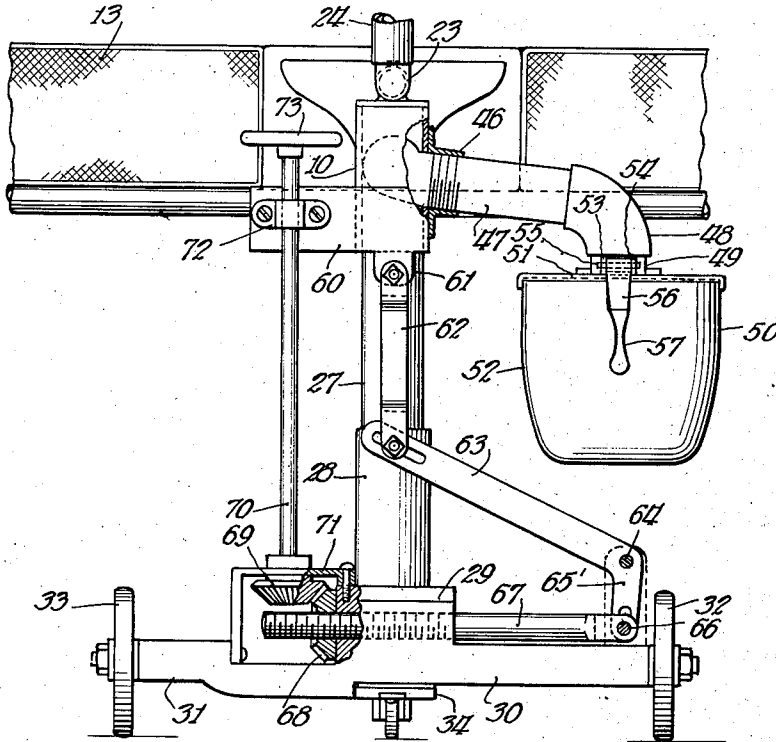
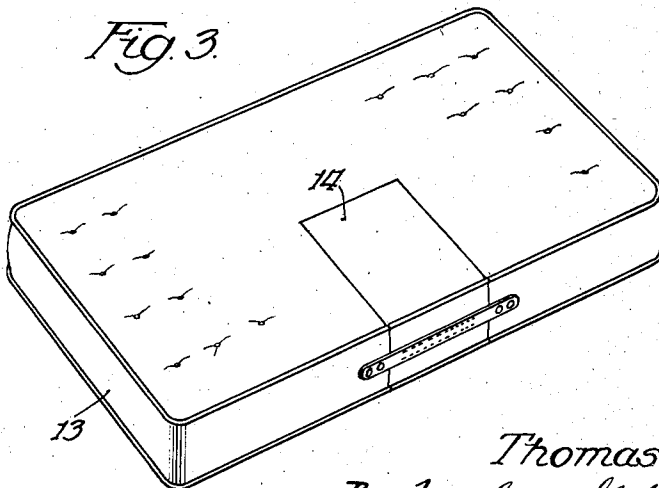


Fig. 3.



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UNITED STATES PATENT OFFICE

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HOSPITAL EQUIPMENT

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6 Claims. (Cl. 4-112)

The present invention relates to hospital equipment and more particularly to means for replacing the ordinary bed pan or urinal now commonly used. It is a well known fact that the ordinary bed pan is a very difficult device for use with patients who are badly incapacitated. This is partly due to the fact that it is difficult to place the bed pan under the patient and also very uncomfortable to the patient. According to the present invention much of the difficulty of placing the bed pan under the patient and more of the discomfort are eliminated.

My invention contemplates the provision of a novel device which cooperates with a bed mattress having a removable section so as to eliminate the necessity of lifting the patient onto the bed pan and enables the attendant to flush away the discharge from the patient to a convenient storage receptacle and thereby eliminate the foul odors without disturbing the patient. Replacement of the removable section of the mattress can also be accomplished with a minimum disturbance of the patient.

The novel features and advantages of the invention will appear more fully from the following description and the accompanying drawings wherein a preferred form of the invention is shown. It should be understood however, that the drawings and description are illustrative only and are not to be taken as limiting the invention except insofar as it is limited by the claims.

In the drawings:

Fig. 1 is a longitudinal sectional view taken through the apparatus embodying my invention;

Fig. 2 is an end view looking at the right hand end of the apparatus shown in Fig. 1 with certain parts broken away to show the interior construction; and

Fig. 3 is a perspective view of a mattress with a removable portion such as is necessary in connection with the apparatus.

Referring now to the drawings, the apparatus embodies a flush bowl 5 which is provided with a seat portion 6 beneath which a ring 7 is secured around the inner rim of the bowl. This ring is provided with a multiplicity of small outlets 8 adapted to discharge water into the bowl 5 so as to flush and wash away any solid matter. The flush bowl has a tubular sloping outlet 9 that leads to a discharge box 10 which is suitably mounted in a manner hereinafter described so that it may be vertically adjusted to accommodate the flush bowl to beds of different heights.

As shown in the drawings, a bed frame 11 is provided with suitable springs 12 on which a mattress 13 is mounted. The mattress is of the standard construction except for the fact that it has

a rectangular section 14 that is removable. This rectangular section is of sufficient width crosswise of the mattress to enable the patient to lie directly over the removable section. The width of the removable section is such as to accommodate the bowl 5 with a small clearance at each side.

The discharge box 10 has a cap 15 screw threaded into the top thereof. This cap serves as a mounting for a pipe section 16 which is welded to the cap. The pipe section is connected to a hand valve 17 that has an operating handle 18. The pipe section 19 connects the valve 17 by a flanged joint 20 to an inlet pipe 21 leading to a nipple 22 that connects with the ring 7. The pipe section 16 also has an upturned end 23 to which a stand pipe 24 is secured. The stand pipe 24 is threaded into a bottom coupling 25 of the water tank 26. The water tank is of sufficient size to carry adequate supply of water for flushing the bowl 5. It is indeed capable of flushing the bowl more than once so that the apparatus can be used a plurality of times before it becomes necessary to take it to a central disposal place.

In order to support the discharge box and the parts carried thereby for vertical adjustment the box is mounted on a pipe section 27 that is vertically slidable in a tubular support 28. The tubular support 28 is carried by a framework which includes a block 29 having oppositely directed axle portions 30 and 31 thereon. These axle portions mount wheels 32 and 33. The lower end of the tubular support 28 is closed by a cap 34 which threads into the end of the member and serves as a stop to eliminate the downward movement of the pipe section 27.

A third wheel 34 is mounted by a yoke 35 having a shaft 36 welded thereto. The shaft 36 extends upwardly through the lower and the upper portions 37 and 38 of a bracket, one end 39 of which is fastened to the cap 34 by screws and the other end 40 of which is fastened to the tubular support 28 by screws. The shaft 36 is secured by a nut 41 and a lock nut 42 so that it can rotate in the bracket. Suitable spacers 43 and 44 are provided for the shaft 36. A shaft 45 rotatably mounts the wheel 34 in the bracket 35.

The box 10 has an outlet nipple 46 mounted thereon at right angles to the tubular drain 9. A pipe 47 is threaded into the nipple 46 and carries an elbow 48 which in turn connects to a pipe section 49 that carries a storage receptacle 50. The storage receptacle comprises a cover section 51 which is welded securely to the pipe section 49 and a body section 52 which is hinged to the cover section and the pipe section. The hinge construction comprises two ears 53 and 54 on the

cover section, a hinge pin 55, and a bar 56 which is welded to the body section 52 and bent around the hinge pin 55. The body section 52 is shaped as shown so that it can be tilted about the hinge and emptied readily into a disposal place. It has a handle 57 thereon. The cover section 51 preferably carries a deodorant container 58 that has an outlet 59 through the cover. Any suitable means may be provided in the container regulating the discharge of the deodorant.

Any desirable lifting mechanism may be provided for raising and lowering the pipe section 27. The mechanism shown includes a bracket 60 on the box 10 having a depending ear 61. A link 62 is pivoted to the ear 61 and at its lower end is also pivoted by a pin and slot connection to a lever arm 63. The lever arm 63 is pivoted at 64 to a bracket 65 that is mounted on the axle portion 30. The lower end 65' of the lever arm has a slot to receive a pin 66 which connects the arm to one end of a shaft 67. The shaft 67 extends through a portion of the block 29 which serves as a guide and is threaded through a beveled gear 68. The beveled gear 68 meshes with a second beveled gear 69. The gear 69 has a shaft 70 fixed thereto. The shaft is journaled in a bracket 71 that is mounted on the shaft portion 31 and also on the block 29. The shaft 70 extends upwardly past the bracket 60 and is secured thereon by a bearing block 72. A hand wheel 73 is fixed on the end of the shaft 70 for rotating it. It is believed to be evident that rotation of the shaft 70 and the gears 68 and 69 will effect a raising or lowering of the box 10 and the pipe section 27.

As stated hereinbefore the raising and lowering mechanism shown is merely one of various types that may be employed. A standard jack, either hydraulic or mechanical, may be adapted for this purpose.

The operation of the device is believed to be clear from the foregoing description. It provides a simple portable bed pan unit that eliminates much of the difficulty now encountered in the use of hospital bed pans. It is adaptable to a wide variety of bed heights and requires only that suitable provision be made in the mattress to receive the bowl. Mattresses with removable sections are known in the art and therefore present no problem.

From the foregoing description it is believed that the nature and advantages of the present invention will be readily apparent to those skilled in this art.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a flush bowl, means to deliver flushing water to said bowl, a storage receptacle below the level of the flush bowl, and conduit means for carrying the flushed materials from the flush bowl to the storage receptacle, said bowl, said flushing means, receptacle and conduit means being movably mounted on said support whereby they may be adjusted with respect to the bed.

2. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a flush bowl, means to deliver flushing water to said bowl, a storage receptacle below the level of the flush bowl, and

conduit means for carrying the flushed materials from the flush bowl to the storage receptacle, said bowl, said flushing means, receptacle and conduit means being secured to a single part of said support, and means on said support for moving said part up and down.

3. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a flush bowl, means to deliver flushing water to said bowl, a storage receptacle below the level of the flush bowl, and conduit means for carrying the flushed materials from the flush bowl to the storage receptacle, said bowl, said flushing means, receptacle and conduit means being secured to a single part of said support, and means on said support for moving said part up and down, said storage receptacle being hinged to swing between a storage position and an emptying position.

4. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a tubular guide mounted on the support, a stem mounted for vertical movement in said guide, a hollow head supported by said stem, a flush bowl having a laterally and downwardly extending rigid support and drain conduit emptying into said head and supported thereby, a storage receptacle, an upwardly and laterally extending rigid conduit leading from the top cover of the receptacle to the head and fixed to the head of the cover whereby to support the receptacle from the head, a flush tank mounted on said head above the level of the flush bowl and having a valved outlet to the bowl, and means to move the stem up and down in said guide.

5. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a tubular guide mounted on the support, a stem mounted for vertical movement in said guide, a hollow head supported by said stem, a flush bowl having a laterally and downwardly extending rigid support and drain conduit emptying into said head and supported thereby, a storage receptacle, an upwardly and laterally extending rigid conduit leading from the top cover of the receptacle to the head and fixed to the head and the cover whereby to support the receptacle from the head, the body of said receptacle being hinged to said cover to swing downwardly away from the cover for opening the receptacle and emptying its contents, a flush tank mounted on said head above the level of the flush bowl and having a valved outlet to the bowl, and means to move the stem up and down in said guide.

6. A portable device of the character described adapted for use with mattresses having a removable section at one side thereof, said device comprising a wheeled support, a flush bowl, means to deliver flushing water to said bowl, a storage receptacle below the level of the flush bowl, and conduit means for carrying the flushed materials from the flush bowl to the storage receptacle, said conduit means comprising pipes supporting the flush bowl and the storage receptacle, the receptacle having a cover fixed to the pipe and the body portion being hinged to said cover to swing downwardly away from the cover for discharging its contents.