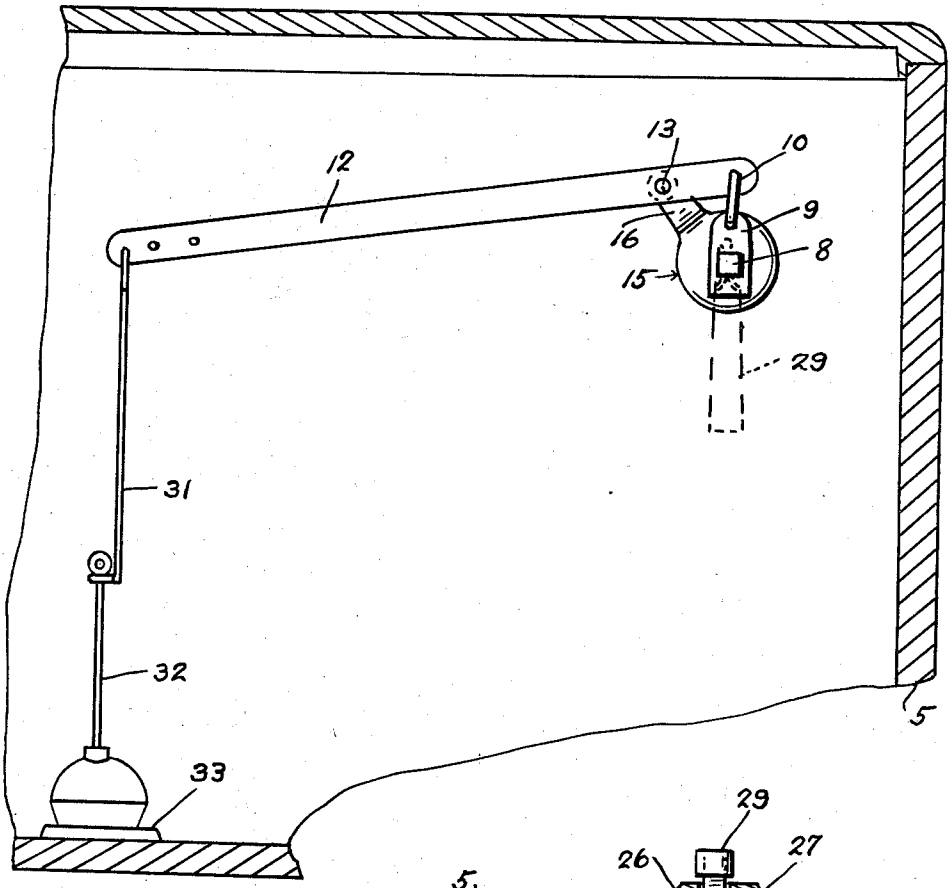
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TOILET TANK LEVER MOUNTING

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Fig. 1.



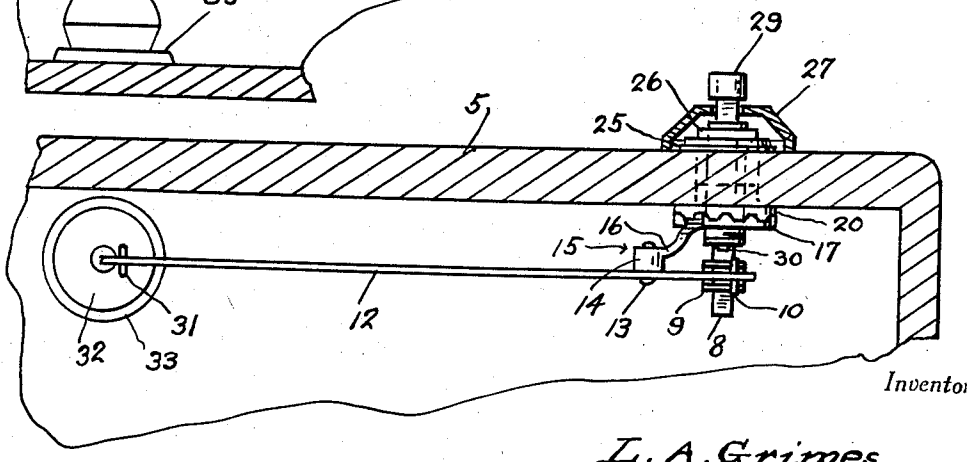


Fig. 2.

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Fig. 3.

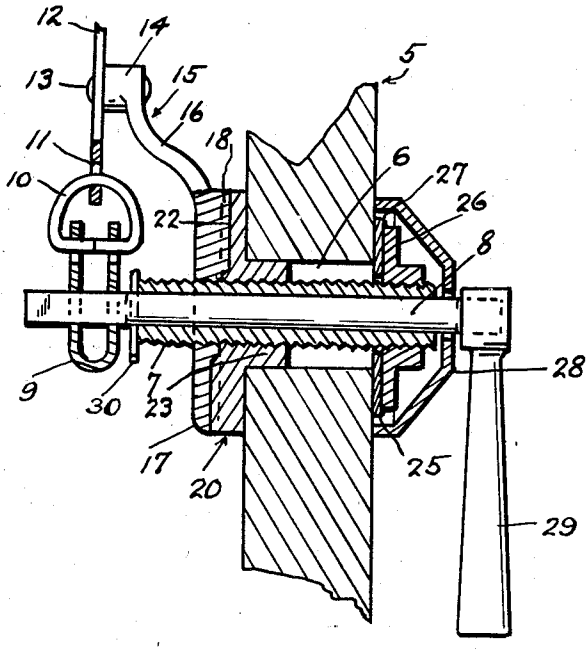


Fig. 4.

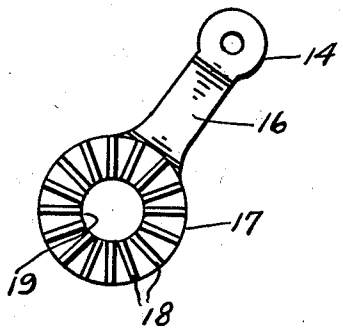


Fig. 5.

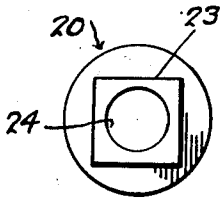
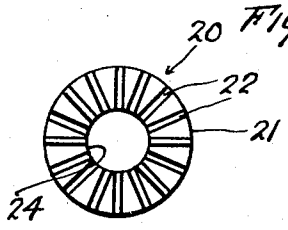


Fig. 6.



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Patented Nov. 2, 1937 2,097,619

UNITED STATES PATENT OFFICE

2,097,619

TOILET TANK LEVER MOUNTING

Leon Aaron Grimes, Rocky Mount, N. C.

Application January 4, 1937, Serial No. 119,046

2 Claims. (Cl. 4—67)

My invention relates generally to means for operatively mounting a toilet tank lever, and particularly to a mounting of this character which has portions penetrating the side of the tank for the purpose of supporting the lever operating handle as well as the lever itself, and an important object of my invention is to provide an efficient and relatively inexpensive arrangement of this character.

Other important objects of my invention will be apparent from a reading of the following description taken in connection with the drawings, wherein for purposes of illustration I have shown a preferred embodiment of my invention.

In the drawings:—

Figure 1 is a general longitudinal sectional view taken through a toilet tank showing a lever mounted therein in accordance with the present invention.

Figure 2 is a horizontal sectional view taken through Figure 1 and looking downwardly.

Figure 3 is a transverse vertical sectional view taken through Figure 2.

Figure 4 is a back elevational view of the bracket.

Figure 5 is a back elevational view of the bracket engaging collar.

Figure 6 is a front elevational view of Figure 5.

Referring in detail to the drawings, the numeral 5 generally designates the side wall of the toilet tank which in accordance with the present invention is provided with a square opening 6 passing therethrough.

In accordance with the present invention there is provided an externally threaded tube 7 which exceeds considerably in length the thickness of the wall 5 and which is provided with a smooth bore in which the squared shank 8 turns. The corners of this shank are sufficiently rounded to facilitate the turning and yet provide adequate purchase for the square openings in the legs of the U-shaped operating connection 9 which is placed on its inner end within the tank as shown in Figure 3 of the drawings. The upper ends of the legs are swivelly engaged with a suitable ring or other connection 10 which, in turn, passes through an opening 11 in the end of the toilet tank lever 12 which is pivoted as indicated by the numeral 13 on the head 14 of the bracket 15 which includes the reduced arm 16 and the circular plate 17 whose inner face is provided with circumferentially spaced ribs 18 and further is provided with a threaded opening 19 threadable on the exterior of the tube 7.

A bracket engaging collar 20 is composed of a plate 21 which is circular in form and has on its outer face grooves 22 to receive the ribs 18 on the plate 17. A square extension 23 extends from the back of the plate 21 to be conformably received in the square hole 6 in the wall of the toilet tank as shown in Figure 3 of the drawings. The bore 24 of the member 20 threadedly receives the tube 7.

Opposed to the member 20 and threaded on the tube 7 at the outer side of the tank wall is the brass washer 25 which encircles the tube, and the locking nut 26 which is threaded on the tube 7 and forces the washer against the side or exterior of the side wall of the tank as shown in Figure 3, so as to lock the member 20 in the hole 6 and against the interior face of the side wall of the tank, and in turn, because of the engagement of the ribs 18 with the grooves 22, to lock the bracket 15 against turning on the tube 7, thereby providing for positive maintenance of the selected angular position of the bracket 15.

An ornamental cap 27 surrounds the outside end of the tube 7 and the nut 25 and it has an opening 28 through which the shank or shaft 8 passes its outer end, which outer end is provided with an ornamental operating handle 29 in the usual manner.

A pin 30 traverses an opening in the inner end of the shaft 8 to act as a stop against the inner end of the tube 7 to prevent withdrawal of the handle and shaft 8.

It is believed obvious that turning of the handle 29 will cause the operating member 9 to tilt to one side or the other, and in tilting toward one side, to pull down the connected end of the toilet tank lever 12 and thereby pull up on the link 31 which operates the float valve 32 in the usual manner in connection with the valve seat 33 on the bottom of the toilet tank.

Although I have shown and described herein a preferred embodiment of my invention, it is to be definitely understood that I do not desire to limit the application of the invention thereto, and any change or changes may be made in the materials and in the structure and arrangement of the parts, within the spirit of the invention and the scope of the subjoined claims.

What is claimed is:—

1. In combination, a vertical wall having a squared opening extending horizontally therethrough, a plate contacting a portion of the wall and having a square reduced extension on one face fitting in the opening, a second plate resting on the first plate, said plates having their

contacting faces ribbed to prevent one plate slipping on the other and said plates having threaded openings therein, the opening in the first plate passing through the extension, an exteriorly threaded tube passing through said openings and also passing through the opening in the wall, a washer on the tube engaging that face of the wall which is opposite the face engaged by the first plate, a nut on the tube engaging the washer, an upwardly and outwardly extending arm on the second plate, a lever pivoted to the arm, a shaft passing through the tube with its ends projecting beyond the ends of the tube, a connection between the shaft and the lever for moving the lever by rocking movement of the shaft and a handle connected with the shaft.

2. In combination, a vertical wall having a squared opening extending horizontally therethrough, a plate contacting a portion of the wall and having a square reduced extension on one face fitting in the opening, a second plate resting on the first plate, said plates having their contacting faces ribbed to prevent one plate slipping on the other and said plates having threaded openings therein, the opening in the first plate passing through the extension, an exteriorly threaded tube passing through said openings and also passing through the opening in the wall, a washer on the tube engaging that face of the wall which is opposite the face engaged by the first plate, a nut on the tube engaging the washer, an upwardly and outwardly extending arm on the second plate, a lever pivoted to the arm, a shaft passing through the tube with its ends projecting beyond the ends of the tube, a connection between the shaft and the lever for moving the lever by rocking movement of the shaft and a handle connected with the shaft, said connection including a member passing through the shaft and extending at right angles thereto and a link connecting the member with the lever.

LEON AARON GRIMES.