Aug. 30, 1955 A. F. KIMZEY 2,716,243

DEODORANT ATTACHMENT FOR TOILET BOWL

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Fig. 1

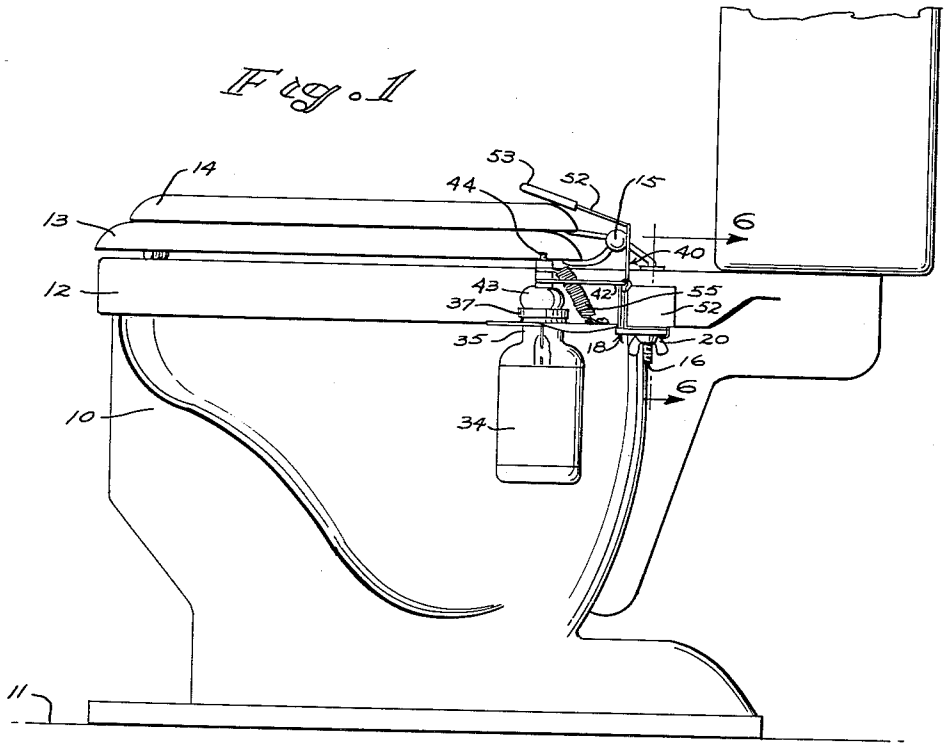


Fig. 5

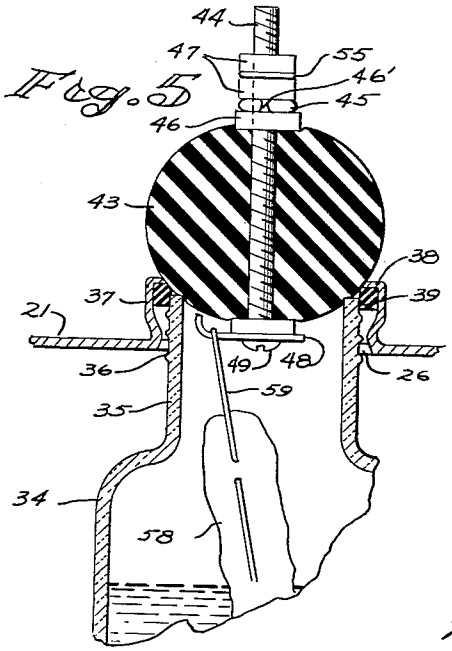
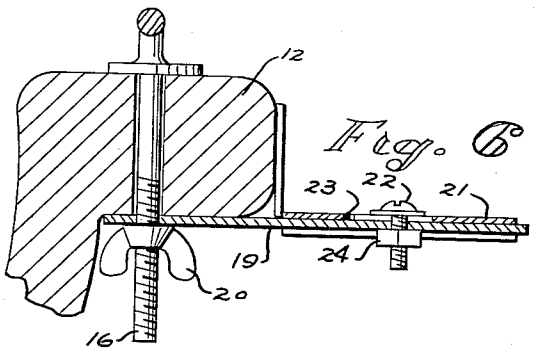


Fig. 6



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Fig. 2

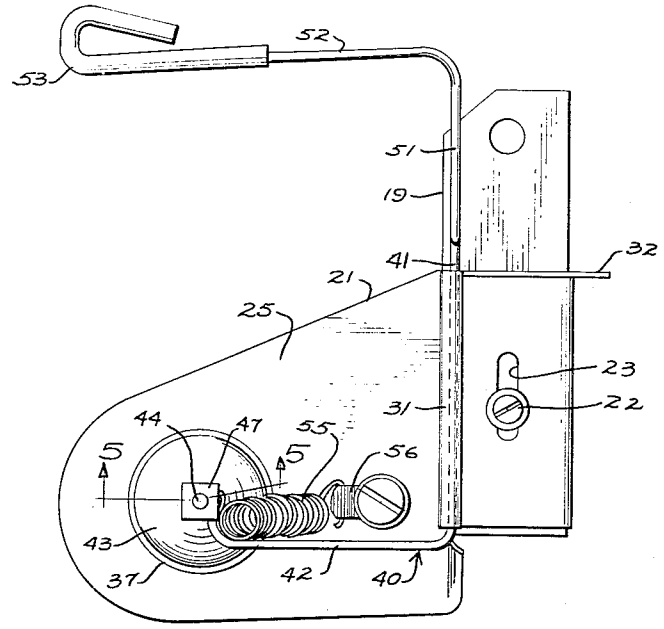


Fig. 3

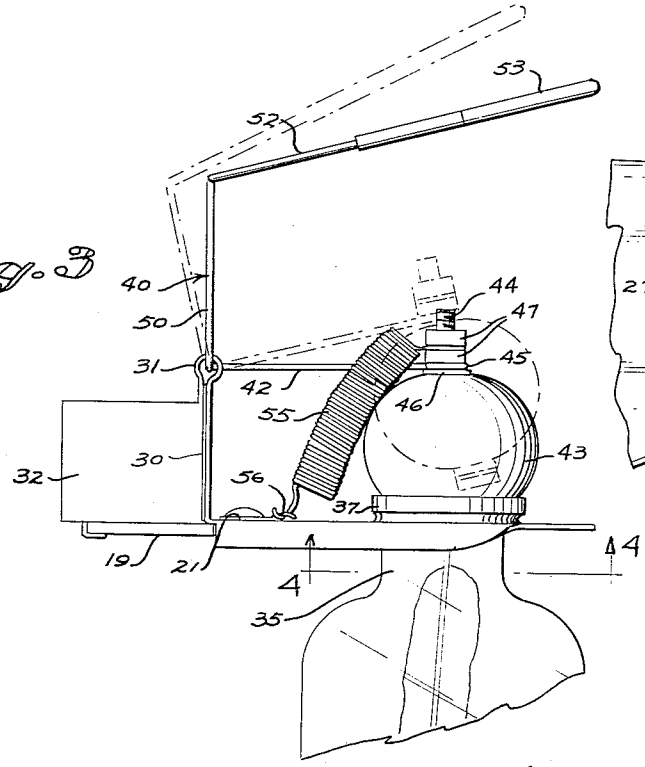
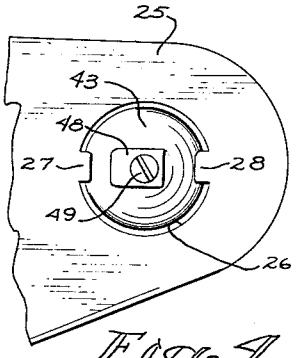


Fig. 4



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DEODORANT ATTACHMENT FOR TOILET BOWL

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2 Claims. (Cl. 4—222)

This invention relates to deodorant attachments for toilet bowls and more particularly to a deodorant attachment having a replaceable container for liquid deodorant.

It is among the objects of the invention to provide an improved deodorant attachment including a support bracket which can be easily mounted on a toilet bowl with no necessary modification of the bowl construction, and a replaceable deodorant container detachably mounted on the support; which includes means operated by the associated toilet seat cover to close the deodorant container when the cover is down, and open the container and expose the deodorant carrying wick to the atmosphere when the cover is raised; which includes resilient means maintaining the container closed when the associated toilet seat cover or lid is in lowered position; and which is simple and durable in construction, economical to manufacture, easy to install, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawings wherein:

Figure 1 is a side elevational view of a toilet bowl assembly with a deodorant attachment illustrative of the attachment operatively mounted thereon;

Figure 2 is a top plan view of the deodorant attachment;

Figure 3 is a side elevational view of the attachment;

Figure 4 is a fragmentary bottom plan view of the attachment;

Figure 5 is a fragmentary cross sectional view on an enlarged scale on the line 5—5 of Figure 2; and

Figure 6 is a fragmentary cross sectional view on an enlarged scale on the line 6—6 of Figure 1.

With continued reference to the drawings, the toilet bowl assembly may be of well known construction and includes a toilet bowl 10 mounted at its bottom end on a floor 11 and having a bead or flange formation 12 extending around its upper end and providing a top surface disposed substantially in a horizontal plane. A toilet seat 13 is disposed above the top surface of the bowl and a seat cover or lid 14 is disposed above the seat 13. A hinge 15 is connected to the seat and the cover at the rear side of the top end of the bowl and this hinge is connected to the bowl by bolts, one of which is indicated at 16, extending through corresponding apertures in the rear portion of the flange formation 12 on the bowl.

The deodorant attachment comprises a sheet metal bracket, generally indicated at 18, including an elongated plate 19 having one end disposed under the lower edge of the toilet bowl flange 12 and provided with an aperture receiving the lower portion of the bolt 16, as illustrated in Figure 6. A wing nut 20 is threaded onto the screw threaded lower end portion of the bolt 16 and bears against the under side of the plate 19 to securely clamp the plate against the other side of the bowl flange 12. The plate 19 projects outwardly from the outer edge

of the flange 12 and a sheet metal holder 21, also constituting a part of the bracket 18, is adjustably mounted on the plate 19 by a screw 22 which extends through a slot 23 in the holder and through a registering aperture in the plate 19 and receives a nut 24 at the lower side of the plate 19 to clamp the holder in adjusted position relative to the plate. The holder 21 includes a portion 25 projecting outwardly from one side edge of the plate 19 and provided at a location spaced from the plate with an aperture 26 of substantially circular shape with diametrically opposed tongues 27 and 28 projecting inwardly of the perimeter of the circular aperture. A wall 30, comprising a double thickness of the material of the holder 21, projects perpendicularly upwardly from one edge of the holder along the edge of the plate 19 from which the holder portion 25 extends and this wall is provided along its edge remote from the holder with a cylindrical sleeve formation 31 disposed above and substantially parallel to the upper surface of the plate 19. This wall 30 is supported in its position perpendicular to the holder by a wall 32 which extends perpendicularly upwardly from the holder at one end of the wall 30 and extends transversely across the plate 19, being secured to the wall 30 along its edge adjacent this wall to constitute a brace or gusset for the wall 30.

A container 34 for a liquid deodorant, such as a chlorophyll containing deodorant, has an externally screw threaded neck 35 extending through the aperture 26 in the holder 21 with the screw thread formation 36 thereof engaged with the tongues 27 and 28 projecting inwardly of the aperture to detachably secure the container in position in which it is suspended from the holder 21 with the open end of its neck disposed above the upper surface of the holder. An annular flange or rim 37 surrounds the aperture 26 at the upper side of the holder 21 and is provided at its end remote from the holder with an inwardly directed annular flange 38. A packing ring 39 of suitable elastic material, such as rubber, is disposed in the rim 37 against the inner side of the flange 38 and engages the outer surface of the container neck 35 at the upper end of the container neck to provide a seal between the upper end of the container neck and the upper portion of the rim 37.

A lever, generally indicated at 40, in the form of a rod or heavy wire having angularly related longitudinal portions, has a straight intermediate portion 41 thereof extending through the sleeve formation 31 and rotatable in this sleeve formation and has an arm 42 extending substantially perpendicularly from this intermediate portion 41 and secured at its distal end to a resilient stopper 43 for the upper end of the container neck 35.

The stopper 43 is preferably in the form of a spherical body of suitable resilient or elastic material, such as expanded rubber, and a screw 44 extends diametrically through this body. The lever arm 40 is provided at its distal end with an eye formation 45 through which the screw 44 extends, and a washer 46 surrounds the screw between the eye formation 45 and the adjacent upper surface of the stopper 43. Nuts 47 are threaded onto the upper, screw threaded end of the screw 44 in mutually locking relationship and bear against the side of the eye formation 45 remote from the washer 46 and a clip 48 having an aperture receiving the screw 44 is disposed between the lower or bottom side of the stopper body 43 and the head 49 of the screw 44.

A small tongue 46' projects from washer 46 into a notch in eye formation 45 to properly position the clip 48 relative to the arm 42 when the stopper element is assembled with the lever 40.

An intermediate arm 50 extends perpendicularly from the end of the intermediate portion 41 of the lever 40

remote from the arm **42** and is disposed substantially at right angles to the arm **42**. The inermediate arm **50** extends upwardly from the sleeve formation **31** and an intermediate lever portion **51** extends substantially perpendicularly from the upper end of the arm **50** in a direction away from the intermediate lever portion **41** and has its longitudinal center line substantially in a plane including the longitudinal center lines of the intermediate arm **50** and the intermediate lever portion **41**. A second arm **52** extends substantially perpendicularly from the end of the lever intermediate portion **51** remote from the intermediate arm **50** and is inclined upwardly from its connection with the lever intermediate portion **51**. At its end remote from the lever intermediate portion **51** the second arm **52** is provided with a hook or loop and this hook or loop is received in a cushioning sleeve or tube **53** of suitable elastic material, such as rubber.

When the bracket is properly mounted on the toilet bowl, as explained above, the distal end portion of the arm **52** carrying the sleeve **53** is disposed adjacent the top surface of the toilet seat cover **14** at the rear end of this cover, as illustrated in Figure 1.

A coiled tension spring **55** is connected at one end to a clip **56** secured on the holder **21** adjacent the rim **37** and is secured at its upper end to the screw **44** by the nuts **47** and acts to resiliently hold the stopper **43** in closing engagement with the upper end of the container neck **35**.

With this arrangement, when the seat cover **14** is raised about its pivotal connection with the hinge **15**, it forces the distal end of the lever arm **52** upwardly and raises the stopper **43** away from the upper end of the container neck **35** against the force of the spring **55** and, when the seat cover is lowered, the distal end of the lever arm **52** is accordingly lowered, permitting the spring **55** to pull the stopper **43** back into sealing engagement with the upper end of the container neck.

A wick **58** is disposed in the deodorant container **34** and connected by a suitable strand or wire element **59** to the clip **48** disposed at the lower side of the stopper **43**. When the stopper **43** is lifted away from the upper end of the container neck the wick **58** is pulled partly out of the upper end of the neck exposing deodorant absorbed by the wick to the atmosphere to destroy any unpleasant odors in the atmosphere.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrtaive and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. A deodorant attachment for a toilet bowl comprising a bracket adapted to be detachably secured to a toilet bowl and to project outwardly from the associated bowl, said bracket having an aperture of circular shape therein and angularly spaced apart tongues projecting inwardly of the perimeter of said aperture, a deodorant container having a neck extending through said aperture and provided with a screw thread formation engaged by said tongues to secure said neck in said aperture with said container depending from said bracket, an annular flange formed on said bracket surrounding the aperture, a packing ring mounted in said flange in sealing engagement with the container neck, a lever pivotally mounted on said bracket and having one end disposed for engagement by the seat cover of an associated toilet bowl for imparting rotational movement to said lever when the associated cover is raised, a resilient stopper mounted on the other end of said lever and resiliently urged into closing relationship with the flange, said stopper being movable away from said container neck by rotational movement of said lever in response to raising of the associated toilet seat cover.

2. In a deodorizing device, the combination, with a toilet bowl and with a seat cover hinged thereto, of a bracket fixedly connected to the bowl, a lever having an intermediate portion rotatably mounted on the bracket and having one end portion overlying the upper surface of the seat cover in slidable contact with the same for rotating the intermediate portion on raising of the cover, said bracket having an aperture therein, an annular flange surrounding the bracket aperture, a deodorant container having a neck extending through said aperture with its free end adjacent to and inwardly of the top of the flange, means projecting from the wall of the bracket aperture engaging the neck, and a resilient stopper carried by the other end portion of the lever and resiliently urged into a closing relationship with the open end of the neck and the flange, said stopper being movable away from the open end of the neck and the flange responsive to said rotation of the intermediate portion.

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