

[54] **INVALID OR GERIATRIC TOILET SEAT**
[72] Inventor: Sarah B. Smith, 2030 Spottswood Road,
Charlottesville, Va. 22903
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4/244, 245; 264/DIG. 8, 45, 46

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Primary Examiner—Frederick L. Matteson
Assistant Examiner—Donald B. Massenberg
Attorney—Mason, Fenwick & Lawrence

[57] **ABSTRACT**

An auxiliary invalid or geriatric seat for toilets for placement on top of a conventional seat to substantially raise the seating level. The auxiliary seat consists of a core having a rigid upper portion and a resilient lower section, with the core being coated with a smooth finish material, at least the lower portion of the coating being flexible to allow the lower surface of the seat to conform to the shape of the surface upon which it is placed to stabilize the auxiliary seat in position upon the conventional seat. The center of gravity may be lowered to increase stability by enclosing a weighted member within the lower inner edge of the seat.

7 Claims, 5 Drawing Figures

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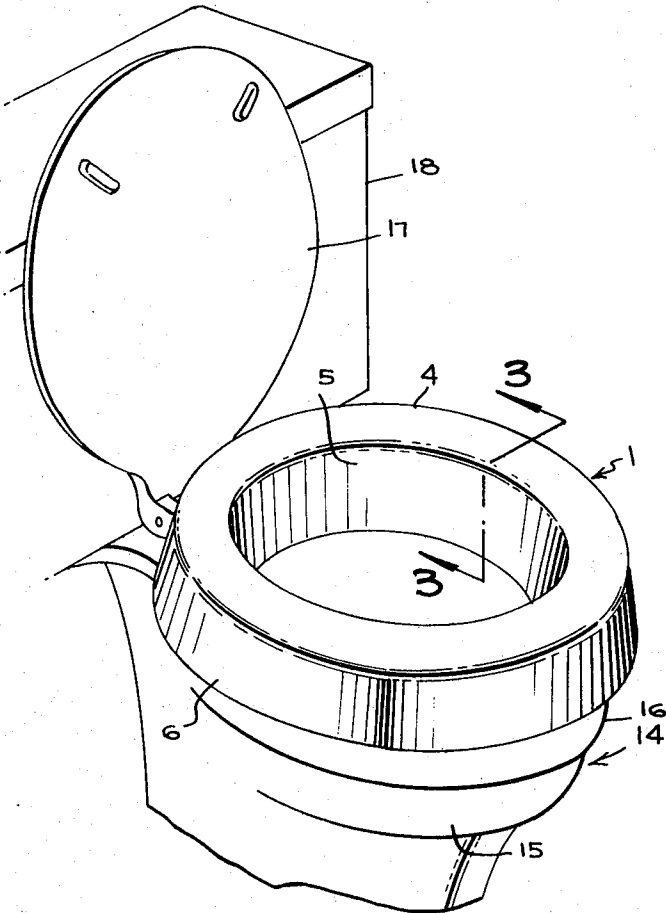


Fig-1

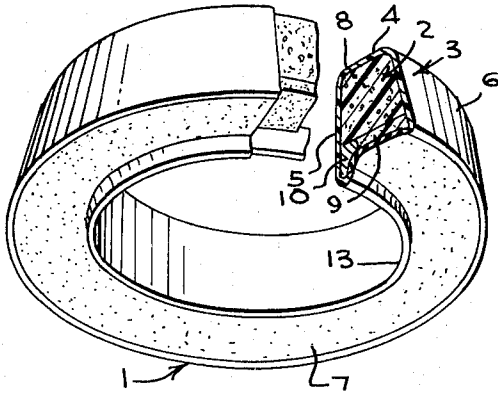


Fig-5

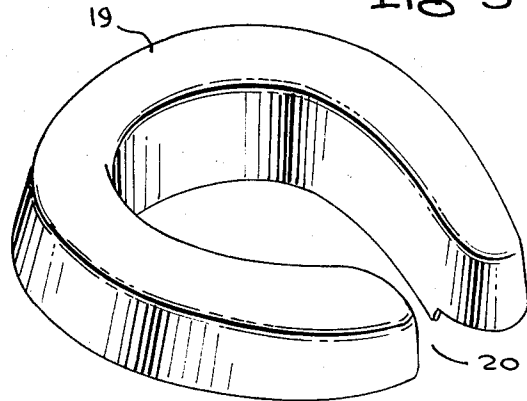


Fig-3

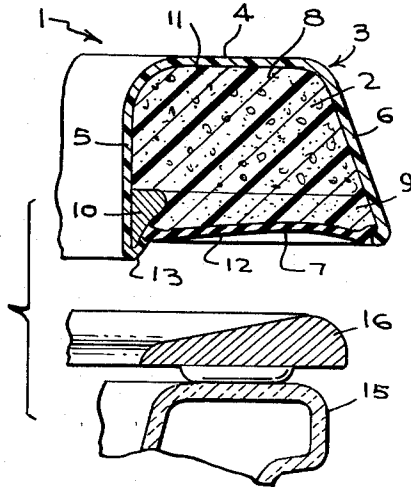


Fig-2

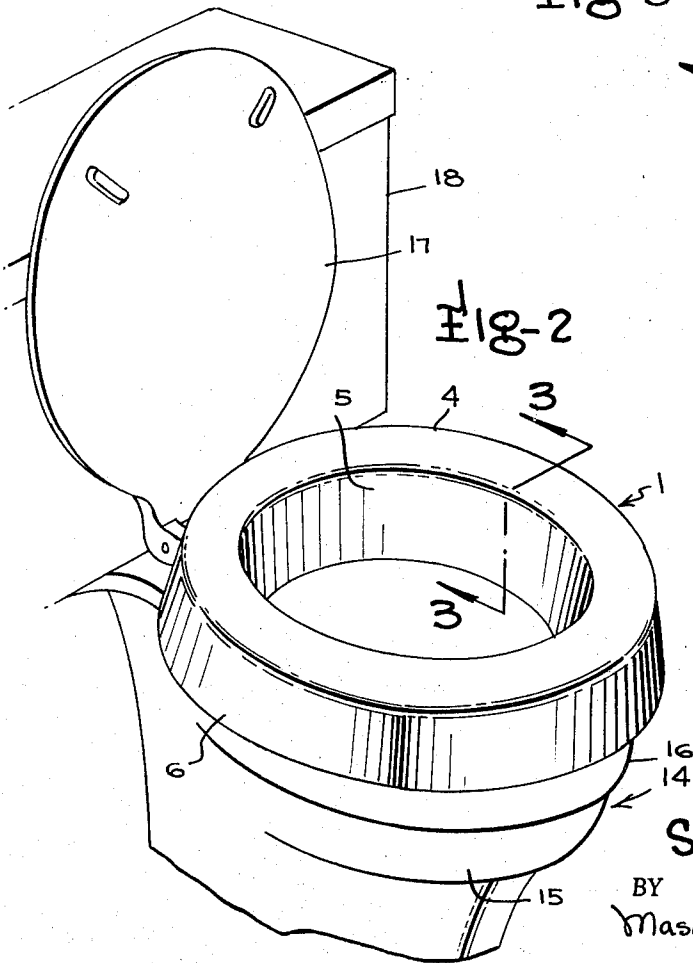
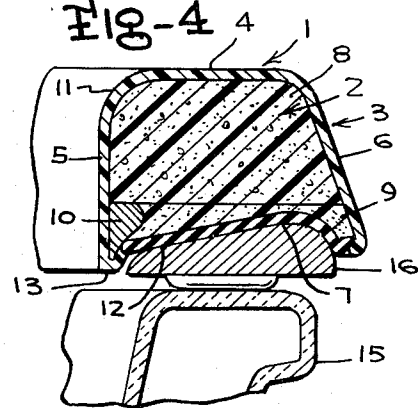


Fig-4



INVENTOR

SARAH B. SMITH

BY
Mason, Fenwick & Lawrence
ATTORNEYS

INVALID OR GERIATRIC TOILET SEAT

BACKGROUND OF THE INVENTION

This invention relates to water closet seats, and particularly to auxiliary seats for placement upon existing seats, to raise the seating surface to a predetermined distance above floor level, to facilitate use of the water closet by the sick, inform or handicapped.

The conventional water closet, or toilet, unit is designed to have the seat surface about fourteen to fifteen inches above the floor, which has been found to be best suited for the purpose. It is difficult, however, for persons who are ill or handicapped to lower themselves to a seat as low as this, or, once seated, to raise themselves to a standing position. Both seating and rising is much easier for such persons if the knees are not required to bend to a considerable degree. It is much easier to lower the body to, or lift it from, a seat level several inches higher than that afforded by the conventional toilet seat.

The above facts have been long recognized, and numerous attempts have been made to provide a seat which is higher than normal. These efforts have not been entirely successful, for, although the seat level has been raised, the special seat cannot be removed for free use of the conventional seat, the raised seat has no stability to insure steadiness under stress and safety to the user, or it is incapable of maintaining acceptable sanitation standards.

SUMMARY OF THE INVENTION

The general object of the present invention is to provide an improved auxiliary toilet seat, which, when placed upon a conventional seat will form a stable, non-slipping seat somewhat higher than the normal distance above the floor.

A more specific object of the invention is to provide a seat for use on top of a conventional seat, wherein the bottom surface of the auxiliary seat will conform in shape to the surface of the seat upon which it is placed, to insure a tight, non-slipping interlock with the standard seat to hold the auxiliary seat securely in place.

Another object is the provision of such a seat having a rigid upper section to present a firm seating surface to use.

A further object is to provide a seat of this nature which has a smooth, water-proof finish over the entire outer surface for ease in cleaning.

It is also an object of the invention to provide an auxiliary seat which has an extremely low center of gravity, with the weight concentrated about the lower inner edge of the seat for stability when mounted upon a conventional toilet seat for use.

Other objects of the invention will become apparent from the following description of practical embodiments thereof, when taken with the drawings which accompany, and form part of, this specification.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the improved auxiliary seat for a water closet, viewed from the underside, and with parts broken away to show internal structure;

FIG. 2 is a perspective view of a water closet, with the improved seat in place upon the conventional water closet seat;

FIG. 3 is an enlarged sectional view through one side of the improved seat in raised position above a conventional seat and bowl, the view being taken on the line 3—3 of FIG. 2;

FIG. 4 is a view similar to FIG. 3, but with the auxiliary seat in place on the conventional seat; and

FIG. 5 is a perspective view of a modified auxiliary seat having an open front.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The seat forming the subject matter of the present invention can be of any desired shape to fit any of the conventional toilet seats. It may be substantially round, or a short or long oval, and it may be closed or open at the front. Although the shape

may vary as required for use with standard toilet seat shapes, the structure will be the same in all cases.

Referring first to that form of the invention shown in FIGS. 1 through 4, the auxiliary seat 1 is composed of a core 2 and a casing, or outer cover, 3. The core and casing are bonded together to form a unitary whole.

The cross-sectional shape of the seat can vary as required, or desired. The seat illustrated has a top surface 4 which is generally similar in contour to the top surface of a standard toilet seat. The inside wall 5 is preferably vertical, while the outside wall 6 flares outwardly in a downward direction. The bottom surface 7 is slightly concave transversely to provide an initial curvature to lessen the deformation necessary in use to conform to the upper surface of the conventional seat with which it is to be used.

The core 2 is composed of material of two characteristics, a rigid, relatively hard material in the upper part 8, and a more porous, compressible material, capable of shape conforming properties, in the lower part 9. The two are bonded together to form a core having a rigid upper portion and a deformable lower portion.

The upper portion of the core can be made of any suitable rigid material. It may be made from wood flour and resin, as many conventional seats, or it may be made from a suitable plastic. If formed of plastic, the material preferably should be a high density material for strength and rigidity. It may be one of the urethanes, polystyrenes, urea formaldehydes, etc., having the desired characteristics. The upper core portion may be molded, foamed or otherwise formed to shape, depending upon the material used, or it may, if desired, be cut from a preformed sheet.

The lower portion of the core, if formed from a plastic, will be less dense than the upper section. Foamed plastics have been found suitable for the purpose, and although open or closed cell plastics can be used, a closed cell non-connecting type is preferable. The material must have some flexibility, compressibility, or shape conforming characteristics, coupled with the strength required for the purpose. The material may be one of the urethanes, polystyrenes or polyethylenes. Although other plastics are suitable, these will serve as an example. The flexible section of the core should be at least one-half inch, and not more than one and three-quarters inch thickness for proper function.

The upper and lower sections may be joined in any convenient manner. They may be separately formed and joined by one of the well known compatible, flexible adhesives commonly used to join plastics of different densities and flexibilities. On the other hand, one of the sections may be formed and placed in a mold having the proper amount of unfoamed plastic material to form the other section, and the second section foamed in place, to attain a simultaneous molding and jointure of the sections.

In many instances, it is desirable to lower the center of gravity of the seat, while shifting the center of gravity toward the inner side of the seat. This provides added stability, and aids in assuring maintenance of the auxiliary seat on the conventional seat during use. This may be accomplished by adding a weighted member 10 about the inner lower edge of the core. This member may be of any material having the required weight and it may be adhered to the core, or if the weighted member has some porosity, it may be bonded to the plastic of the core during the molding process.

The outer coating, or casing, 3 is preferably of two joined parts, one coating 11 over the rigid top section of the core and a flexible section 12 over the lower, flexible section of the core, but the flexible coating can be used over the entire core if desired. If two materials are used, the upper section may be coated with any abrasion resistant, smooth surfaced material which is water, acid and alkali resistant. The underside will be coated with a material having the characteristics mentioned above for the upper section coating, and, in addition, it must be flexible to allow the lower core section to deform to assume the contour of the surface upon which it is placed. Suitable

material for the lower coating can be found among the epoxies, polyesters and urethanes. The thickness of the lower coating, or skin, 12 should not be less than one-sixty-fourth of an inch to provide adequate strength and covering for the lower core, and it should not be thicker than one-sixteenth of an inch to allow full freedom of the lower flexible core portion in conforming to the surface upon which the seat rests. The coatings may be applied by spraying onto the core, dipping the core into the coating material, or by applying the coating to the mold cavity before adding the plastic material for the core to the mold.

The finished seat will be quite thick, for example four inches, to materially raise the seating surface when placed upon the usual toilet seat. The outward appearance is similar to a conventional seat, except for height, and the auxiliary seat will have all of the features of sanitation of the usual seat. It differs from the normal seat in that it has no connection to the bowl or to other parts of the water closet, and it can be placed upon the permanent seat and its lower surface will conform to the upper part of that seat to provide a seat-gripping, stable addition to the fixed seat. The stability of the auxiliary seat is obtained primarily by the flexibility of its under portion, so that it can assume the shape of the surface on which it rests and resist lateral sliding. The use of a weighted member about the lower inner edge lowers the center of gravity and helps hold the seat in place. The lower, inner edge of the seat may be offset downwardly, to provide a depending skirt, or lip, 13 to further resist lateral movement. Its stability will be such that even though a user should accidentally, or thoughtlessly, impose a transverse, or lateral, force upon it, it will not shift position on the lower seat. This is most desirable in a device of this nature where the strength, balance and agility of the user is much less than that of the average person.

In FIGS. 2, 3 and 4 of the drawings, the auxiliary seat is shown in relation to associated parts of a conventional toilet 14, having the usual bowl 15, seat 16, seat cover 17 and flush box 18. It will be noted that the auxiliary seat fits firmly upon the toilet seat 16, the bottom surface 7 of the auxiliary seat conforming to the shape of the conventional seat upper surface to hold tightly against tilting or lateral movement. Use of the auxiliary seat is possible with the toilet seat cover 17 raised, and, when the auxiliary seat is removed, the toilet is completely standard.

In FIG. 5 a slightly modified seat 14 is shown. This seat dif-

fers from the one just described only in configuration. Seat 19 has an open front 20, and is for use with a conventional seat having an open front. Structurally, the seat 19 is exactly the same as the seat shown in FIGS. 1 through 4.

While in the above practical embodiments of the invention have been disclosed, the particular details of construction shown and described are merely for purposes of illustration, and the invention may take other forms within the scope of the appended claims.

I claim:

1. An auxiliary invalid or geriatric seat for use upon a conventional toilet seat to raise the seating level comprising, a seat-forming member having a horizontal contour approximating that of the conventional seat upon which it is to be used and of substantial thickness, the seat-forming member having a rigid upper section to support the body of a user and a flexible, shape-conforming lower section to closely embrace the upper surface of a conventional seat upon which the auxiliary seat is placed, the outer surface of the seat-forming member being smooth and impervious to moisture.

2. An auxiliary invalid or geriatric seat as claimed in claim 1 wherein, the seat forming member is composed of an inner core and an outer coating, the core having an upper section which is rigid throughout and a lower section which is flexible, and the coating is flexible throughout the area of the core lower section.

3. An auxiliary invalid or geriatric seat as claimed in claim 2 wherein, the core upper section is of a high density plastic, the core lower section is of a lower density plastic, and the coating is a water-resistant resin.

4. An auxiliary invalid or geriatric seat as claimed in claim 3 wherein, the lower section of the core has a thickness in the range of one-half inch to one and three-quarters inch.

5. An auxiliary invalid or geriatric seat as claimed in claim 4 wherein, the coating has a thickness in the range of one-sixty-fourth inch to one-sixteenth inch.

6. An auxiliary invalid or geriatric seat as claimed in claim 2 wherein, there is a weighted member within the coating about the lower inner lower edge of the seat-forming member.

7. An auxiliary invalid or geriatric seat as claimed in claim 6 wherein, the lower inner edge containing the weighted member forms a depending skirt to engage the inner edge of the conventional toilet seat.

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