Feb. 7, 1961 C. E. VAUSE 2,970,322

DEODORIZER FOR TOILET AND THE LIKE

Filed Jan. 9, 1959

Fig. 1

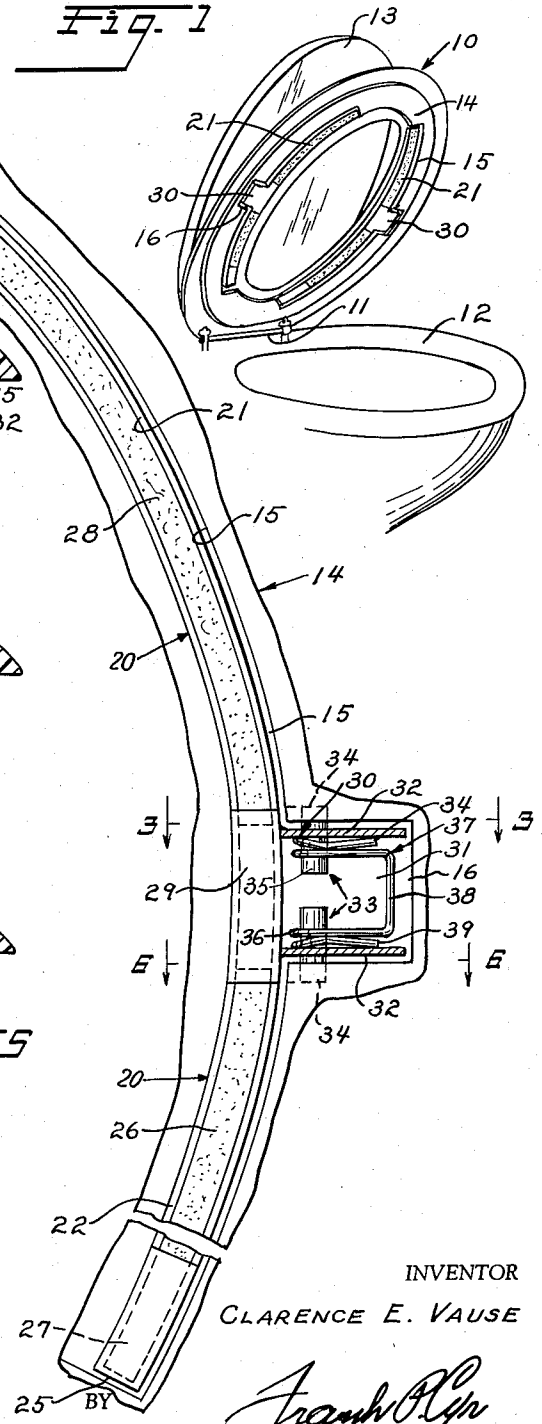


Fig. 2

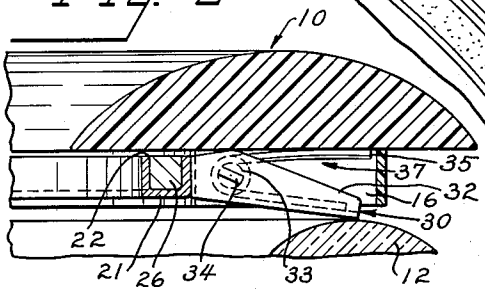


Fig. 3

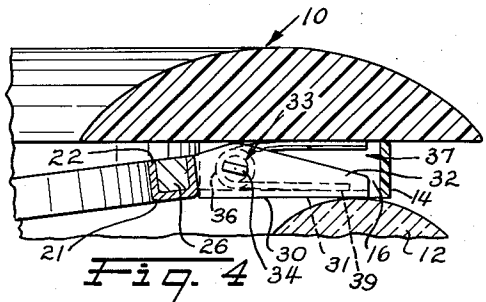


Fig. 4

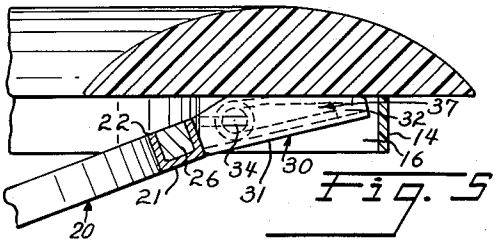


Fig. 5

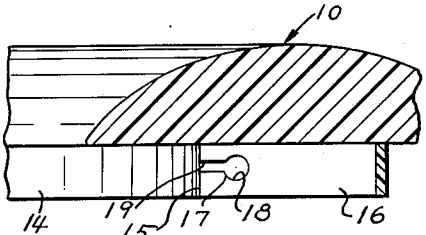


Fig. 6

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DEODORIZER FOR TOILET AND THE LIKE

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6 Claims. (Cl. 4—229)

This invention relates to a deodorizer, and more particularly to a deodorizer for toilets or the like.

A primary object of this invention is the provision of a deodorizer associated with the seat of a toilet which is normally inoperative when the seat is either in raised or lowered position, but which is moved immediately to operative position when pressure is applied to the toilet seat, as by a person sitting thereon.

An additional object of the invention is the provision of a device of this character which may be made as a component part of a new toilet seat, or which may be readily and inexpensively applied to an existing toilet seat.

A more specific object of the invention is the provision of a pair of arcuate channel shaped deodorizing elements adapted normally to seat in a groove in the underside of a toilet seat with the open face of the channel in abutting relation with the underside of the seat, to seal the opening and prevent waste of the deodorant, each arcuate member being provided with a centrally positioned integral lug pivotally mounted in an opening in the underside of the toilet seat and offset relative to the plane of the arcuate member, so that pressure on the seat causes the lugs by their engagement with the rim of the toilet bowl to tilt the arcuate members downwardly out of their associated groove, to expose the open faces of their channels, and release the deodorant fumes into the toilet bowl.

A further specific object of the invention is the provision of spring means associated with each lug normally biasing the lugs outwardly to bias the arcuate members into their associated channels.

Still another specific object of the invention is the provision of a pair of wicks, one disposed on either side of the central lug in each channel shaped arcuate member and a deodorant reservoir associated with each wick, each reservoir being positioned at the lower end of its associated wick when the seat is in raised position.

An additional object of the invention is the provision of flat pivot pins on each side of each lug engaging in key hole openings in the sides of each lug retaining opening and offset relative to the normal plane of the lugs so that when the seat is raised and the arcuate members extended beyond their normal open position, the pins may be removed from their associated slots to permit removal of the arcuate members for cleaning, replacement of the wicks, refilling the reservoirs or any other desired purpose.

Still another object of the invention is the provision of a device of this character which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble and utilize.

Other objects reside in the combinations of elements, features of construction, and arrangements of parts, all as will be more fully pointed out hereinafter and shown

in the accompanying drawing which discloses a preferred embodiment of this inventive concept.

In the drawing:

Figure 1 is a perspective view of a toilet seat embodying the device of the instant invention, shown in association with a portion of a toilet bowl and a seat cover.

Figure 2 is an enlarged fragmentary view of the underside of a toilet seat having a groove therein showing one of the arcuate deodorizer elements of the instant invention in inoperative or closed position therein.

Figure 3 is an enlarged fragmentary sectional view taken substantially along the line 3—3 of Figure 2 as viewed in the direction of the arrows, showing the deodorizing element in closed or inoperative position.

Figure 4 is a view similar to Figure 3, but showing the deodorizing element in open or operative position.

Figure 5 is a view similar to Figures 3 and 4 but showing the deodorizing element in fully extended position, ready for removal from the seat, the latter being in raised position, and

Figure 6 is a sectional view taken substantially along the line 6—6 of Figure 2, with the deodorizing element removed showing the construction of the key hole mounting openings.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing in detail, and more particularly to Figure 1, there is generally indicated at **10**, a toilet seat hingedly mounted as on a conventional hinge bar **11**, on a toilet bowl **12**, and provided with the usual hinged cover **13**.

The underside of seat **10** is provided with a relatively wide annular flange **14**, which may be formed integral with the seat during manufacture or which may be added to a conventional seat as an accessory. Cut into the underside of flange **14** are two oppositely disposed grooves or cut away portions **15** open on their under and inner sides, at the center of each of which is a laterally offset opening **16**, cut into the flange **14** and open on its underside. A keyhole mounting slot **17** is provided on each side of opening **16** adjacent cut away position **15**, and includes an enlarged inner opening **18**, and an access slot **19** (See Figure 6).

A deodorizing member generally indicated at **20** is mounted in each cut away portion and since these members **20** are substantially identical in configuration, though opposite, only one hereinafter will be described in detail.

Each deodorizing member **20** comprises an arcuate channel shaped member **21** dimensioned to seat in cut away portion **15** and having its open side **22** positioned to engage the underside of seat **10**. Suitable conventional gaskets or sealing material (not shown) may be provided either on the adjacent underside of the seat or on the rim of the open side of member **21**. The ends of each member **21** are closed as at **25** and positioned interiorly of the channel shaped member **21** is a first absorbent wick **26** which extends substantially from one end of the interior of member **21** to substantially its center. A reservoir **27** for deodorant open at one end contains the end of the first wick, so that deodorant may be absorbed in this wick by capillary action as necessary. A second wick **28** extends from substantially the center of the interior of member **21** to the opposite end, and is supplied by deodorant from a reservoir **29** located at the center of arcuate member **21** in a manner similar to that previously described. The reservoirs are so positioned that when the seat **10** is raised each wick extends upwardly from the open end of its associated reservoir to prevent spilling of the deodorant fluid.

A U-shaped lug or bracket **30** extends from the convex side of arcuate member **21** into opening **16**. Lug

30 has a bottom wall 31 which extends downwardly at an obtuse angle to the plane of the under or closed side of arcuate member 21, and two opposite side walls 32, which are inclined relatively sharply downwardly from the plane of the open side 22. Pivot pins 33 extend through each of walls 32 adjacent to their juncture with member 21. The portion 34 of each pin 33 exterior of walls 32 is flat and inclined at an angle relative to the plane of bottom wall 21, so that when the device is moved to the extreme angle shown in Figure 5, these ends may be passed through the slotted portions 19 of keyhole slot 17 to seat in the enlarged openings 18 for pivotal mounting of the lug 30 and its associated arcuate member 21. Obviously when the device is moved to the position of Figure 5 it may be readily assembled and disassembled.

The portion 35 of pin 33 which extend interiorly of walls 32 are circular in cross section and are adapted to be surrounded by coiled portions 36 of a wire spring generally indicated at 37, which includes a transverse bight 38 which abuts the underside of seat 10 in opening 16 and a pair of end lugs 39 which engage the bottom wall 31 of lug 30, the arrangement being such as to normally bias lug 30 to the position shown in Figure 3, with arcuate member 21 in closed or inoperative position with its open face 22 engaging the underside of seat 10. When pressure is applied to the seat as by a person sitting thereon, lug 30 is tilted by its engagement with the rim of bowl 12 to the position shown in Figure 4, the arcuate members are thus tilted downwardly disengaging their open faces 22 from the underside of seat 10 and deodorant is disseminated from the wicks 26 and 28 into the interior of the toilet bowl 12.

From the foregoing it will now be seen that there is herein provided a deodorizing device which accomplishes all of the objects of this invention and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In a deodorizing device, the combination of a toilet seat having a cut away portion in the underside thereof and a recess extending from said cut away portion, an elongated channel shaped deodorizing member having an open face normally abutting the underside of said toilet seat in said cut away portion, a deodorizing element in said deodorozing member, a lug secured to said deodorozing member and offset from the plane of said deodorizing member pivotally mounted in said recess whereby pressure on said seat compresses said lug between the underside of said seat and the rim of a toilet bowl to tilt said deodorizing element out of said cut away portion to expose said open face and release deodorant from said deodorizing element.

2. The construction of claim 1, wherein there are provided two arcuate cut away portions in the underside of the toilet seat and two deodorizing members conforming in configuration to the cut away portions.

3. The structure of claim 2 wherein spring means are provided in association with said lug normally biasing said deodorizing member toward seat engaging portion.

4. The structure of claim 3, wherein said deodorizing element comprises at least one wick positioned in said channel shaped member and a deodorant reservoir for said wick.

5. The structure of claim 4, wherein said lug is channel shaped and provided with cut away side walls to permit pivotal movement in said recess.

6. The structure of claim 5, wherein the sides of said recesses are provided with keyhole slots and the pivotal mounting of said deodorizing member includes a pair of flat pivot pins having their flat sides lying in a plane offset from the planes of the bottom of said channel shaped element and lug whereby upon excessive tilting of said lug beyond its normal range of movement said pins may be disengaged from said keyhole slots for removal of said deodorizing member.

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