March 23, 1965 J. M. BERTOLDO 3,174,159

SELF-SERVICE BED PAN

Filed Dec. 18, 1962

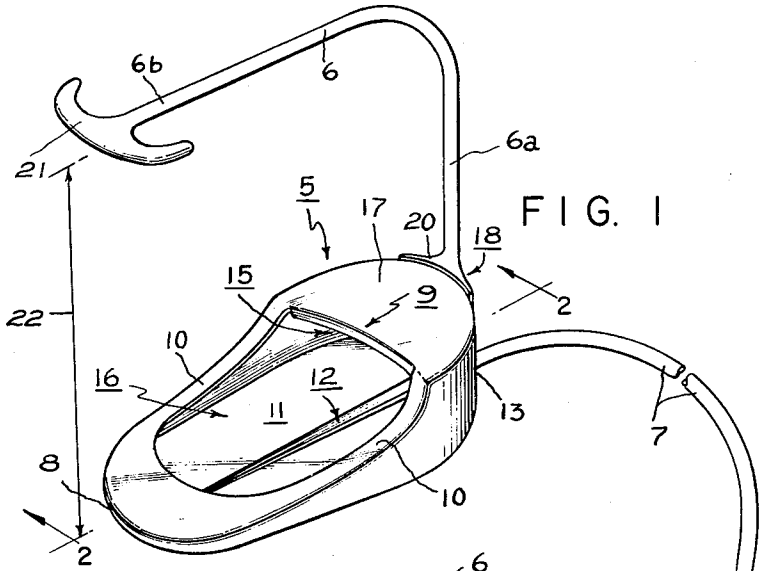


FIG. 1

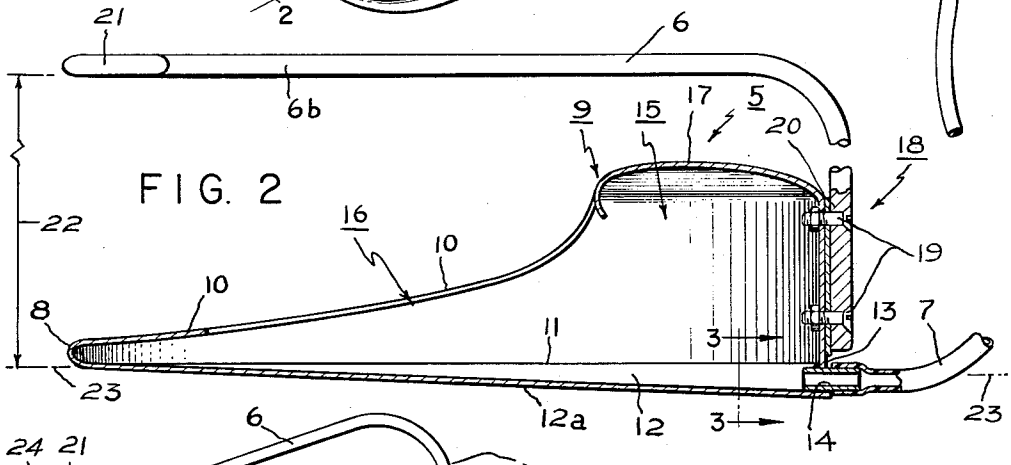


FIG. 2

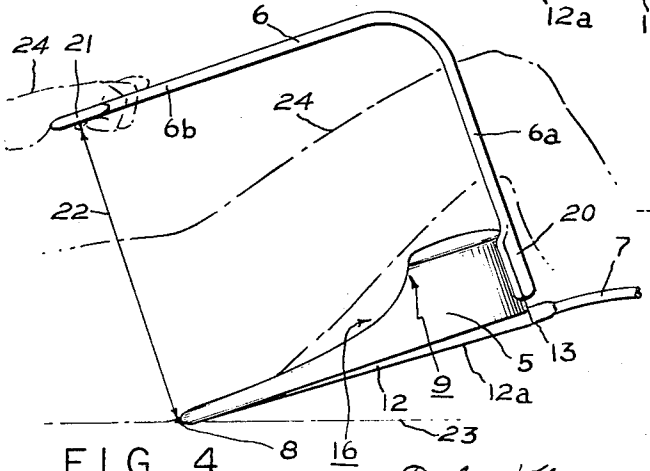


FIG. 4

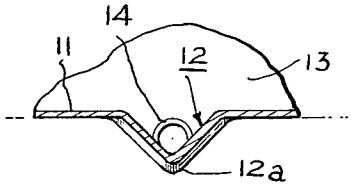


FIG. 3

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SELF-SERVICE BED PAN

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The present invention relates to improvements in sickroom provisions for collection of body eliminations, and, in one particular aspect, to novel and improved vessels such as bedpans and urinals of unique configuration and construction promoting their efficient use by unaided patients.

Care of bedridden persons, either in institutional or private sickrooms, is made tedious and unpleasant for both patient and attendant because of frequent routine assistance required in the elimination of body wastes. Valuable time of skilled medical personnel is lost in such activities, and the aided patient commonly must endure inconvenience and suffer lack of privacy. In many instances, the ailments or infirmities which confine patients to bed are not so restrictive as to prevent certain manual bodily movements which could enable at least some measure of self-care, although existing common forms of bedpans and urinals do not promote this result and instead would tend to make such efforts difficult and ineffectual. According to the present teachings however, vessels serving these purposes are of special contour and proportions and are provided with unique handles, all to the end of promoting simple and efficient manipulations whereby a patient may provide for sanitary collection and removal of eliminations without aid of an attendant.

It is one of the objects of the present invention, therefore, to provide a novel and improved sickroom article which may be operated by a bedridden patient, without assistance, for the purpose of collecting and removing body eliminations.

Another object is to provide unique waste-collection accessories, such as bedpans and urinals, which are shaped and supported for convenient manipulation into and from operative positions without imposing strain upon an unaided patient confined to supine or recumbent postures.

A further object is to provide a novel patient aid of simple and low-cost construction which is in the form of a wedge-shaped vessel having an elongated handle disposed for ready manipulation of the vessel and for its stable maintenance in operative position for receiving body eliminations.

By way of a summary account of practice of this invention in one of its aspects, there is provided a narrow sheet-metal bedpan which is substantially wedge-shaped in cross-section, extending from a narrow front to a higher rear. The customary top opening is restricted somewhat by a top covering marginal edges of the pan nearer the thin front edge, and the closed substantially flat bottom of the pan is formed with a depending V-shaped channel which deepens in its central course from front to rear. At the rearmost, and highest, portion of the article, the V-shaped channel merges with a low drain outlet connected with flexible tubing on the exterior. Also near the rear of the bedpan, there is attached a special form of handle bar which rises upwardly and forwardly over the article, extending at least as far forward as does the front edge and terminating in a flat handle which may be grasped by a patient. In use, the bedridden patient

grips the bedpan handle to lift and position it between his bent legs, tilting it such that the slender front edge tends to wedge itself undereneath his person, and thereafter pulls and tilts the handle until the entire bedpan is firmly wedged into position for collection of body eliminations.

The subject matter regarded as my invention is particularly pointed out and distinctly claimed in the concluding portion of this specification. However, both as to preferred structure and assembly, and further in relation to objects and advantages thereof, this invention may best be understood through reference to the following description taken in connection with the accompanying drawings, wherein:

FIGURE 1 depicts in perspective view of a preferred bedpan construction embodying the present invention;

FIGURE 2 is an enlarged longitudinal cross-section taken along section lines 2—2 of the article shown in FIGURE 1, a portion of the handle being cut away;

FIGURE 3 provides an enlarged detail taken along section lines 3—3 in FIGURE 2, transversely of the bottom depression of the article; and

FIGURE 4 represents the same article in a pictorial illustration from the side showing its orientation in relation to a patient (dashed outline) as it is being manipulated into a position of use.

The sickroom accessory appearing in FIGURE 1 comprises a special form of bedpan vessel **5** in cooperative relationship with an elongated arched-over handle **6** and a flexible drainage tube **7**. An important aspect of the construction of vessel **5** is found in its generally wedge-shaped contour, as viewed from a curved forward edge **8**, which is made very shallow, to a rear position **9** beyond which the height does not change significantly. Preferably, the vessel is fabricated in a lightweight form, such as that resulting from its construction of stainless steel sheet, although various other materials and combinations of materials may obviously be exploited instead. As shown in FIGURES 1, 2 and 4, the wedge shaping of the forward part of the pan **5** does not follow a purely triangular form; instead, the top marginal surfaces **10** are contoured to better complement the corresponding curvature of a patient's body. Bottom wall **11**, however, is preferably substantially planar except for a central depression **12** which extends from about the front edge **8** fully to the rearmost edge **13**. As appears in the FIGURE 3 cross-section, the depression or channel **12** is substantially V-shaped, such that its bottom edge **12***a* is relatively sharp, and becomes deep enough so that the tubular outlet coupling **14** at rear edge **13** may be disposed below the level of the flat bottom plate **11**.

Channel **12** not only serves as a drainage aid but, because of its sharp V form, tends to be depressed easily into yieldable mattress and other bedding materials under weight of the user and, thereby, to prevent unwanted lateral sliding or slippage of the article. Gravity-induced drainage may occur continuously during use, via the flexible rubber or plastic tubing **7** which leads to any suitable form of drainage collector (not shown) at a lower level beside the patient's bed. The elongated vessel is made very shallow at and near its front edge **8**, such that it may be readily wedged below the user's body, although the rear portion **15** beyond the top waste-receiving opening **16** is preferably of a substantial depth and volume for the purpose of collecting the relatively large

amounts of fluid which may sometimes accumulate before full drainage is effected. In general, the bedpan is longer, from front to rear, than it is wide, the latter dimension being preserved relatively small because the bedpan is intended to be lowered into and lifted out of position of use through the spread thighs of the bedridden patient to whom more substantial accommodating movements may be highly uncomfortable.

As illustrated, the upwardly-and-forwardly opened bedpan is closed, marginally, near its front by the surfaces **10**. Rear portion **15** is also preferably closed, by the cover surface **17**, which adds desirably to structural rigidity of the sheet-metal pan. Enough space is provided everywhere between bottom plate **11** and the cover surfaces **10** and **17** to insure that adequate cleaning and sterilization can be performed. In some constructions, it may be advantageous to have the cover surfaces removable, as an aid to cleaning, or to modify them such that they are only relatively narrow about the top opening.

The handle assembly connects with the vessel **5** at a rear position **18** where it can best exert leverages needed in certain wedging and tipping actions. The illustrated detachable connection of the cast handle assembly to the bedpan includes bolts **19** passed through an integral flange **20** on handle **6**, as well as through the rear wall of the pan. From that position, the handle is arched upwardly and forwardly over the pan, terminating in a widened grip **21** which is at least about as far forward as the front edge **8** and which is substantially flat and parallel with the bottom **11** of the bedpan. The portion **6***a* of the handle, which is nearer the connection with bedpan, preferably extends about perpendicularly to the bottom surface **11** for a substantial distance which insures that it will not inadvertently contact the body of the user; handle grip **21**, and the portion **6***b* of the handle near it are at a height **22** above the bottom of the pan which is in excess of the heights to which abdomens of average users can be expected to reach above the sickbed mattress. The detachable connection of the handle assembly to the bedpan is desirable for convenience in packaging and storage, as well as for the purposes of cleaning and sterilization. In construction other than that illustrated, the handle may be formed of tubing and the connection may be made more readily separable through use of a snap-lock type of socketing, or the like, such as is commonly used with fitted tubular parts.

In making use of the improved article, the patient may lift it by way of grip **21**, from the nearby floor or table where it stands substantially upright on its essentially flat bottom plate **11**. With one hand, the bedridden user may then thrust the entire unit between slightly-spread thighs, supporting the unit only through grip **21** all the while. A slight elevation of the patient's knees then permits the rounded forward edge **8** of the bedpan to be wedged below the lower part of the patient's body and the top of the mattress and its coverings the latter level being designated by linework **23**. Partial outline **24** of the patient, in FIGURE 4, aids in an understanding of this operation. Thereafter, the patient may tilt and rock the article, by manipulations of the forwardly-extending grip **21**, while remaining in a reclining or supine position, until the bedpan is fully wedged into a proper orientation for collection of elimination. At such time, the user may rock handle grip **21** upwardly and away from the abdominal region, causing the bedpan to tilt in a direction favoring drainage into portion **15** and out of drainage tube **7**. Channel **12** guides sliding movements of the pan into and out of its position of use, and prevents lateral displacements. Withdrawal of the article merely involves reversal of the foregoing procedures. Because the handle attachment is at the rear of the bedpan, a loose hold on grip **21** by the patient results in a desired downward tilt of the rear of the pan, this being caused by a mass unbalance. Therefore, as the unit is withdrawn after use the pan tends of its own accord to hang in a position which favors drainage and avoids spillage.

While a preferred embodiment has been illustrated and described, this disclosure has not been intended as a limitation upon the invention, and those skilled in the art will understand that variations, modifications, substitutions and combinations may be effected without departure in spirit or scope from the invention in its broader aspects.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A patient-operated article for collection of body wastes comprising an open-topped vessel having substantially the shape of a wedge from a shallow front portion to a thicker portion rearwardly thereof, an elongated handle, and cooperating connecting means on one end of said elongated handle and on said wedge-shaped vessel at the thicker portion thereof, respectively, for connecting one end of said elongated handle to said wedge-shaped vessel at the thicker portion thereof, said handle extending from said one end upwardly and forwardly over said vessel in widely-spaced relationship and terminating in a grip disposed at least about as far forward as said front portion of said vessel.

2. A patient-operated bedpan for collection of body wastes comprising an open-topped vessel having substantially the shape of a wedge from a shallow front edge to a thicker portion rearwardly thereof, an elongated rod-like handle crooked to have its two ends extend substantially perpendicular to one another, cooperating connecting means on one end of said elongated handle and on said wedge-shaped vessel at the thicker portion thereof, respectively, for connecting one end of said elongated handle to said wedge-shaped vessel at the thicker portion thereof with said handle arched over said vessel in a widely-spaced relationship, and a grip fixed with the other end of said handle, said handle being proportioned relative to said vessel to orient said grip at least as far forward as said front edge of said vessel while in said widely-spaced relationship thereto.

3. A patient-operated bedpan as set forth in claim 2 wherein said thicker rear portion of said vessel is fully closed by walls of said vessel at the top thereof to form an enlarged chamber for collection of said wastes, and further comprising a flexible drainage tube, and connection means at the rearmost and lowermost portion of said chamber for connecting said tube with said vessel at the rearmost and lowermost portion of said chamber.

4. A patient-operated bedpan as set forth in claim 3 wherein the walls of said vessel include a substantially flat bottom wall, said bottom wall having a substantially central drainage channel extending from front fully to the rear of said vessel and gradually deepening in direction from front to rear thereof, the deepest end of said channel being disposed in direct fluid communication with said means for connecting said tube.

5. A patient-operated bedpan as set forth in claim 3 wherein said narrow front edge of said vessel is closed by walls of said vessel at the top thereof to form a small chamber preventing leakage of body waste and to form top wedging surfaces of said vessel, and further comprising marginal top surfaces extending about the top opening of said vessel between said small and enlarged chambers.

6. A patient-operated bedpan as set forth in claim 4 wherein said channel in said bottom is substantially V-shaped in transverse cross section, with the relatively sharp bottom edge thereof projecting below the bottom surface of said substantially flat bottom wall, and wherein the top of said wedge-shaped vessel is contoured by an upward curvature from said front edge to said thicker rear portion.

7. A patient-operated bedpan as set forth in claim 2 wherein said grip extends substantially transversely to said

other end of said handle and is substantially parallel with the bottom of said vessel.

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