Dec. 16, 1941. A. G. ROBINSON 2,266,268

SANITARY DEVICE

Filed April 25, 1939

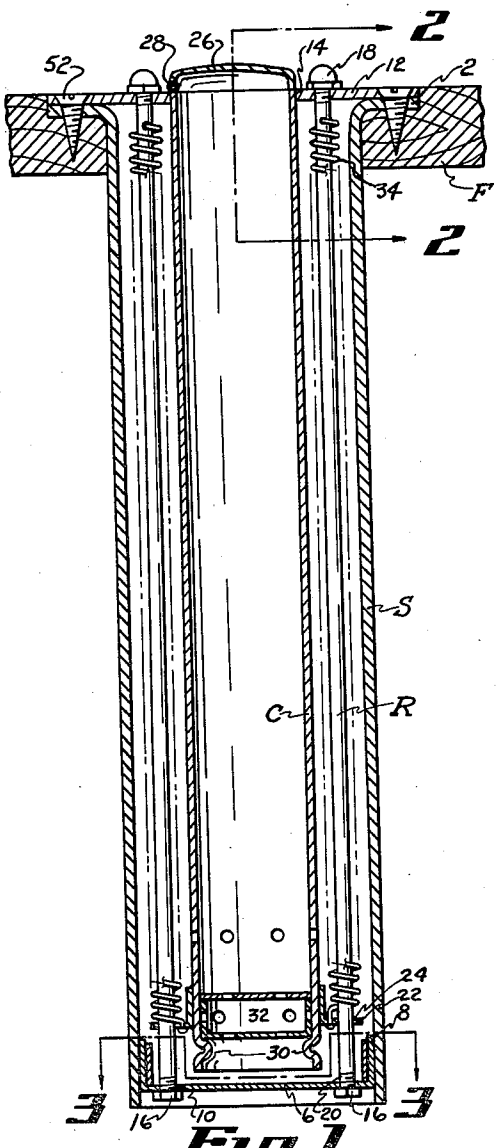


Fig. 1

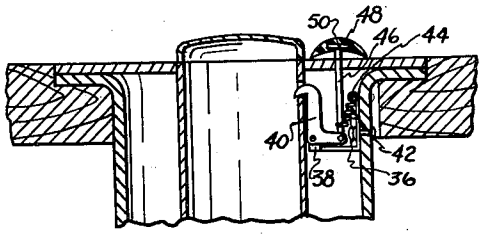


Fig. 2

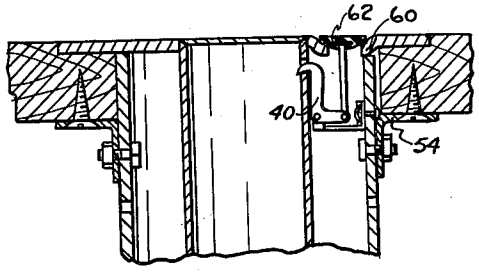


Fig. 4

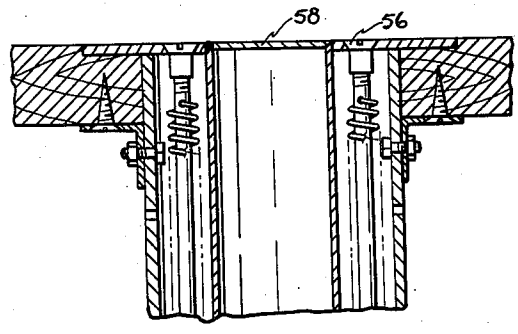


Fig. 5

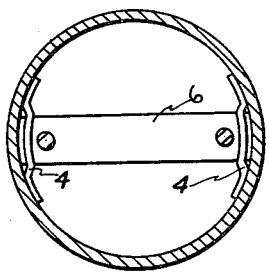


Fig. 3

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Patented Dec. 16, 1941 2,266,268

UNITED STATES PATENT OFFICE

2,266,268

SANITARY DEVICE

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Application April 25, 1939, Serial No. 269,920

8 Claims. (Cl. 312—151)

My invention is in the field of sanitary devices and is particularly directed to a novel and convenient means for storing cleaning brushes such as are commonly used in cleaning toilet bowls.

It is highly desirable to use such brushes daily but the incidents of their use are such as to discourage this practice. Such a cleaning brush after use is wet and retains a certain amount of odor. It is not satisfactory to hang it on a hook or store it in a corner in the bathroom since it will drip water on the floor and also disseminate an unpleasant odor. As a result it is usually kept on a porch or stored outside the house in an out of the way place. The inconvenience of carrying the brush back and forth and the possibility of its dripping on floors in the process results in curtailment of its use.

The primary object of my invention is to provide a simple and satisfactory device for storing a cleaning brush in a convenient place close to the point of use. Another object is to provide means whereby a cleaning brush may be stored entirely out of the way and yet be available instantly for use when desired. A further object is to provide means whereby a cleaning brush may be aired and disinfected while not in use. Other and further objects will become apparent as the description proceeds.

The invention obviously may take a variety of forms. The present preferred embodiments are illustrated in the accompanying drawing in which:

Fig. 1 is a vertical sectional view thru the device showing the support and container in their normally nested relation;

Fig. 2 is a sectional view on line 2—2 of Fig. 1, showing the detail construction of the latch mechanism;

Fig. 3 is a sectional plan view on line 3—3 of Fig. 1, showing the construction of the lower portion of the support means, and;

Fig. 4 is a view similar to Fig. 2, showing a modified construction of the support means and showing a flush upper surface construction.

Fig. 5 is a view similar to Figs. 2 and 4, showing further details of the flush construction.

Referring to Fig. 1 the sanitary brush holder includes an outer supporting shell S, guide rods R and brush container C. The supporting shell is preferably made of sheet metal but it may aso be made of any other suitable material. It is shown in Fig. 3 as being cylindircal but it may be any other desired shape and may be of any built up construction instead of sheet material. A flange or several supporting ears 2 are provided at or near the upper end for attachment to a floor or other support F. Loops 4 are provided internally near the lower end. They may be separate members attached by spot welding, riveting or the like, or they may be cut and stamped out of the wall of the shell S.

A cross bar 6, of sheet metal or the like, is provided with ears 8 for insertion into loops 4 and with openings 10 for the passage of the guide rods R. Cap plate 12 is adapted to rest on the upper end of shell S and has a central opening 14 for the passage of container C. The walls of the opening serve to guide the container in its movement.

The guide rods R are provided with heads 16 at their lower ends and are threaded at their upper ends for engagement with acorn nuts 18. Tightening the nuts clamps the shell, cross bar and cap plate into a unit assembly. Rods R may be threaded next to the heads, as at 20, to retain them in engagement with cross bar 6. Any other means for retaining them may be employed, such as swaging, spot welding or the like.

The inner container C is arranged to telescope within and be extended upwardly above the support S. For this purpose ears 22 with perforations 24 are provided near the lower end and are adapted to slide on the guide rods. The opening 14 in the cap plate serves as additional guiding means for the container. The lid 26 is mounted on the upper end of the container by means of any suitable hinge 28.

Near the lower end of the container an inwardly extending peripheral ledge or abutment 30 is formed, preferably by a simple rolling operation. A small perforated disinfectant container 32 is removably supported on this ledge and serves as a substantial closure or bottom for the brush container. Springs 34 are attached at their upper ends to the guide rods and at their lower ends to the guide ears of the movable container. They are shown in Fig. 1 in their stretched condition and are adapted, when the inner container is released, to raise it so that the major portion thereof projects above the floor level. The springs are shown as encircling the guide rods but obviously they may be differently arranged.

In order to hold the container in its normally lowered or closed position a latch means, shown in detail in Fig. 2, is used. A bracket 36 is attached to the outer shell or support and has an upstanding ear 38 pivotally carrying latch means

40. A spring 42 attached to one end thereof and to an eye 44 on the bracket biases the latch to locking position. To disengage the latch a rod 46 is movably attached near the end of the latch and extends up thru a perforation in the cap plate to an operating position.

An operating head or button 48 of rubber or other resilient material is provided with an insert 50 of metal or other hard material by means of which it is fixedly attached to the upper end of the operating rod. This head or button is domelike in shape, thick near the center and tapering off toward the edge in a manner similar to a simple vacuum cup. The free edge normally engages the surface of the cap plate, thus avoiding the possibility of mops or other cleaning means catching under it. Because of its resiliency it cooperates with spring 42 to bias the latch 40 to locking position. In some cases spring 42 may be omitted. Screws 52 fasten the entire assembly to the floor.

The support S is intended to remain in place permanently and hence it may be desirable to provide means to attach it to the bottom of the flooring instead of the top. Such a modification is shown in Figs. 4 and 5. In this form lugs 54 are attached to the outside of the shell by means of bolts. By providing slots or a series of holes in the wall of the shell the lugs may be attached at any desired height to accommodate flooring of different thicknesses.

In the modification shown in Figs. 4 and 5 the entire upper surface is made flush with the level of the floor. This gives the device a neater appearance and eliminates annoying obstructions. The acorn nuts 18 are replaced by countersunk head type nuts 56. The hinged lid 58 is made flush with the cap plate. Depending flanges 60 are formed in the cap plate for supporting the resilient operating head 62. While the head does not extend above the floor level it may be depressed by hand or by applying the heel of a shoe thereto.

The invention is particularly adaptable to one story homes without basements. In such homes the floor is spaced several feet above the ground and there is provision for ventilation thru the walls of the foundation. The bottom of the container in retracted position is well below the floor and the brush contained therein is ventilated continually. The disinfectant container is immediately adjacent to the brush and hence is well adapted to serve its purpose.

The operation of the device is believed to be apparent from the above description. The retractable container is normally held in its lowermost position with its upper surface substantially flush with the floor level by means of latch 40. When it is desired to use the brush the operating head 48 or 62 is depressed, disengaging latch 40. Thereupon the springs 34 will raise the container to a position extending above the floor and the brush can be readily removed. When the brush is replaced the container is forced down until the latch 40 again engages and the brush is conveniently stored for future use.

While I have described my invention in detail in its present preferred embodiment, it will be obvious to those skilled in the art, after understanding my invention, that various changes and modifications may be made therein without departing from the spirit or scope thereof. I aim in the appended claims to cover all such modifications and changes.

I claim:

1. A sanitary device comprising a cylindrical shell, a plurality of guide rods within said shell and extending substantially parallel to its longitudinal axis, a second cylindrical shell within said first shell provided with ears near one end for engagement with said guide rods, tension springs connected at one end to said guide rods and at the other end to said ears, said springs being biased to urge said second shell out of said first shell, releasable latch means carried by said first shell adapted to normally maintain said second shell in retracted position, and a cap hingedly mounted on said second shell, said device serving as a container for a sanitary implement.

2. A sanitary brush container comprising an elongated shell disposed in upright position and open at each end, an abutment near one end, a disinfectant container adapted to rest on said abutment and be retained thereon by gravity alone and serve as a closure for said end and a lid pivotally connected to the other end of the shell and adapted to serve as a closure therefor.

3. An extensible and retractable brush holder comprising a cylindrical supporting shell open at its upper and lower ends, a cross bar extending diametrically across its lower end, a cap plate in the form of an annular ring resting on the upper end of said shell, guide rods extending thru said cross bar and cap plate and clamping them in assembled relation with said shell, a second cylindrical shell adapted to telescope within said first shell, ears attached to the lower end of said shell and adapted to slide on said guide rods, said annular cap plate serving as a guide for the upper end of said inner shell, resilient means to extend said inner shell and releasable latch means to retain said inner shell in retracted position.

4. A retractable brush holder comprising a substantially rigid supporting means, a brush container slidably carried by said supporting means for extension and retraction and lying substantially flush with said supporting means when in retracted position and means for locking said container in retracted position comprising a movable latch, a movable member for disengaging said latch and a button of resilient material on said movable member, said button being located closely adjacent to said container and being substantially flush with said supporting means and serving as an operating head and as a spring for biasing said latch to its locking position.

5. In a sanitary device adapted to be mounted in an opening in a floor of a building with members thereof exposed only at the surface of the floor and flush therewith, supporting means extending downwardly, guide means carried by said supporting means, a brush container slidably engaging said guide means for movement to and from an extended position above the level of said floor, means to urge said container to its extended position, latch means to hold said container in its lowered position, and operating means for said latch means, the entire assembly, when said container is in its lowered position, presenting an upper surface which is adapted to be substantially level with the surface of said floor.

6. A sanitary brush holder comprising an outer supporting shell, means to attach said shell to a floor with its lower portion extending into said floor and its upper end being substantially flush with said floor, guide rods carried by said

outer shell, an inner shell adapted to telescope within said outer shell and having means engaging said guide rods, coil springs encircling said guide rods, the upper ends of said springs being attached to the guide rods and the lower ends of said springs being attached to said inner shell, said springs acting in tension to extend said inner shell with respect to said outer shell.

7. An extensible and retractable brush holder comprising a supporting shell open at its upper and lower ends, a member extending across said shell near its lower end, a cap plate resting on the upper end of said shell, guide means extending thru said member and said cap plate and clamping them in assembled relation with said shell, a second shell adapted to telescope within said first shell, means carried near the lower end of said second shell and adapted to engage said guide means, said cap plate serving as a guide for the upper end of said second shell, resilient means to extend said second shell and releasable latch means to retain said second shell in retracted position.

8. An extensible and retractable brush holder comprising a supporting shell open at its upper and lower ends, a first member engaging said shell near its lower end, a second member engaging said shell adjacent to its upper end, guide means clamping said first member and second member in assembled relation with said shell, a container adapted to telescope within said shell, means carried by said container and adapted to engage said guide means, said second member also serving as a guide for said container, means to extend said container and means to releasably retain said container in retracted position.

ARTHUR G. ROBINSON.