June 17, 1941. R. M. GRAY 2,246,205

BEDPAN

Filed Dec. 11, 1939

Fig. 1.

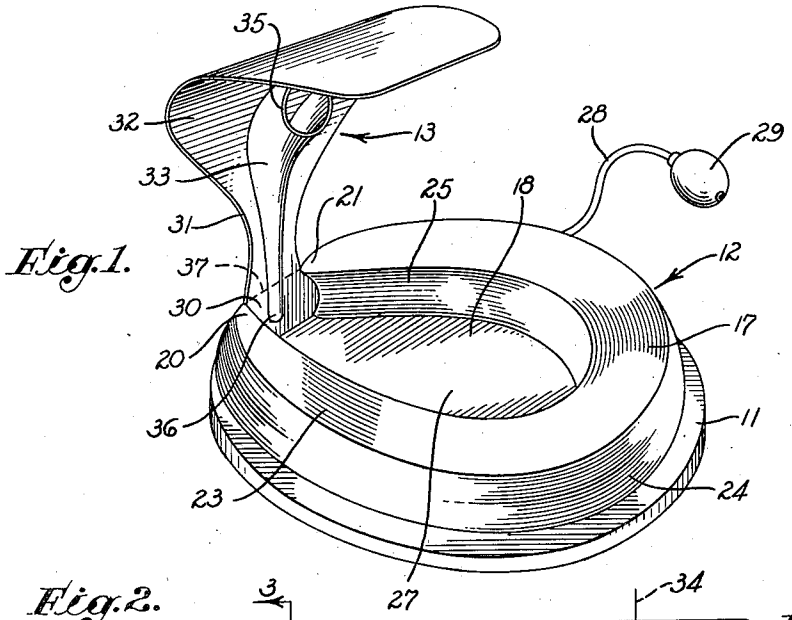


Fig. 2.

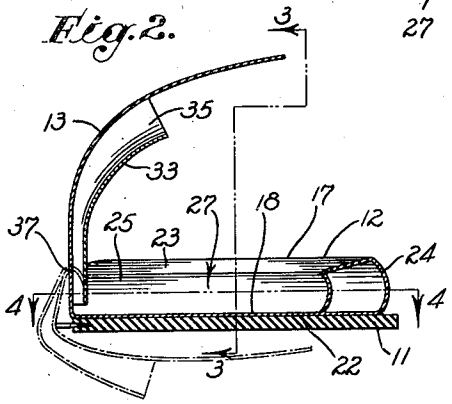


Fig. 3.

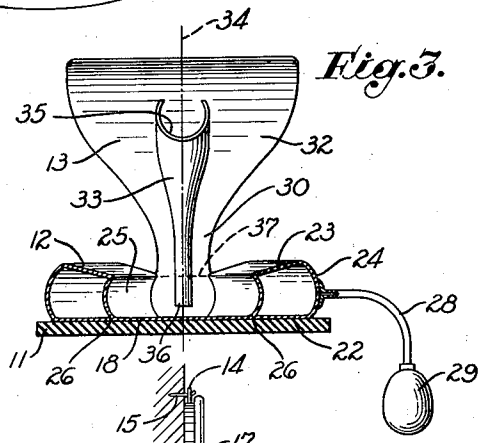


Fig. 4.

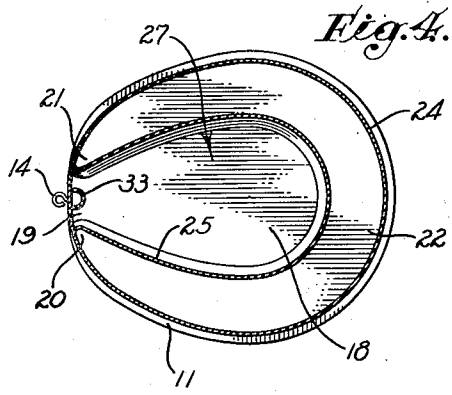
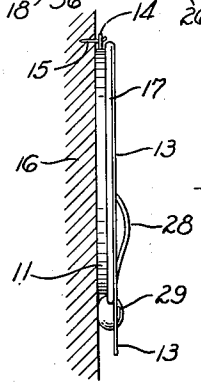


Fig. 5.



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FOR THE FIRM

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BEDPAN

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8 Claims. (Cl. 4—113)

This invention relates to bedpans.

A satisfactory bedpan will possess a number of desirable characteristics. It will be comfortable for the patient. It will have a reservoir from which the contents will not easily spill. It will be so constructed that it will receive the excretal liquids of the patient and conduct them to the reservoir without the loss of any portion thereof upon the bed or, the body of the patient. It will be easy to empty after use. It will be light in weight. The surfaces exposed to the liquid will be non-absorbent. It will be easy to clean. When not in use, it will be collapsible to a smaller size and capable of ready storage. It will be inexpensive of manufacture and sufficiently sturdy to support the weight of the patient. It will preferably be of one-piece construction to promote ease of handling. It will be capable of ready placement for use and subsequent removal.

This invention provides a bedpan possessing each one of these characteristics, and possessing them all in a single article of manufacture.

In the drawing:

Fig. 1 is a perspective view of the bedpan embodying my invention;

Fig. 2 is a longitudinal section in elevation of the bedpan;

Fig. 3 is a vertical sectional elevational view taken along the line 3—3 of Fig. 2;

Fig. 4 is a horizontal sectional view taken along the line 4—4 of Fig. 2;

Fig. 5 shows the bedpan in collapsed position hung on a wall which is shown in vertical section.

The principal parts of the bedpan are the base plate 11, preferably made of hard rubber, or other suitable inflexible plastic material, a receptacle 12, and a shield 13. The base plate 11 is of a generally oval configuration, and is provided at its front end with an eye 14 by which the bedpan may be hung in storage position, when not in use, as upon pin 15 in a wall 16 as shown in Fig. 5.

The receptacle 12 comprises a tubular body supporting cushion 17 and a horizontal web 18. The cushion 17 is of generally annular configuration and in order to properly conform to the body of the patient presents in plan view an oval shaped crescent. A gap 19 between horns 20 and 21 of the crescent are located at the forward end of the bedpan.

The tubular cushion 17 is made of soft, flexible cured rubber. It has a flat horizontal bottom wall 22, a flat centrally and downwardly inclined top wall 23, an outside, preferably convexed, wall 24, and an inside concave wall 25.

The web 18 connects inner edges 26 of the bottom wall 22 and is in effect a continuation of the bottom wall. The web 18 is integrally molded and vulcanizably joined at its periphery with the cushion 17, and forms with the cushion a reservoir 27 for holding the excretal matter of the patient. The inside wall 25 of the cushion 17 is made concave so that liquid within the reservoir 27 is less likely to be splashed outside of the receptacle 12. The bottom wall 22 of the cushion and the web 18 are firmly secured to the upper face of the base plate 11 by the use of a suitable cement, or by any other satisfactory means. A rubber tube 28 is attached at its one end to the outside wall 24 of the cushion 17, and is provided at its other end with valved air syringe bulb 29, the tube and bulb being provided for the purpose of manually inflating the cushion 17 with air.

The shield 13 is an integral extension of the web 18. Its lower portion 30 is shaped to fit between the horns 20 and 21 of the cushion 17 and is united in the process of molding to the forward upright end edges of the inside walls 25 of the tubular cushion 17. The shield is formed with a neck portion 31 immediately above the lower portion 30, and broadens into a wider upper portion 32 which is curved rearwardly in a horizontal direction to lie over the pelvic portion of the body of the patient. On the inner rear face of the shield 13 is secured a rubber duct 33. This duct is formed by vulcanizing the longitudinal edges of a strip of soft flexible rubber to the inner face of the shield along vertical lines spaced a short distance from and on either side of the central longitudinal line 34 of the shield 13. An upper end opening 35 of the duct is positioned to properly receive excretal liquids from the patient and a lower end opening 36 is disposed in the reservoir at a point slightly above the level of the web 18.

Preferably the bedpan is made in different forms, one for the use of male patients and the other for the use of female patients, the upper end opening 35 of the duct 33 being suitably shaped and disposed in each of the two forms.

When the cushion 17 is deflated, the shield 13 lies with its inner face resting against the upper wall 23 of the cushion as shown in Fig. 5, and with the tube 33 nesting in the space between the two sides of the deflated cushion. When the tubular cushion 17 is inflated with air, the inside walls 25 assume an upright position caus-

ing the lower portion **30** of the shield **13** to also assume an upright position. The lower end of the tube **33** which is secured to the lower portion **30** of the shield is thereby brought to an upright position, causing the entire tube **33** to be moved to an upright position, carrying with it the neck portion **31** and the upper portion **32** of the shield **13**. When the cushion **17** is inflated, the tube **33** acts as a reinforcing stiffener for the shield maintaining it in its upright position and placing the tube **33** itself in proper utility relationship with the patient. Although, if unacted upon by outside forces, the shield **13** will stand in the position shown in Fig. 1, it may be manually bent forward about the line **37**, as shown in Fig. 2, for the purpose of readily emptying the receptacle **27** of its contents after use by the patient.

A bedpan constructed in accordance with this invention is comfortable, the air cushion **17** being well adapted to yieldably conform to the body of the patient. The concave character of the inside wall **27** of the cushion **17** prevents accidental spilling of the contents and at the same time, the bedpan is easy to empty by the simple expedient of bending back the shield **13**. The contents may be thus readily removed without their passing over the side or rear portions of the top wall **23**, over which it would be difficult to pour the contents in a desirably narrow stream. The bedpan is light in weight being made of rubber, a relatively light material. In collapsed form it is easy to store either singly or in quantities. The rubber is non-absorbent and there are no cracks or corners difficult to clean. The rubber material is inexpensive and the molding and vulcanizing process by which the bedpan is given form is likewise inexpensive to practise. Though the tubular cushion **17** is comfortable to the patient, the air pressure within it enables it to sustain the weight of the patient. The duct **13** prevents excretal liquid from coming in contact with the body of the patient or from being accidentally discharged beyond the sides of the bedpan and conducts these liquids safely to the central receptacle of the bedpan. The bedpan is a one-piece article, having no separable parts to become displaced in use, or to become lost. Since its body-supporting part is of low and even elevation above the base plate, it is readily placed for use and removed after use.

The bedpan shown in the drawing and described herein embodies this invention. It is apparent, however, that many slight modifications of the relative dimensions of the shape and of the construction and material of the several parts of the bedpan and of assembling and securing together of the parts may be made without the resulting product being outside of the scope of this invention.

The word "rubber" as used herein is intended to cover any material having the qualities of pliability, flexibility, imperviousness to liquid and surface smoothness, and lightness of weight of rubber.

I claim as my invention:

1. In a bedpan, the combination of: a horizontally disposed receptacle; and an upright member having a wall extending transversely of said receptacle and extending upwardly to the level of the discharge of excretal liquids by the patient and secured to the front portion of said receptacle and provided with a duct disposed centrally and longitudinally of said member, and having its upper end positioned horizontally and longitudinally to receive excretal liquids of the patient and its lower end positioned to discharge into said receptacle.

2. In a bedpan, the combination of: a flat inflexible base plate; an annularly configurated inflatable body-supporting tubular cushion of soft flexible rubber secured to the upper face of said base plate; an upright shield of flexible rubber disposed transversely of the bedpan and extending upwardly to the level of the discharge of excretal liquids by the patient and secured to the front portion of said cushion and adapted to be normally held upright by the walls of said cushion in conjunction with said inflexible base plate when said cushion is inflated and to fold rearwardly down upon said cushion when said cushion is deflated.

3. In a bedpan, the combination of: a flat inflexible base plate; a crescent configurated inflatable body-supporting tubular cushion secured in fluid-tight manner to the upper face of said base plate; an upright transverse shield of flexible rubber disposed with its lower portion extending across the space between the horns of said cushion and united in fluid-tight manner therewith and with said base plate to form a fluid-tight receptacle, and extending upwardly to the level of the discharge of excretal liquids by the patient.

4. In a bedpan, the combination of: a flat inflexible base plate; and a structure of flexible soft rubber secured to the upper face of said plate comprising a crescent configurated inflatable body-supporting tubular cushion, an upright shield disposed with its lower portion extending across the space between the horns of said cushion and integrally molded therewith, said shield extending upwardly substantially above said cushion and rearwardly in a position to conform to the pelvic portion of the patient's body, and a web across the central opening of the cushion in the bottom plane thereof and integrally molded with said cushion and with the lower edge of said shield, the inner walls of said cushion, the lower portion of said shield and said web forming a fluid-tight receptacle.

5. In a bedpan, the combination of: a crescent configurated body-supporting tubular cushion; means for holding rigid the bottom wall of said cushion; an upright shield, the lower portion of said shield being united along its vertical edges with the inner walls of the horns of said cushion, said shield extending upwardly substantially above said cushion and rearwardly in a position to conform to the pelvic portion of the patient's body; and means for closing the opening between the lower edges of the inner walls of said cushion and the bottom edge of the lower portion of said shield to form a fluid-tight receptacle.

6. In a bedpan: an annularly configurated inflatable body-supporting tubular cushion comprising an inflexible bottom wall, a flexible collapsible outer side wall, a flexible collapsible inner concavely arcuate side wall and a flexible collapsible inwardly sloping top wall; and a bottom wall united in liquid-tight relationship to said cushion in the bottom plane thereof and across the central opening thereof.

7. In a bedpan, the combination of: an inflexible base plate; a crescent configurated inflatable body-supporting tubular cushion of soft rubber secured to the upper face of said plate; a web of soft rubber molded integrally with said

cushion and connecting the bottom walls thereof and secured to said plate; a normally upright shield of soft flexible rubber molded integrally with said web and cushion and connecting the juxtaposed edges of the horns of said cushion and extending upwardly substantially above said cushion and rearwardly from the front end of said web in a widening sheet to conform to the pelvic portion of the body of the patient; a rubber duct molded integrally upon the rear face of said shield and mounted centrally and longitudinally thereof with its upper end in position to receive excretal liquids of the patient and its lower end in position to discharge on said web.

8. In a bedpan, the combination of: a tubular inflatable cushion configurated to conform to the body of the patient, said cushion having a rigid bottom wall; a flexible normally upright sheet of soft rubber, the lower portion of said sheet being secured to front portions of the side walls of said cushion and the upper portion of said sheet extending upwardly substantially above said cushion and rearwardly to conform to the pelvic portion of the body of the patient; and a transversely U-shaped strip of soft rubber secured at its lateral edges along spaced lines to the rear face of said sheet and centrally and longitudinally thereof to form a duct with its upper end disposed to receive excretal fluids of the patient and its lower end terminating substantially below the top wall of said cushion, whereby when said cushion is deflated and its top and side walls collapse against its rigid bottom wall said sheet nests in collapsed form against the top wall of said cushion and when said cushion is inflated the front portions of the side wall of said cushion hold the lower portion of said sheet upright and said strip stiffens the upper portion of said sheet in said upright position, said strip permitting said sheet to be flexed forwardly by manual pressure about a horizontal line adjacent the top wall of said cushion.

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