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C. R. MORRIS

2,333,732

SEAT

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Fig. 1.

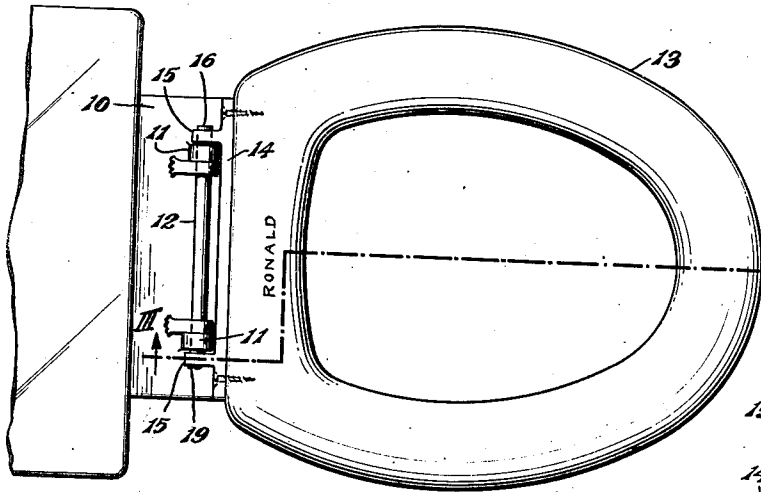


Fig. 2.

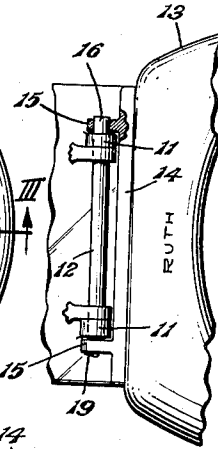


Fig. 3.

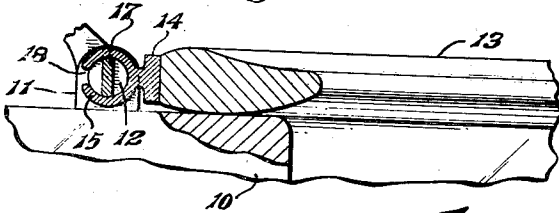


Fig. 6.

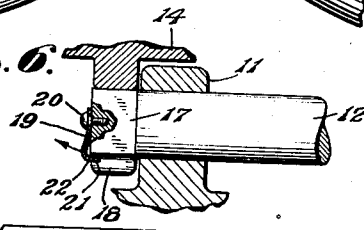


Fig. 7.

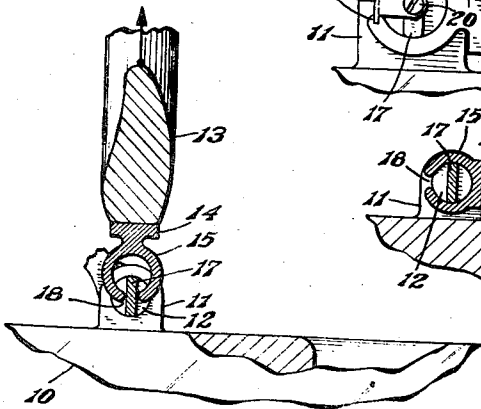


Fig. 4.

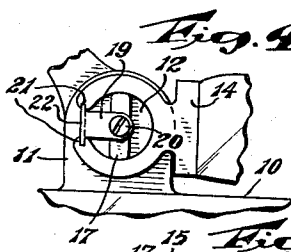


Fig. 5.

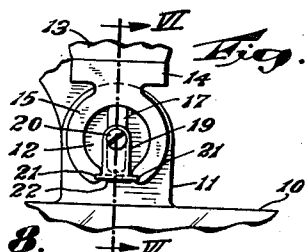
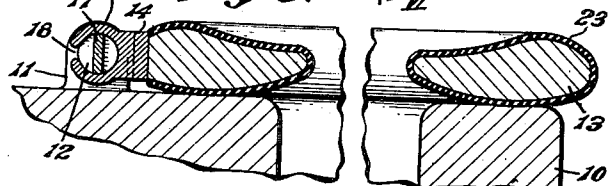


Fig. 8.



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SEAT

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2 Claims. (Cl. 4-240)

This invention relates to seats, and more particularly to hinged toilet seats.

Present-day sanitation, sterilization and hygienic progress has been rapid and in many instances marked with successful and outstanding accomplishment. However, in the matter of hygiene as applied to toilet seats and use thereof, advancement has lagged. Body posture, area of seat contact, and other considerations have direct bearing upon intestinal evacuation. Then again, common use by all corners of toilet seats in public places has led to spread of skin and other diseases and this again adds to the problems which have heretofore gone unsolved and which the present invention seeks to remedy.

An object of the present invention accordingly is to adequately solve the growing problems of the past affecting construction and use of toilet seats, with due regard to medical and other considerations involved;

Another object of the invention is to provide a toilet seat susceptible as well to family use, to hotel and similar use, and to so-called "pay-station" use.

Yet another object of the invention is to provide a reversible seat, and to provide a reversible seat offering a choice of seating configuration or contour.

A further object of the invention is to provide for ready removal, reversal, application and swinging of the seat inclusive of simple and effective means for preventing inadvertent removal.

Still further objects will appear to those skilled in the art as the description progresses, both by direct statement thereof and by implication from the context.

In the accompanying drawing, wherein like numerals of reference indicate similar parts throughout the several views:

Figure 1 is a plan of a toilet seat in its position of use and embodying my invention;

Figure 2 is a partial similar view with the seat turned with its other side up;

Figure 3 is a sectional view on line III—III of Fig. 1;

Figures 4 and 5 are end views of the latch-end of the hinge mounting, showing seat positions of the seat lowered and of the seat raised, respectively;

Figure 6 is a sectional view on line VI—VI of Fig. 5;

Figure 7 is a sectional view similar to Fig. 3 showing the hinged end of the seat and with the hinge partially separated; and

Figure 8 is another sectional view similar to Fig. 3 and showing a modified construction.

In the specific embodiment of the invention illustrated in said drawing, the reference numeral 10 designates the usual toilet bowl at the rear part of which are provided metallic or other bracket means 11 for mounting a transverse hinge pin 12 parallel to and above the upper surface of said bowl to the rear of the bowl cavity. Both ends of the hinge pin project beyond the fixed bracket means, and it is upon these projecting ends that the toilet seat 13 is removably hinged. It is a feature of the present invention to provide a seat which will swing up and down as usual, but which is readily removable and replaceable and which is reversible and differently shaped on opposite sides.

In carrying out the removable feature of the invention, the socket portion of the hinge is carried by the seat, being fixed at the rear thereof, and here shown as comprising a bar 14 forming the rear edge of the seat and having jaw-like hinge knuckles 15 projecting rearwardly therefrom with said knuckles spaced apart a distance such that they will be at the projecting ends of the hinge pin when mounted thereon. Both knuckles are the same shape and construction so as to interchangeably function on either end of the hinge pin. The ends of the hinge pin may, however, differ, and as here shown one end 16 is truly cylindrical, whereas the other end 17 is flattened. Both knuckles have a rear gap or opening 18 therein wide enough to admit entry of said flattened end of the pin by a movement of the knuckle transverse to the pin. Preferably the thinned or flattened portion is vertically disposed and thereby necessitates the seat to be in a vertical position to register the gap with the flat pintle portion of the pin for removal or replacement. Accordingly, to remove the seat from the bowl, it is first brought to vertical position so as to register the thinned pintle portion of the pin and the gap of the knuckle, at which position, as shown in Figure 7, the knuckle can be lifted from the pin.

Since only one end of the hinge pin is provided with a flattened pintle portion and the other end of the pin provides a cylindrical pintle portion, removal of the seat involves lifting the one side by virtue of flattened pintle releasing the knuckle, and thereafter sliding the other knuckle off the end of the cylindrical pintle. The said cylindrical pintle and knuckle have a sufficiently loose fit which will permit the neces-

sary side-tilt to the seat in the performance of the removal operations just described.

Suitable means are preferably provided to prevent the inadvertent disengagement of the flattened pintle and its juxtaposed knuckle. As here shown a means for that purpose is exemplified as a resilient leaf-spring detent 19 one end of which is held flatwise against the outer end of the pivot by a stud screw 20 threaded into the said pin coaxially therewith. By virtue of the shoulder of the stud screw, the detent may revolve even though the screw is tight in the pin. The outer end of the detent bends laterally inward under the pin and has its side edges engaged in notches 21 in the knuckle. The bent portion or lip 22 of the detent therefore traverses the gap in the knuckle, and by engagement with the knuckle prevents inadvertent withdrawal, but since it is resilient, it can be swung outward, as indicated by the arrow in Fig. 6, to release the knuckle when it is desired to remove the seat.

The removal of the seat is advantageous from several view-points. It enables the seat to be cleansed, as by washing in a tub or elsewhere; it enables the seat to be removed after each guest using it departs and promptly replaced by a duplicate but steril seat, thereby permitting the first one to be taken to a sterilizing room for its period of sterilization; and it permits a prospective user to make a selection of which side shall be used.

Proper contact of the toilet seat with the seat of the person using it has its influence on the ease and/or completeness of intestinal evacuation. I accordingly make the body-contacting surface on one side of the seat different from the body-contacting surface of the other side, and as illustrative thereof, the one is concave to the body and the other convex to the body. Other shapes or contours, however may be employed within the scope of my invention. Suitable marking, here illustrated as appropriately inscribed names, may be employed for ready identification of the sides, that the right side will always be used by a certain person where the invention is employed in a home, for instance.

Again, it is within the purview of the invention to provide cushioning or other covering on the seat, which covering is preferably waterproof,

readily cleaned and sterilized and which will both add to the desirability to the user from the standpoint of body contact and to the desirability as a cushion against the toilet bowl. A cushioning cover 23 coextensive with the seat area has been shown in Figure 8, it being understood that surface extent, body thickness or variation, material and other characteristics being susceptible to selection of manufacturer or user. Obviously other detail changes and modifications may be made in construction and use of my improved toilet seat, so that all matter contained in the specification or illustrated in the drawing, shall be interpreted as exemplary and not in a limiting sense. It is also intended that the following claims are to be understood as covering all the generic and specific features of the invention herein shown and described and all statements of the scope of the invention herein set forth as a matter of language which might be said to fall therebetween.

Having thus described the invention, I claim:

1. A toilet seat having a middle opening therethrough with the seat providing body-engaging portions at opposite sides of said opening, and at the top and bottom of the seat, each said side portion having its top surface concave in cross section and having its bottom surface convex in cross section and both surfaces converging to a rounded edge in cross section and said rounded edge constituting the perimeter of said opening and said edge being situated between and offset from planes defining the uppermost and lowermost levels of the top and bottom body-engaging portions of the seat.

2. A toilet seat hinge comprising a bracket, a hinge pin fixedly carried by the bracket, ends of said hinge pin constituting pintles, and hinge knuckles having pintle sockets and removably mounted on said end pintles, one of said knuckles having an opening less than the maximum diameter of the said socket and one of said pintles having a reduced thickness in one diametric direction permitting disengagement of the knuckle therefrom through said opening in a direction of a diameter, one of said pintles having means preventing inadvertent disengagement of the pintle from the pintle socket.

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