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BEDPAN FOR CHAIR OR MATTRESS ASSEMBLY

Filed May 25, 1955

2 Sheets-Sheet 1

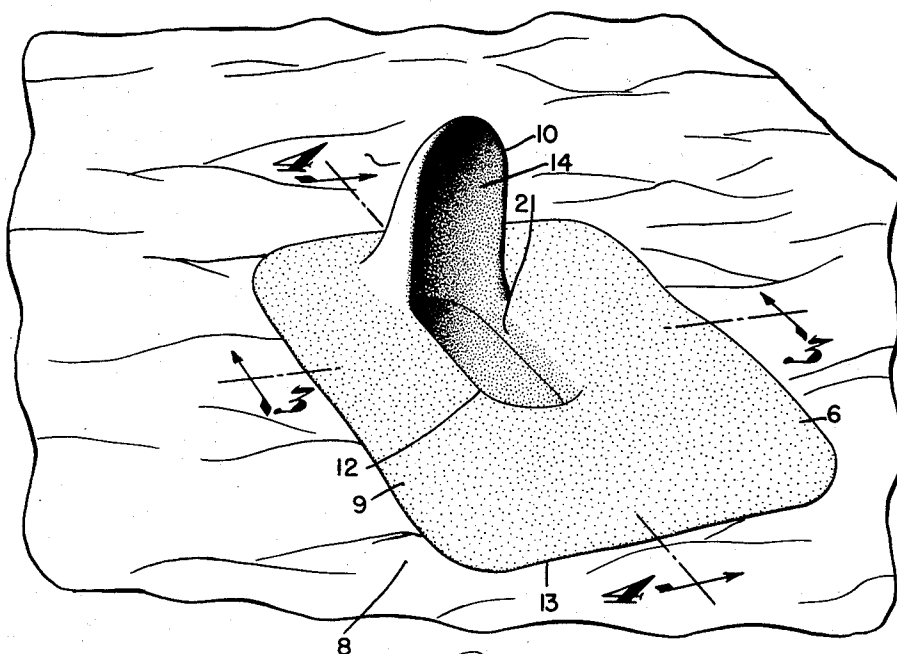


Fig. 1

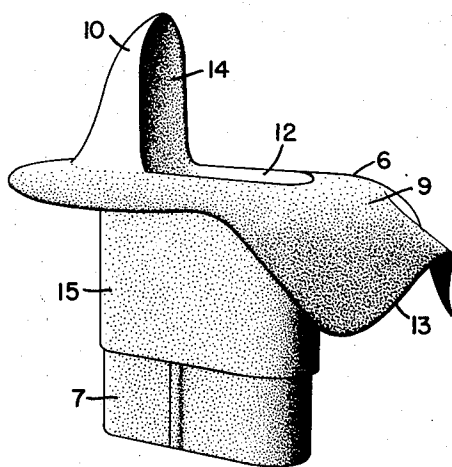


Fig. 2

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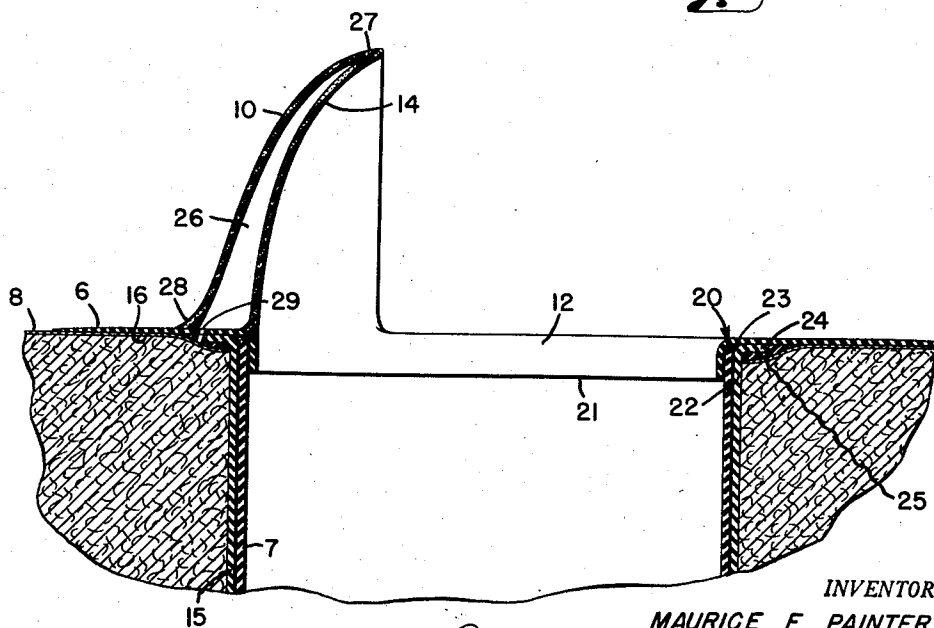
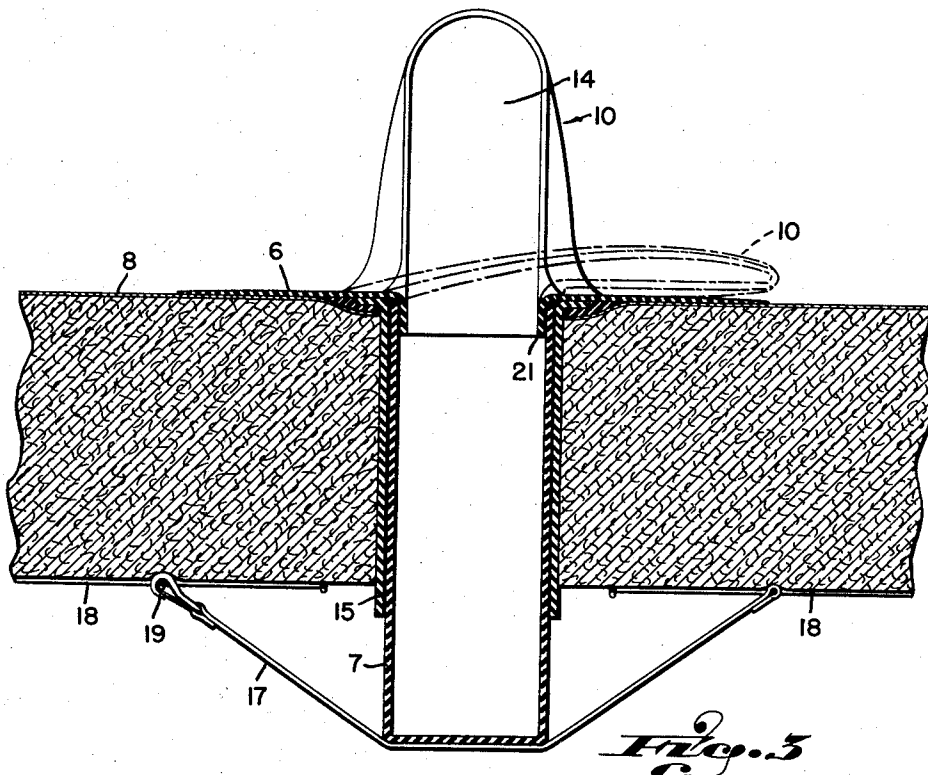


Fig. 4

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BEDPAN FOR CHAIR OR MATTRESS ASSEMBLY

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4 Claims. (Cl. 5—91)

This invention relates to a bed receptacle for use in hospitals, sick-rooms, and institutions where human patients are disabled to the extent of being unable to use the ordinary toilet facilities available for disposal of feces and urinary discharges.

An object of the invention is to provide a receptacle in the nature of a bed pan generally, but which is so constructed that it may remain beneath the bed-confined patient without discomfiture, for extended periods of time, thereby to materially reduce the nursing care required by the patient.

Another object is to provide a device of the character stated which is highly sanitary, and easy to service without disturbance of the patient in any manner whatsoever. Moreover, the device may be bodily removed from beneath the patient with a minimum of disturbance to the patient, when thorough cleaning and sterilizing of the device is considered necessary.

A further object of the invention is to provide a bed receptacle of the type referred to, which may be built into the mattress of the bed with ease, and without materially increasing the cost or weight of the mattress.

Another object is to produce a bed receptacle from molded flexible material, the construction of which is greatly superior to others heretofore proposed from the standpoints of cost, comfort, convenience of use, and durability, with the added advantage that it may constitute in practice an essential part of a bed.

The foregoing and other objects are attained by the means described herein and illustrated upon the accompanying drawings, in which:

Fig. 1 is a perspective view of part of a bed mattress incorporating the device of the invention.

Fig. 2 is a perspective view of the device as it appears removed bodily from the mattress.

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 1, showing how the device is applied to a mattress.

Fig. 4 is a fragmental cross-sectional view taken on line 4—4 of Fig. 1.

In accordance with the present invention, the bed receptacle is formed in two sections indicated at 6 and 7, the section 7 being in the nature of a removable container telescopically associated with the main body section 6 which to a substantial extent overlies the upper surface of a mattress 8. The main body section 6 preferably is constructed of soft and flexible impervious material, formed to provide a flexible substantially flat apron 9 upon which is superposed an upstanding flexible horn or deflector 10. The horn or deflector is adapted to extend upwardly between the limbs of the patient, at the crotch, while the buttocks rest upon apron 9. An elongate opening 12 formed in the apron, extends from the horn or deflector 10 toward the head end 13 of the apron, and underlies the body cavities to receive the feces and urinary discharges of the patient. The horn or deflector for urinary discharge may have its deflective sur-

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face 14 depressed or concaved as shown, for confining the discharge laterally and directing it to the opening 12.

Referring now to Figs. 3 and 4, it may be noted that a tubular open-end sleeve 15 depends from the under face 16 of the apron, and surrounds the opening 12, this sleeve constituting a guide for vertical insertion and removal of the container 7 as clearly suggested by Fig. 3. To remove the container 7, it is necessary of course to displace the retainer or strap 17 which normally holds the container in the elevated operative position within sleeve 15. The retainer very obviously may assume any one of a number of different mechanical forms, a mere example of which is illustrated in the drawings as a strap, elastic or inelastic, slung beneath the container and having its opposite ends suspended from the bed spring 18, or from some other element of the bed. One end of the strap may be furnished with a detachable clip 19 as shown, for release of the container. It is quite possible, of course, to incorporate a suitable mechanical retainer in the sleeve and container structure, as an equivalent.

For sanitary reasons, a seal preferably is established at the upper peripheral edge 20 of container 7 when in use. This seal may assume various forms, one of which involves provision of an inner depending flap 21 coextensive with the opening 12, and formed as an integral part of the apron 9. The flap normally depends within the open top of the container and marginally covers the inner face of the container at the top thereof. The outer surface of the container may bear against the inner face of sleeve 15, which guides the container toward and from the operative elevated position. It will accordingly be understood that the depending flap 21 and the upper end portion 22 of the sleeve are spaced apart a distance approximating the thickness of the container material at the mouth or upper open end thereof, to provide a circumferential groove or seat 23 receptive of the container edge at the mouth thereof. The flap 21 being flexible, it can easily be arranged about the upper edge of the container when inserted.

As will readily be understood, the entire main body section 6 comprising the apron, the deflector, the sleeve and the flap, could be molded or formed as a single unit; or if desired, it might be built up or assembled from several individually molded parts. For example, as Fig. 4 suggests, the deflector 10 may be molded as a single unit and applied by means of cement, vulcanization, or other process to the upper face of the apron. By the use of similar means, the sleeve 15 may be applied to the under face of the apron circumscribing the opening 12, utilizing an outwardly extending peripheral flange 24 of the sleeve in effecting the connection. To reinforce the connection, a peripheral band or ring 25 of rubber or rubberlike material may be cemented or otherwise applied over the flange and the surrounding surface of the apron underside. This band or ring may be fabric-reinforced or otherwise strengthened, if desired.

The apron 9 preferably is of a material which is thin and flexible, in the interest of comfort for the patient. A suitable material therefore would be rubber or plastic, or possibly some form of fabric rendered impervious to moisture by the application of rubber or a rubberlike substance, or a plastic coating or impregnation. Other materials available and suitable for the purpose may be selected, of course. For the sleeve 15, a rubber or rubberlike material is considered suitable, although other types of materials more rigid or substantial in character might here be substituted. It is highly desirable to so construct the apron and the sleeve, as well as the remaining elements of the device, as to withstand the usual sterilization and germicidal treatments commonly em-

ployed in maintaining the necessary standards of cleanliness and sanitation.

The container 7 may be formed of various selected materials ranging from disposable waterproofed paper or paperboard, to metal. By way of example, the container is illustrated in the drawings as one formed or molded from hard or semi-hard rubber. If the container is constructed of a material not disposable in character, it should be such as to withstand the usual treatments for sterilization. Containers having seams or joints, such as would ordinarily be found in metal cans, should preferably be coated with rubber or a rubberlike material, or a plastic capable of withstanding the service required of it.

Attention is now directed to the nature of the upright horn or deflector 10, adapted to extend upwardly between the limbs of the patient in position to deflect any body discharge downwardly through the opening 12 and into the container 7. The deflector preferably is formed of a soft and resilient rubber or rubberlike material which is impervious to liquid, and capable of sterilization treatment. It is considered desirable that the deflector be capable of disposition readily from the upright position to a position substantially flush with the upper face of the apron (Fig. 3), so that a patient rolling over on his side will not be injured or discomforted by the deflector. Moreover, such displacement of the deflector will facilitate bathing or cleaning of the patient by an attendant at times. To achieve maximum flexibility of the deflector for the purposes stated, the deflector may be made hollow to include an air chamber 26 extending substantially from the tip 27 to the base 28. This construction results in reducing the thickness of the deflector walls, rendering them very pliable and soft. To avoid entrapment of air within the chamber, a small vent 29 may be formed at the base of the deflector or at some other suitable location where any pressure of air resulting from distortion or collapse of the deflector may be released. In the example shown, the vent discharges into the material of the mattress, beneath the apron 9, where it cannot in any manner affect the patient.

In conclusion, it may be pointed out that the bed receptacle of the present invention may be used by patients male and female, irrespective of age. To equip a bed with the device, it is necessary only to provide a hole in the mattress properly dimensioned to accommodate the sleeve 15, whereupon the apron may be lowered onto the upper surface of the mattress in readiness for use of the device. The concavity 14 of the horn or deflector is in effect an upward continuation of the vertical opening 12, and the surface of the concavity is impervious to moisture or liquids. The entire device is so constructed as to be leak-proof, and any parts thereof may be kept sterile and clean by steam treatment or otherwise. In use, the device performs its intended function with great advantage, and with a minimum of discomfort to the user.

It is to be understood that various modifications and changes in structural details of the device may be resorted to, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim is:

1. A receptacle of the type adaptable to a hole in a

chair bottom or bed mattress, comprising an apertured flexible apron to cover an area of the chair bottom or mattress about the hole therein, an annular flexible flap integral with and extending inwardly and downwardly from the marginal edge portion of the apron bordering the aperture therein, a sleeve fixed to said apron and depending from the underside thereof to enter the hole in the chair bottom or mattress, said sleeve being carried by the apron and the upper end of the sleeve circumscribing the apron aperture, the sleeve being of an interior diameter greater than the diameter of the apron aperture and of said flap, and having an open lower end, a container slidably fitting within the lower open end of the sleeve with its upper peripheral end portion abutting against the under face of the apron and within the confines of said sleeve, means for removably supporting the container in position within the sleeve, said flap being spaced laterally inwardly of said sleeve, overlying the upper edge of the container and extending into and fitting against the side wall thereof.

2. A receptacle of the type adaptable to a hole in a chair bottom or bed mattress, comprising an apertured flexible apron to cover an area of the chair bottom or mattress about the hole therein, an elongate deflector integral with the apron for body-fluid discharge extending upwardly from the upper face of the apron adjacent the aperture therein, the deflector being hollow with relatively thin yieldable walls formed of soft resilient liquid impervious material, the deflector normally projecting upwardly in operative position above the apron and being yieldable for flexing the same laterally from its upright operative position to a position substantially flush with the upper face of the apron, and a container positioned to extend within the hole of the chair bottom or bed mattress below said apron in alignment with the apron aperture, and means for removably supporting the container in said position.

3. A receptacle of the construction defined in claim 2, wherein the deflector has a transversely concavely curved side wall facing toward the apron aperture.

4. A receptacle of the construction defined in claim 3, wherein the inner transversely curved side wall of the deflector is also concavely curved longitudinally.

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