

1

3,344,441

TOILET SEAT DISINFECTOR
Anthony J. Kelly, 516 Princeton Road,
San Mateo, Calif. 94402
Filed May 24, 1965, Ser. No. 457,954
6 Claims. (Cl. 4—233)

ABSTRACT OF THE DISCLOSURE

A cover swingable into a position to form a hood over and around a toilet seat and top rim of a toilet bowl, and a pressurized container provided on the cover and containing a disinfecting medium that is automatically discharged into the interior of the hood to render the seat and bowl rim sanitary when the cover is lowered.

The present invention relates to improvements in a toilet seat disinfecter. It consists of the combinations, constructions, and arrangement of parts, as hereinafter described and claimed.

It is a well known fact that public toilets are a source of spreading various contagious diseases and body mites. Accordingly, and as the cardinal object of this invention, it is proposed to provide a toilet seat disinfecter that may be readily attached to a toilet seat so as to discharge a disinfecting medium onto the seat prior to the latter being occupied by an individual.

More specifically stated, it is proposed to provide an attachment defining a cover that may be lowered into a position to enclose the toilet seat, with the cover being swingable into a raised position so that it will not interfere with the use of the seat by an individual. As the cover is lowered to form a hood over the seat, the disinfecting medium is automatically discharged into the interior of the hood, resulting in sanitary condition of the seat.

Another object of the invention is to provide a toilet seat disinfecter that may be mounted on the usual hinge means that connects the seat to the toilet bowl, with the disinfecter being attachable to hinge means of various sizes.

A still further object of the invention is to provide a toilet seat disinfecter having a cover designed to enclose the main part of the toilet seat, and this cover having vents that will eventually permit the disinfecting medium to escape to the atmosphere, whereby a toxic condition will not result in the toilet bowl, which will exist at the time the seat is used.

Another object of the invention resides in the provision of a cover of the character described which defines front and rear sections that are hinged together so that these sections may be folded together upon one another when the cover is raised, thus occupying a small space.

Other objects and advantages will appear as the specification proceeds. The novel features of the invention will be set forth in the appended claims.

Drawing

For a better understanding of the invention, reference should be had to the accompanying drawing, forming part of this specification, in which:

FIG. 1 is a top plan view of my toilet seat disinfecter showing it as being mounted on a conventional toilet.

FIG. 2 is a side elevational view thereof, the toilet bowl being fragmentarily illustrated.

FIG. 3 is a transverse sectional view taken along the plane 3—3 of FIG. 1 and disclosing the details of the attachment assembly.

While I have shown only the preferred embodiment of the invention, it should be understood that various

2

changes, or modifications, may be made within the scope of the appended claims without departing from the spirit thereof.

Detailed description

Referring now to the drawing in detail, it will be noted that the upper portion of a conventional toilet bowl A has a seat B swingably fastened thereto by a hinge structure or means C so that the seat may be lowered and raised relative to the bowl. This hinge structure has been shown as including brackets 10 having bolts 11 secured to the bowl, and a horizontal journal rod 12 is rotatably carried by these brackets to provide a support on which the rear portion 13 of the seat is journaled.

The disinfecter attachment D defines a cover E that is hingedly supported for swinging movements into lowered and raised positions relative to the seat B. This cover has front and rear sections E¹ and E², respectively, that are hinged together by pins 14 so that these sections may be folded together upon one another about the hinge pins 14, and then the cover E may be raised about the axis of the journal rod 12 in the manner hereinafter described so as to expose the main part of the seat B for use.

Each cover section defines a top wall 15 having marginal flanges 16 depending therefrom, and the cover is dimensioned to receive and enclose the main portion of the seat B and the upper rim of the toilet bowl A when the cover E is lowered, as shown in FIG. 2, with the marginal flanges projecting below the seat, whereby the cover provides a hood over the seat. It will be apparent from FIGS. 1 and 2 that these marginal flanges are spaced laterally from the seat and the top walls 15 are spaced above the seat by support pegs 17 that depend from the top walls and rest on the upper surface of the seat, when the cover provides a hood over the seat. Thus an air space is provided around and over the seat to receive a disinfecting medium that may be discharged from a self-contained pressurized container F.

The container F is secured to the cover section E² to move therewith, the container being mounted in an opening 18 in the top wall of the rear section E² and held in place by a lock-bar 19 that is swiveled at one end by a pin 20 of this top wall, which swings in and out of position as required, permitting easy replacement of empty containers. A trigger 21 is provided on the container and is positioned to strike the seat for actuating a disinfecting medium release button 22 so as to release this medium when the cover E is being closed and returns to cocked position when the cover is opened. Twin spouts 23 on the container are canted for directional flow of the disinfecting medium that is released from the pressurized container during each operation, causing sprays 24 to fan-out over the seat, as indicated in FIG. 1. The pressurized medium enclosed in the container may be of any suitable type that will sterilize the seat B and render the latter sanitary for use.

When the cover sections E¹ and E² are folded about the hinge pins 14 and then the cover is swung into raised position about the journal rod 12, as indicated by dot-dash lines in FIG. 2, the main portion of the seat B will be exposed for being occupied by an individual.

The cover E is provided with at least one vent opening 25 that communicates with the atmosphere to permit eventual escape of the disinfecting medium from the interior of the cover while the latter remains in lowered position over the seat B. In FIG. 1 there has been shown a pair of the openings 25 that are provided by omitting the depending flanges on the rear edge 26 of the cover section E². The disinfecting medium is toxic, and it is desired to avoid any concentration thereof when the cover is

3

raised initially by an individual, and thus the medium is gradually dissipated into the atmosphere.

It will be noted that an attachment assembly G is provided on the cover E for removably securing the latter to the hinge structure or means C between the seat B and the bowl A, and this attachment assembly is illustrated in FIGS. 1 to 3, inclusive. It defines a pair of telescoping arms 27 and 28 that are curved transversely to permit telescopic action (see FIG. 2). An extension 29 projects rearwardly from the cover section E² and has a curved saddle 30 that is abutted against the curved part of the arm 27. Both arms have slots 31 formed therein and through which a clamping screw 32 extends so as to retain these arms in adjusted positions.

As shown in FIG. 3, the telescoping arms 27 and 28 have tubular ends 33 that receive washers 34, the latter fitting over the opposite ends of the journal rod 12 with these washers serving as thrust bearings. The purpose of adjusting the arms is to permit the attachment assembly G to be applied to hinge structures C of various lengths. The attachment assembly allows the cover E to be raised and lowered about the axis of the journal rod 12, as will be apparent by reference to FIG. 2 of the drawing. Lifting handle 35 is provided on cover section E¹ and adjacent edges 37 of the cover sections overlap one another, when closed to provide a tight seal therebetween.

I claim:

1. The combination with a toilet seat, of a disinfectant attachment comprising:

- (a) a cover hingedly supported on a toilet bowl for swinging movements into lowered and raised positions relative to the seat;
- (b) the cover defining a top wall having marginal flanges depending therefrom, and the cover being dimensioned to receive and enclose the main portion of the seat and the upper rim of the toilet bowl when the cover is lowered, with the marginal flanges projecting below the seat and the bowl rim, whereby the cover provides a hood over the seat and the bowl rim;
- (c) a self-contained pressurized container enclosing a disinfecting medium therein under pressure and being secured to the cover to move therewith, the container being provided with a disinfecting medium release button and a trigger arranged to strike the seat and actuate this button to discharge said medium from the container into the interior of the cover so as to disinfect the seat and the bowl rim as the cover is moved into lowered position;
- (d) and the cover being movable into a position to expose the main portion of the seat for being occupied by an individual when the cover is raised.

2. The combination as set forth in claim 1;

- (e) and in which the marginal flanges are spaced laterally from the seat and the bowl rim, and the top wall of the cover is spaced above the seat, when the

4

cover provides a hood over the seat and bowl rim, whereby air space is provided around and over the seat and bowl rim to receive the disinfecting medium discharged from the container.

3. The combination as set forth in claim 1;

- (e) and in which the marginal flanges are provided on the front and both lateral sides of the cover, and the rear edge of the cover is open to provide vents communicating with the atmosphere to permit eventual rearward escape of the disinfecting medium from the interior of the cover while the latter remains in lowered position over the seat and bowl rim.

4. The combination as set forth in claim 1;

- (e) and in which the cover defines front and rear sections that are hinged together so that these sections may be folded together upon one another to provide a compact arrangement when the cover is raised to expose the seat for use, and these cover sections having adjacent edges that overlap one another when the cover is lowered to provide a tight seal therebetween.

5. The combination as set forth in claim 1;

- (e) and in which the seat is secured by hinge means to a toilet bowl, whereby the seat may be raised and lowered;
 - (f) the cover having an attachment assembly that is removably secured to the hinge means between the seat and the bowl;
 - (g) the attachment assembly including a pair of telescoping arms that are adjustable endwise relative to one another, the arms having washers for fitting over the opposite ends of a journal rod of the hinge means, and a clamping screw for securing these arms in adjusted position, whereby the attachment assembly may be applied to hinge means of various lengths.
6. The combination as set forth in claim 1;
- (e) and in which the top wall of the cover is provided with an opening having the pressurized container mounted therein;
 - (f) and a lock-bar is swingably carried by the cover for movement into a position to engage with the container for holding the latter in place, and the lock-bar being movable into another position to release the container for removal.

References Cited

UNITED STATES PATENTS

1,051,631	1/1913	Pickles	4—233
1,107,685	8/1914	McLean	4—233
1,165,986	12/1915	Mayo et al.	4—233
1,333,073	3/1920	Friedrich	4—233
2,104,947	1/1938	Joosten	4—233

LAVERNE D. GEIGER, *Primary Examiner*.

D. MASSENBERG, *Assistant Examiner*.