Oct. 27, 1953 J. W. OSBON, JR 2,656,549

MATTRESS WITH TOILET ATTACHMENT

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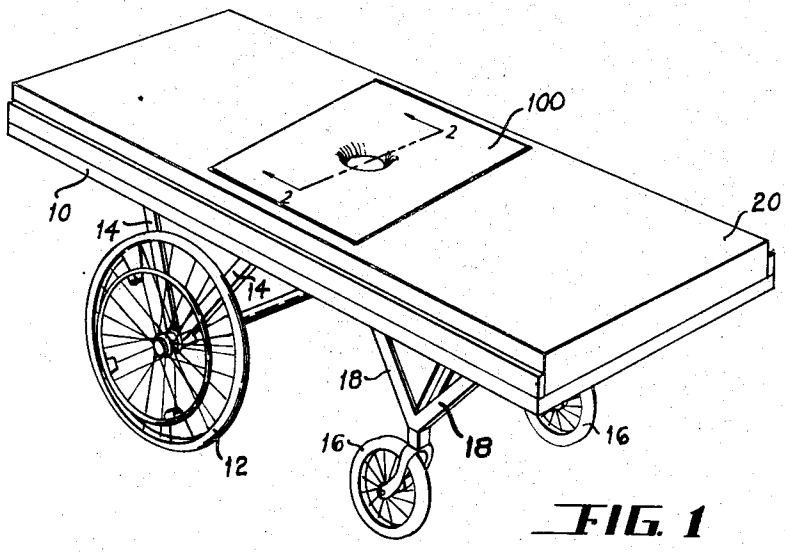

FIG. 1

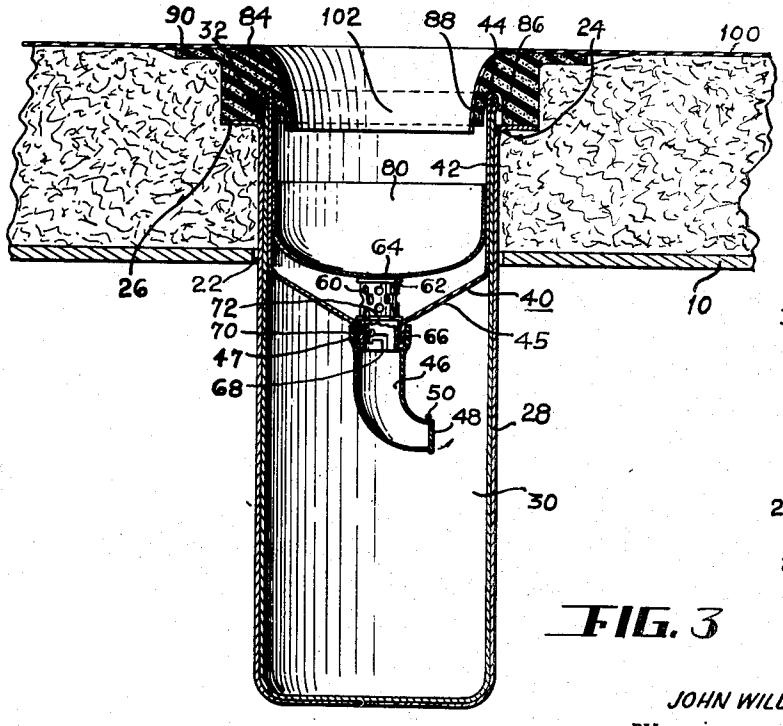

FIG. 2

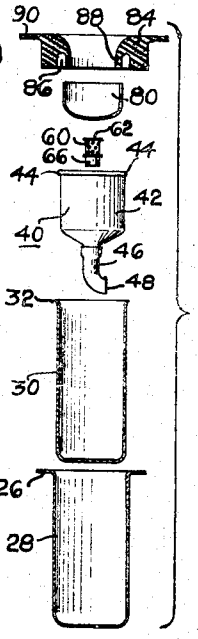

FIG. 3

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MATTRESS WITH TOILET ATTACHMENT

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11 Claims. (Cl. 5—91)

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This invention relates to an attachment for an invalid bed and more particularly to an attachment for the comfort of the occupant.

The invalid bed disclosed herein is similar to the invalid bed disclosed in my copending application for United States Letters Patent Serial No. 16,472, filed March 23, 1948.

An object of this invention is to provide an attachment for a bed, such that a vessel located below the top level of the mattress is accessible through an aperture in the mattress.

Another object of this invention is to provide a plurality of vessels nestled together and accessible from the top of the mattress through an aperture in such a manner that one or more of the vessels may be removed for emptying and sterilization as may be required.

Another object of this invention is to provide a vessel nested in an aperture in the mattress, the top of the vessel being located below the top surface of the mattress, means being provided for covering the margin of the mattress, said means being provided with an annular flange projecting into the vessel so as to protect the mattress.

Other objects and advantages reside in the construction of parts, the combination thereof and the mode of operation, as will become more apparent from the following description.

Referring to the drawings,

Figure 1 is a perspective view of an invalid bed provided with an attachment.

Figure 2 is a cross sectional view taken substantially on the line 2—2 of Figure 1. Figure 2 is drawn to a larger scale than the other figures.

Figure 3 shows a view of the vessel and the parts associated therewith removed from the bed.

The invalid bed includes a bed portion 10 having the major portion supported upon wheels 12 through brackets 14. One end of the bed is also supported upon caster wheels 16 through brackets 18. This permits the occupant of the bed to move the bed from place to place by manipulating the wheels 12, as more fully described in my copending application Serial No. 16,472. The bed portion 10 supports a mattress 20 that may consist of sponge rubber or similar material. The mattress 20 is provided with an aperture registering with an aperture 22 in the bed portion 10. The aperture in the mattress is subtended by an annular shoulder 24. The shoulder 24 of the mattress supports an annular radially disposed flange 26 integral with a receptacle 28 projecting downwardly from the bed. The receptacle 28 provides a support for a telescopically disposed vessel or urinal 30. The vessel 30, adapted to receive and hold liquids, is provided with a flared marginal portion 32 projecting above the receptacle 28.

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For the purpose of sanitation and for the purpose of eliminating foul odors, a strainer assembly has been used. This strainer assembly includes a funnel member 40 having a cylindrical portion 42 terminating in a beaded portion 44 resting upon the flared marginal portion 32 of the vessel 30. Member 40 is provided with a conical portion 45, terminating in a downwardly projecting tubular or annular flange portion 47. An elbow member 46, press-fitted over the flange 47, projects downwardly from the underside of the conical portion 45 and is provided with an opening extending at right angles to the opening in the conical portion 45. Member 46 may be made from vulcanized rubber, or molded from plastic or made from metal. A lid 48, pivotally mounted at 50, opens up whenever any liquid flows through elbow member 46 and automatically closes when the liquid ceases to flow, so as to provide a valve for closing the opening.

A strainer member 60 that is provided with a solid cap 62 and a plurality of radially disposed openings 64 is seated in the aperture in conical portion 45. In order to prevent the accidental removal of strainer member 60, a downwardly directed flange portion 66 is provided with a bayonet jointed slot 68, seated over a pin 70 fixedly mounted in position. Thus, it is impossible to remove member 60 without first releasing the bayonet joint that is formed by the pin 70 in cooperation with the slot 68. The strainer member 60 is provided with a rib 72 that limits the downward movement of the strainer.

In order to prevent solid matter from entering the vessel 30, a filter member 80, which may be made from filter paper, is loosely positioned in member 40, so as to permit only liquid to flow downwardly into the vessel 30. Solid matter may be removed by merely removing the filter member 80.

An annular ring member or collar 84, made of rubber or any other suitable resilient material, overlies the top portion of the receptacle 28, the vessel 30 and the margin of member 40. This ring member 84 is provided with an annular channel or recess 86, into which the upper portion of the vessel 30 and the upper portion of the strainer assembly 40 project. One side of

the channel forms an overhanging lip or annular flange 88, projecting downwardly into the cylindrical portion 42 of the strainer assembly. Ring member 84 is also provided with a radially disposed flange 90 overlying a margin of the mattress adjacent the aperture therein.

A rubber sheet 100, provided with an aperture and a downwardly directed flange portion 102, extends over an adjacent portion of the mattress, so as to prevent the mattress from becoming soiled.

The assembly of the receptacle, the vessel and the parts associated therewith may be mounted in the mattress so as to be available for use by the invalid at all times. If, for example, the patient or invalid is left alone for a long period of time, as when another member or members of the family are at work during the day time, the patient or invalid may then wait upon himself. After a deposit of solid matter, the filter member 80 may be removed without removing the other parts of the attachment.

At intervals it will be necessary to remove the vessel 30, so as to empty it and sterilize it, and at times it may be desirable to remove the entire assembly. First, the rubber sheet 100 is removed, then the rubber ring member 84 is removed. Thereupon, member 40 and the parts associated therewith may be removed either with or without the vessel 30. Finally, the receptacle 28 may be removed, if this is found necessary. Upon the removal of member 40 and the parts associated therewith from the vessel 30, strainer member 60 may be removed by releasing the bayonet joint, so as to permit the individual parts to be cleansed and sterilized. The receptacle 28 may be reinserted, this followed by the vessel 30 being pushed into place and then the strainer assembly together with filter member 80 may be mounted in position. When these have been properly positioned, the rubber ring member or collar 84 is inserted into place and finally, the rubber sheet is replaced.

The assembly being located below the level of the top of the mattress, the mattress being preferably made from sponge rubber, it can readily be seen that the parts may be left in place without discomfort to the patient or invalid. Furthermore, the assembly is sanitary and at the same time always ready for use by the patient or invalid without the attention of an attendant.

The sheet, not shown, is preferably provided with an opening mounted in registry with the opening in member 100. By this arrangement the patient is self-sufficient for long periods of time.

Although the preferred embodiment of the device has been described, it will be understood that within the purview of this invention various changes may be made in the form, details, proportion and arrangement of parts, the combination thereof and mode of operation, which generally stated consist in a device capable of carrying out the objects set forth, as disclosed and defined in the appended claims.

Having thus described my invention, I claim:

1. In an invalid bed, the combination including mattress provided with an aperture subtended by an annular shoulder positioned below the top of the mattress, a receptacle having a radially disposed annular flange, said receptacle being positioned in said aperture with the flange resting upon the shoulder, a vessel telescopically mounted within said receptacle, said vessel projecting above the annular flange of the receptacle and terminating below the top surface of the mattress, a strainer assembly mounted in the top of the vessel, and a rubber collar having a radially disposed flange overlying the margin of the mattress surrounding the aperture, said collar having an annular channel in the bottom thereof, the upper margin of the vessel projecting into the channel, one side wall of the channel forming an annular lip overhanging the upper margin of the strainer assembly so as to protect the mattress from being soiled.

2. In an invalid bed, the combination including a mattress provided with an aperture subtended by an annular shoulder positioned below the top of the mattress, a receptacle having a radially disposed annular flange, said receptacle being positioned in said aperture with the flange resting upon the shoulder, a vessel telescopically mounted within said receptacle, said vessel projecting above the annular flange of the receptacle and terminating below the top surface of the mattress, and a strainer assembly mounted in the top of the vessel, said strainer assembly permitting liquids to pass therethrough into the vessel but retaining solid matter within the strainer assembly.

3. In an invalid bed, the combination including a mattress provided with an aperture subtended by an annular shoulder positioned below the top of the mattress, a receptacle, means engaging the shoulder subtending the aperture for supporting the receptacle below the top of the mattress, a vessel mounted within the receptacle, said vessel projecting above the top of the receptacle and terminating below the top surface of the mattress, and a rubber collar having a radially disposed flange overlying the margin of the mattress surrounding the aperture, said collar having an annular recess in the bottom thereof into which recess the upper margin of the vessel projects, one side wall of the recess forming an annular lip projecting into the vessel so as to protect the mattress from being soiled.

4. In an invalid bed, the combination including a mattress provided with an aperture subtended by an annular shoulder positioned below the top of the mattress, a receptacle positioned in said aperture and terminating below the top of the mattress, means for supporting the receptacle, a vessel telescopically mounted within the receptacle, the top margin of the vessel terminating near the top of the receptacle, and a rubber collar provided with a radially disposed annular flange overlying the margin of the mattress adjacent the aperture, said collar having an annular lip-like portion projecting into the opening in the top of the vessel and terminating below the top thereof so as to protect the mattress from being soiled.

5. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the top of the receptacle being supported above the bottom of the mattress and below the top thereof, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel terminating in close proximity to the top of the receptacle, the top of the vessel being located below the top of the mattress, and a resilient collar member having a portion overlying the margin of the mattress adjacent the aperture, said collar member having a downwardly directed lip-like portion positioned within

the top of the vessel so as to protect the mattress from being soiled, said collar member providing a cushion for the occupant of the bed.

6. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, the top of the receptacle being supported above the bottom of the mattress and below the top thereof, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel projecting above the top of the receptacle but being positioned below the top of the mattress, means projecting into the vessel and overlying the adjacent portions of the mattress for protecting the same, and a strainer assembly mounted in the vessel adapted to retain solid matter and permit liquids to flow through the same.

7. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, the top of the receptacle being supported above the bottom of the mattress and below the top thereof, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel projecting above the top of the receptacle but being positioned below the top of the mattress, a strainer assembly mounted in the top of the vessel, said strainer assembly terminating in an L-shaped tubular member, and valve means opening in response to flowing liquid, said valve means being suspended so as to close by gravity.

8. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, the top of the receptacle being supported above the bottom of the mattress and below the top thereof, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel projecting above the top of the receptacle but being positioned below the top of the mattress, a strainer assembly mounted in the top of the vessel adapted to retain solid matter and permit liquids to flow into the vessel, valve means opening in response to the flow of liquid, and cushion means projecting into the top of the strainer assembly and overlying the adjacent portions of the mattress for protecting the same.

9. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in

the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel being positioned below the top of the mattress, means projecting into the vessel and overlying the adjacent portions of the mattress for protecting the same, and a strainer assembly mounted in the vessel adapted to retain solid matter and permit liquids to flow through the same.

10. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel being positioned below the top of the mattress, a strainer assembly mounted in the top of the vessel, said strainer assembly terminating in a L-shaped tubular member, and valve means opening in response to flowing liquid, said valve means being suspended so as to close by gravity.

11. In an invalid bed, the combination including a mattress provided with an aperture, a receptacle, means for supporting the receptacle in the aperture, the bottom of the receptacle being located a substantial distance below the bottom of the mattress, a removably mounted vessel telescopically positioned in the receptacle, the top of the vessel being positioned below the top of the mattress, a strainer assembly mounted in the top of the vessel adapted to retain solid matter and permit liquids to flow into the vessel, valve means opening in response to the flow of liquid, and cushion means projecting into the top of the strainer assembly and overlying the adjacent portions of the mattress for protecting the same.

JOHN WILLIAM OSBON, JR.

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