July 16, 1946. H. H. DES ROCHES 2,404,124

TOILET PROTECTIVE DEVICE

Filed March 21, 1944

FIG. 1.

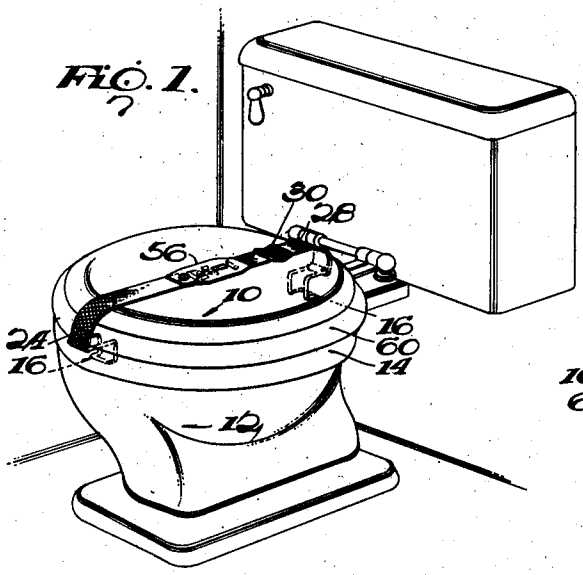


FIG. 2.

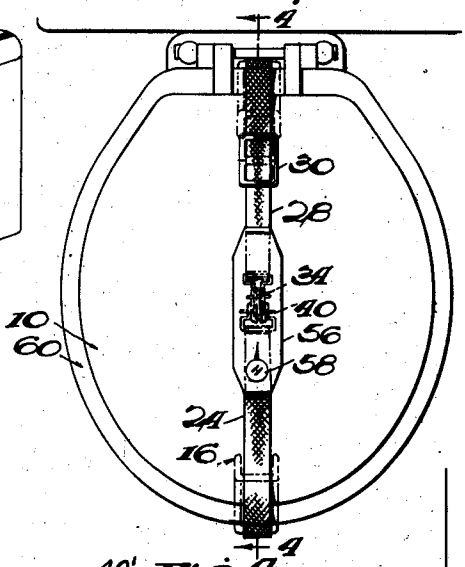


FIG. 3.

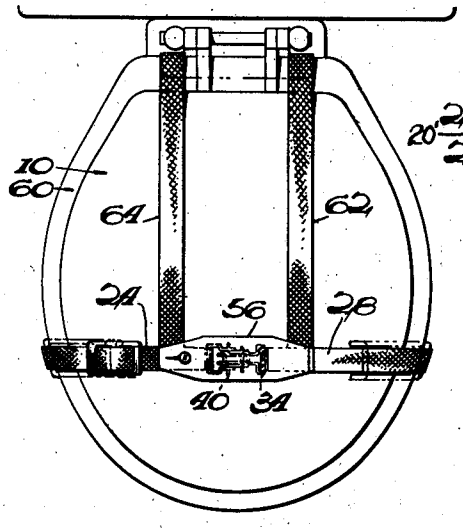


FIG. 4.

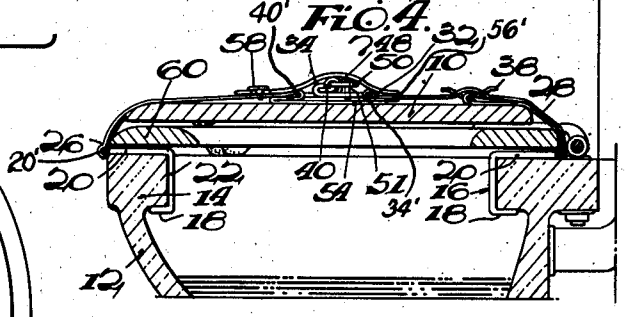
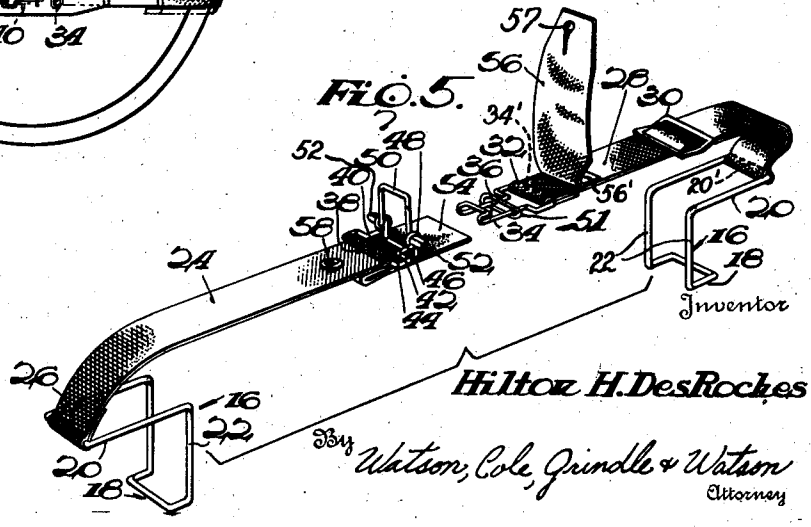


FIG. 5.



Inventor

Hilton H. DesRoches

By Watson, Cole, Grindle & Watson

Attorneys

Patented July 16, 1946

2,404,124

UNITED STATES PATENT OFFICE

2,404,124

TOILET PROTECTIVE DEVICE

Hilton H. Des Roches, Butte, Mont., assignor of one-half to Christopher Frassett, San Francisco, Calif.

Application March 21, 1944, Serial No. 527,443

9 Claims. (Cl. 220—55)

1

This invention relates to what may be termed a protective device in the form of a fastening mechanism for a container closure and has particular reference to an accessory for use in conjunction with the closure of a bowl-shaped member, such as a toilet bowl. A broad object of the invention is to discourage and, if desirable, preclude use of such a receptacle as a disposal means or repository for articles and materials for which it was never intended.

More particularly, an important object of the invention is to render use of a toilet bowl as a disposal or repository means for foreign matter so difficult, if not impossible, as to discourage such use and thus preclude much serious damage and injury to the plumbing system with which the bowl is connected.

Misuse of such a receptacle by children of the household, thoughtless members thereof, and very frequently by builders and their employees or prospective purchasers or lessees either during the course of construction or thereafter, causes serious damage to the plumbing system, the cost of repairing which is usually out of all proportion to the apparent damage that might be caused by such misuse. Hence it is important to discourage or, if necessary, preclude such misuse.

Important features of the invention reside in the particular arrangement and combination of elements whereby the above desirable ends are obtained and, more particularly, in the means for positioning such fastening device and tensioning the same across the closure while at the same time concealing from casual view the mechanism for so doing. In the embodiment illustrated I have disclosed a particular form of buckle or clasp assembly for this purpose, and one phase of the invention resides in the simplicity of its construction and the manner in which it is associated with flexible members constituting a portion of the fastening device.

Various other objects and meritorious features of the invention will become apparent from the following description taken in conjunction with the drawing, wherein like numerals refer to like parts throughout the several figures, and wherein:

Figure 1 is a perspective illustrating one manner in which my improved fastening device may be positioned for use;

Fig. 2 is a plan view thereof;

Fig. 3 is a plan view illustrating a somewhat modified form of arrangement;

Fig. 4 is a section along 4—4 of Fig. 2, and

Fig. 5 is an enlarged exploded view in perspective of the two members comprising my fastening device.

2

Referring now to the drawing, I have disclosed for purposes of illustration the use of my invention in conjunction with the lid 10 of a toilet bowl 12. Extending around the inner periphery of the bowl and merging into the wall of the receptacle at the opening thereof is a bead 14 which the extremities of my improved fastening device are adapted to engage.

As will be noted from the drawing, the extremities consist of what may be regarded broadly as hook members 16 which are adapted to at least partially encompass the bead 14 and project somewhat beyond the marginal edge of the closure when positioned, for a purpose to be described more fully hereinafter. For purposes of illustration, I have disclosed member 16 as a rectangular rod formation fashioned from a single piece of relatively stiff wire or rod material so bent as to form a short arm 18 and a longer arm 20 extending substantially parallel thereto, the two arms being joined by an intermediate portion or base 22.

To the free end 20' of longer arm 20 of one member 16 is secured one extremity of a flexible and somewhat elastic member or strap 24, which may be secured in the embodiment illustrated by means of stitching 26, thus forming a sleeve about that end of the rectangular rod formation. Secured to the end portion 20' of the longer arm 20 of the other member 16 is another flexible member or strap 28. This strap is preferably secured by simply looping it about the end of the rectangular rod formation as a bearing and adjustably connecting the free end to an intermediate portion of the strap by means of a slip buckle 30, thus enabling the length of at least one of the two straps of my fastening device to be easily and quickly adjusted.

Secured to the free end of strap 28 by means of a stitch-formed sleeve 32 is one rodlike extremity 34' of a clasp element 34 which may be made of wire or other suitable material and is provided at its oppositely disposed free extremity with a hook portion 36. An intermediate portion of strap 24, adjacent the free extremity thereof, is reversely folded to form a triple-ply section and stitched transversely across and through the three layers thus formed at a point intermediate the ends of the reversely folded section to form a sleeve or loop 38 receiving the rear transverse bar or journal-member 40' of the fulcrum element 40 of a composite clasp assembly adapted to cooperate with the hook 36.

The fulcrum element 40 is formed of a single piece of material, such as wire, extending outwardly on each side from its journaled portion as indicated at 42, thence inwardly as indicated at 44, thence forwardly as indicated at 46 and turned upwardly to form opposed bearing eyelets 48 lying in a plane substantially perpendicular to that of the strap and fulcrum element.

Locking member 50 likewise consists of a single rodlike piece of material, such as wire, bent into substantially rectangular shape but including a pair of oppositely disposed ears 52 which are journaled in the eyelets 48. These ears are spaced somewhat above the lower extremity of the locking member.

The free extremity of strap 24 extending beyond the triple-ply section functions as a protective pad or flap 54 upon which the clasp assembly when in locked position seats, thus precluding contact of the metal parts against the surface of the closure or lid 10. Secured to the upper face of strap 28 at 56' adjacent its free extremity as by means of stitching or otherwise is a flap or pad 56 provided with an opening in the form of a buttonhole 57 near its free end. This flap is adapted to be positioned over the clasp assembly when in locked position and buttoned down on button 58 to conceal the clasp assembly from view and to some extent constitute a deterrent against unlocking the fastening device.

Referring now once again to the particular embodiment illustrated for the hook members 16, the short arm 18 is preferably of a length substantially equal to the width of the bead 14 extending around the inside of the receptacle opening, and the length of the long arm 20 is sufficient to project beyond the margin of the closure or lid 10 when in position over the opening. In the particular embodiment illustrated the closure is what may be regarded as a composite affair comprising the lid 10 and the underlying seat 60 and in this instance the length of arm 20 is sufficient to permit it to extend beyond the margin of seat 60, which is as a rule of somewhat greater diameter than the lid 10. The intermediate portion or base 22 of the hook element is of a length substantially equal to the depth of bead 14.

In use the hook elements are arranged to encompass the bead 14 at substantially oppositely disposed portions thereof and the two straps are joined by the clasp assembly through simply engaging the hook 36 under the base of locking element 50 after the straps have been adjusted for length and then forcing the locking element around its pivotal support on fulcrum element 40 and down over clasp element 34. This forces the free ends of straps 24 and 28 closer together and, when the outer end of locking member 50 abuts clasp element 34, said locking member will have passed the dead center relation by virtue of the fact that the horizontal plane of its pivotal support has been passed. Also, a flat loop or ring 51 may be used to retain the member 50. Thus the clasp will remain in locked position, tensioning the separable straps, until positively unlocked by sliding the ring 51 and raising locking member 50.

It will be noted that the clasp mechanism does not touch the surface of the closure or lid 10 by reason of the pad portion 54 of strap 24 and that the pad or flap 56 comes down over the clasp in locked position and buttons in place to conceal the assembly. While in Figs. 1, 2 and 4 the fastening device has been illustrated as positioned along the longitudinal median line of a more or less

elliptical contour, the strap passing between the spaced hinge elements of the seat and lid, it will be apparent that the fastening device may be positioned transversely in this particular instance, thereby minimizing the likelihood of removal without substantial effort where the general contour is elliptical as distinguished from circular.

A somewhat modified arrangement has been illustrated in Fig. 3 wherein the fastening device is positioned transversely and somewhat forwardly of the transverse median line of the closure contour, straps 24 and 28, respectively, being held in position by longitudinally extending straps 64 and 62, to the end of each of which may be secured hook elements 16 which are positioned around bead 14 in the manner heretofore described. If preferred, straps 62 and 64 may be formed as a single length, one end of which is secured to strap 28, passed around and under the spaced hinge elements of the lid 10, and the free end secured to strap 24 by button 58.

While I have illustrated my improved fastening device for closure members in conjunction with one particular use to which it is eminently suited and wherein it will accomplish the objectives heretofore set forth, it will be apparent that the utility of the mechanism is not so limited and that it is broadly adapted for use in conjunction with any closure member adapted to seat upon a marginal bead extending around the wall of the opening on the interior thereof. For these reasons I wish to be limited only within the scope of the appended claims.

I claim:

1. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of the opening therein; said device comprising a pair of members engaging said bead and including a portion extending between the closure and the wall of said opening and projecting beyond the margin of the closure when the same is in closed position, and a separable flexible member joining the ends of said last mentioned portions of each member.

2. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of the opening therein; said device comprising a pair of members engaging said bead and including a portion disposed between the closure and the wall of said opening and projecting beyond the margin of the closure when the same is in closed position, a flexible member secured to the last mentioned portion of each engaging member, and cooperating means secured to the free end of each flexible member joining the free ends thereof and means for tensioning the flexible members across the closure, whereby said engaging members are held firmly in place and said closure is secured against displacement from closed position.

3. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of the opening therein; said device comprising a pair of members each engaging said bead and comprising a U-shaped member including a base and legs of different lengths, a flexible member secured to the extremity of the longer leg of each engaging member, and embracing said closure member cooperating means secured to the free end of each flexible member joining the free ends threof, and means for tensioning the flexible members across the closure, whereby said engaging members are held firmly in place and said closure

is secured against displacement from closed position.

4. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of the opening therein; said device comprising a pair of members each engaging said bead and comprising a rectangular rod formation bent transversely to form a U-shaped member including a base and legs of different lengths, a flexible member looped about that end of the rectangle associated with the longer arm of each engaging member, said flexible means extending over the outer surface of the closure, and cooperating means secured to the free end of each flexible member joining the free ends thereof, and means for tensioning the flexible members across the closure, whereby said engaging members are held firmly in place and said closure is secured against displacement from closed position.

5. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of the opening therein; said device comprising a pair of members each engaging said bead and comprising a rectangular rod formation bent transversely to form a U-shaped member including a base and legs of different length, a flexible member having a bearing portion receiving that end of the rectangle associated with the longer arm of each engaging member, cooperating means secured to the free end of each flexible member joining the free ends thereof, and means for tensioning the same across the closure, and concealing flaps associated with the free end of each flexible member and so positioned with reference to the tensioning-joinder means as to both overlie and underlie the same when in locked position.

6. A fastening device for a closure of a receptacle having a bead extending around the inner periphery of an opening thereof; said device comprising a flexible and slightly elastic strap-member extending across the outer side of the closure and having means on the ends thereof engaging said bead at opposite sides of the opening; said device passing between the closure and the rim of the receptacle; and means engaging the length of said flexible member for tensioning the same to draw the bead-engaging means more firmly in place and the closure more tightly closed.

7. A fastening device for a closure of a receptacle having a bead extending around the inner periphery of an opening thereof; said

device comprising a flexible and slightly elastic strap-member extending across the outer side of the closure and having means on the ends thereof engaging said bead at opposite sides of the opening; said device passing between the closure and the rim of the receptacle; means for adjusting said member in length to accommodate it to the approximate dimensions of a particular receptacle and closure; and means engaging the length of said flexible member for tensioning the same to draw the bead-engaging means more firmly in place and the closure more tightly closed.

8. A fastening device for a closure of a receptacle having a bead extending around the inner periphery of an opening thereof; said device comprising a separable strap-member extending across the outer side of the closure, each part of said strap-member having end-portions passing between the receptacle rim and the closure and engaging said bead; one of said strap parts being reversely folded intermediate its length to form a triple-ply strap-section, the plies of said section being secured together along a transverse line intermediate the length of said section to form a bearing sleeve of the upper two plies; a clasp element having a rod-like supporting portion journaled in said sleeve and overlying the free end of said strap, which forms a pad therefor; and a cooperating clasp element secured to the free end of the other strap.

9. A fastening device for the closure of a receptacle having a bead extending around the inner periphery of an opening therein; said device comprising a separable strap-member extending across the outer side of the closure, each part of said strap-member having end-portions passing between the receptacle rim and the closure and engaging said bead; one of said strap parts being reversely folded intermediate its length to form a triple-ply strap-section, the plies of said section being secured together along a transverse line intermediate the length of said section to form a bearing sleeve of the upper two plies; a clasp element having a rod-like supporting portion journaled in said sleeve and overlying the free end of said strap, which forms a pad therefor; a cooperating clasp element secured to the free end of the other strap; a flap secured to the upper face of one of said straps and adapted to overlie said clasp elements when locked, and a securing means on the upper face of the other strap for holding down the free end of said flap.

HILTON H. DES ROCHES.