

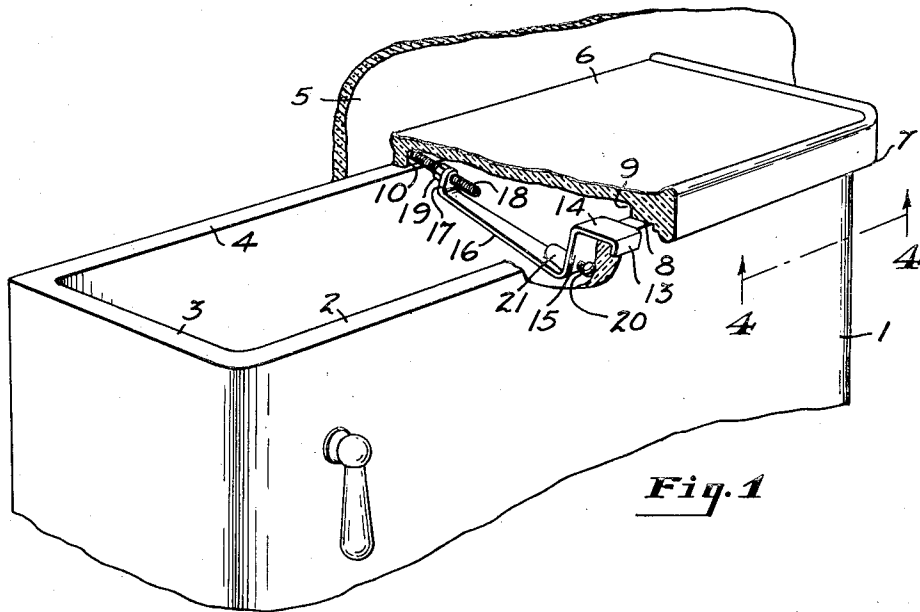
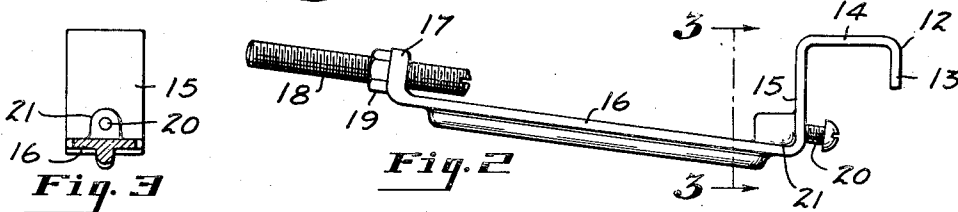
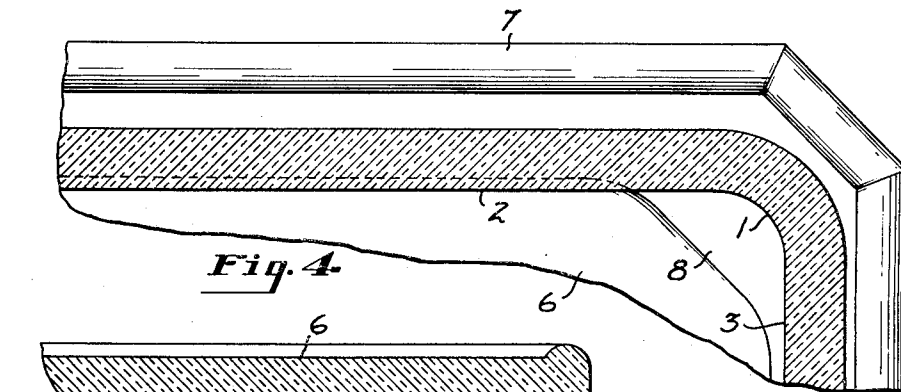
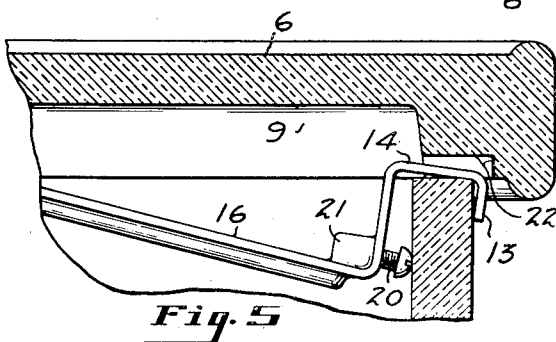
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RETAINING DEVICE_FOR FLUSH TANK COVERS

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RETAINING DEVICE FOR FLUSH TANK
COVERS

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5 Claims. (Cl. 4—68)

This invention relates to means for holding flush tank covers in place, particularly covers such as replacement covers which have relatively wide, flat surfaces resting upon the top edges of the tank walls.

Toilet flush tanks of approximately the same capacity, made by different manufacturers, vary somewhat in width and length, and also in the curvature of the front corners. Porcelain covers of such tanks are frequently broken. Since there are a large number of makes of tanks which vary in size and shape, it is often a difficult matter to obtain a cover to replace a broken one.

The original covers are commonly made with ribs or flanges on the under side which engage with the top edges of the tank walls to hold the cover in place. However, a cover suitable for use on tanks varying in size and shape must be large enough to accommodate the tops of various makes of tank and may have its marginal flange spaced somewhat from the front and end tank walls. The flat marginal portion along the front and ends, which rests on the tank walls, must be made somewhat wider than in the original covers, and unless some means is provided for holding the replacement covers against sliding movements, such a cover, by reason of its loose fit, will not be satisfactory.

Flush tank covers are provided with a recess on the under side within the marginal edges, to provide a clearance for the valve operating mechanism in the tank, and this recess in the cover provides a depending flange or rib along the rear edge of the cover which rests upon the top edge of the rear wall of the tank.

The present invention has for its object to provide a simple device adapted to be mounted upon a wall of the tank and positioned to engage the inner side of the rear flange of the cover to hold the cover in place on the tank.

With the above and other objects in view, which will be apparent from the following specification and appended claims, the invention may be said to comprise the device as illustrated in the accompanying drawing hereinafter described and particularly set forth in the appended claims, together with such variations and modifications thereof as will be apparent to one skilled in the art to which the invention appertains.

Reference should be had to the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a perspective view showing a cover in place on the flush tank, a portion of the cover

being broken away to show the retaining device;

Fig. 2 is a side elevation of the cover retaining device;

Fig. 3 is a section taken on line 3—3 of Fig. 2;

Fig. 4 is a section taken on line 4—4 of Fig. 1, looking upwardly at the bottom of the cover;

Fig. 5 is a vertical section through the upper portion of the tank cover showing the retaining member in side elevation.

Figure 1 of the drawing shows the upper portion of a flush tank 1 having a front wall 2, end walls 3, and a rear wall 4 which is secured against a room wall 5. A replacement cover 6 is shown in place on top of the tank. The replacement cover has a flange 7 along the ends and front thereof and has a flat marginal ledge 8 which rests upon the top edges of the tank wall. In order to accommodate tanks varying somewhat in width and length and having different curvatures at the corners, the cover 6 is made substantially rectangular with relatively sharp corners at the front which are beveled or curved to a short radius. The under side of the cover within the marginal edge, has a recess 9 which extends the full width and length of the interior of the tank top, so that there is a depending flange 10 along the rear edge of the cover.

The cover retaining device of the present invention is a device adapted to fasten onto one of the walls of the tank, and having a part extending into proximity to the inner face of the depending rear flange of the cover to retain the cover against the wall 5.

As herein shown, the retaining device is provided with a clip 12 at one end which is adapted to hook over the front wall of the container, the clip having a downturned flange 13 which engages the outer face of the front wall, a flat top portion 14 which extends across the top edge of the front wall and a downturned inner portion 15 which overlies the inner face of the wall. An extensible arm extends rearwardly from the clip and this arm has a portion 16 formed integrally with the lower end of the downturned portion 15 of the clip. When the clip is in place the arm extends rearwardly across the tank and upwardly into the recess 9 with its rear end in close proximity to the inner face of the rear flange 10 of the cover. The portion 16 of the arm has an upturned flange 17 at its rear end which receives a screw 18 disposed parallel to the portion 16 and forming the adjustable extension of the arm. The screw 18 may be adjusted in the flange 17 to position the rear end of the screw at a point where it will be in close proximity

to the inner face of the flange 10 when the cover is placed on the tank. A lock nut 19 may be provided which, when screwed against the face of the flange 17, holds the screw 18 in adjusted position.

The rearwardly extending arm is supported by the clip 12 in an inclined position such that the rear end of the arm projects upwardly into the recess of the cover closely adjacent the flange 10. In order to enable the arm to be positioned at the desired angle, the downturned portion 15 of the clip carries a screw 20 which is threaded into a boss 21 formed in the angle between the clip and arm. The screw 20 may be adjusted forwardly or rearwardly and its head is adapted to engage with the inner face of the front wall of the tank. The adjustment of the screw 20 determines the angle of the downturned portion 15 and integral arm 16 with respect to the tank wall. The boss 21 serves to provide a threaded opening of sufficient depth to rigidly support the screw 20 and also to stiffen the connection between the clip and arm. The under side of the cover is preferably provided with a notch or recess 22 to accommodate the clip 12.

The cover retaining device of the present invention is illustrated as applied to a replacement cover. It may be used advantageously with original covers, when such covers are not provided with lugs or ribs which prevent the cover from sliding forwardly and rearwardly on the top of the tank.

What I claim is:

1. Retaining means for a flush tank cover which has an under face flat adjacent its marginal edges for engagement with the top edges of the tank walls and recessed within said flat marginal portions whereby a depending flange along the rear edge of the cover is provided, comprising a member having means by which it may be attached to a wall of the tank and an arm extending upwardly toward the inner face of the cover, said arm having an end portion extending into the recess of the cover which is adjustable forwardly or rearwardly so that it may be positioned in close proximity to the inner face of the rear flange of the cover.

2. Retaining means for a flush tank cover which has an under face flat adjacent its marginal edges for engagement with the top edges of the tank walls and recessed within said flat marginal portions whereby a depending flange along the

rear edge of the cover is provided, comprising a member having a clip adapted to hook over the upper edge of the front wall of a flush tank and an arm, which, when the clip is in place on the front wall, extends rearwardly from the clip and upwardly into the recess of the cover with its rear end in close proximity to the inner face of the rear flange of the cover.

3. Retaining means for a flush tank cover which has an under face flat adjacent its marginal edges for engagement with the top edges of the tank walls and recessed within said flat marginal portions whereby a depending flange along the rear edge of the cover is provided, comprising a member having a clip adapted to hook over the upper edge of the front wall of a flush tank and an arm, which, when the clip is in place on the front wall, extends rearwardly from the clip and upwardly into the recess of the cover with its rear end in close proximity to the inner face of the rear flange of the cover, and means carried by the clip for varying the angle at which said arm is supported.

4. Retaining means for a flush tank cover which has an under face flat adjacent its marginal edges for engagement with the top edges of the tank walls and recessed within said flat marginal portions whereby a depending flange along the rear edge of the cover is provided, comprising a member having a clip adapted to hook over the upper edge of the front wall of a flush tank and an arm, which, when the clip is in place on the front wall, extends rearwardly from the clip and upwardly into the recess of the cover with its rear end in close proximity to the inner face of the rear flange of the cover, said arm having a longitudinally adjustable rear end portion.

5. A retaining device for flush tank covers comprising a clip having a downturned flange for engagement with the outer face of a flush tank wall, a portion adapted to rest upon the upper edge of the wall and a downwardly extending portion adapted to overlie the inner face of a flush tank wall, an arm fixed to the downwardly extending portion of the clip and extending rearwardly therefrom, said arm comprising relatively adjustable parts and being extensible, and an adjustable member positioned to engage the inner face of the front wall by which the angle at which said arm is supported may be varied.

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