July 14, 1931. M. H. MARTINDELL 1,814,604

FLUSH GUIDE ARM

Filed June 24, 1930

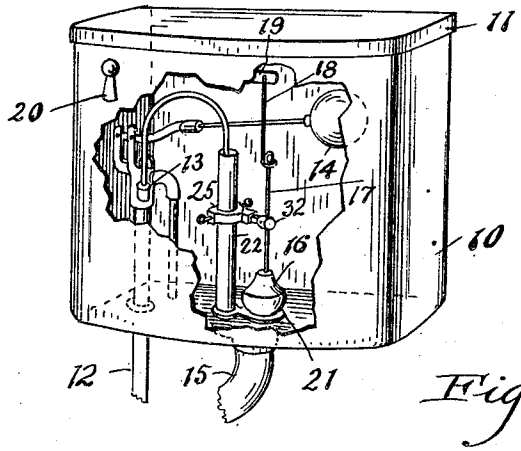


Fig. 1.

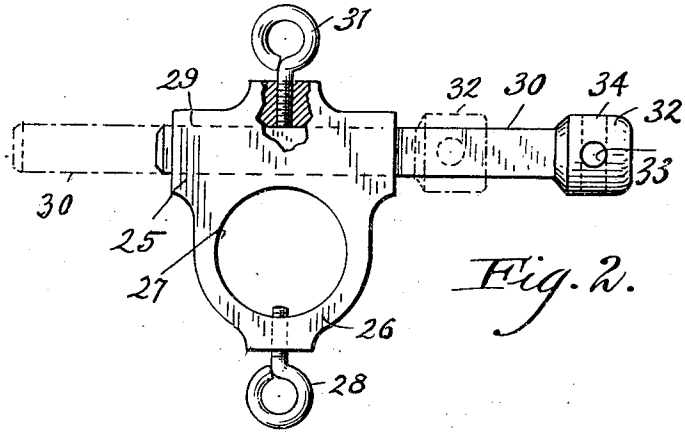


Fig. 2.

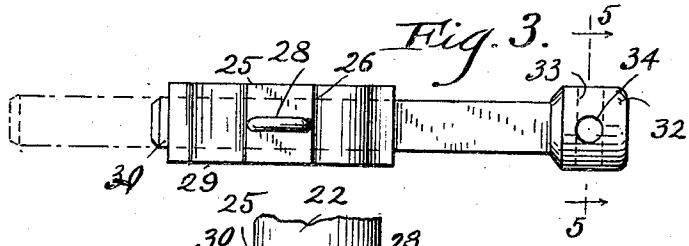


Fig. 3.

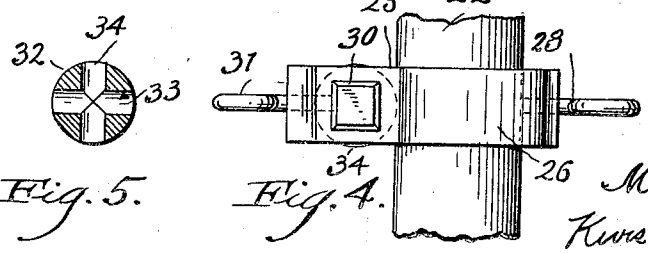


Fig. 5. Fig. 4.

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UNITED STATES PATENT OFFICE

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FLUSH GUIDE ARM

Application filed June 24, 1930. Serial No. 463,427.

This invention relates to flush guide arms, and more particularly to a device of this character for guiding the stem of the outlet valve of a flush tank for sanitary installations and the like.

It is an object of the present invention to provide a flush guide arm which is adjustable so as to accurately center the guide and valve stem with the outlet valve seat.

A further object of the invention is to provide a device of the character described, which will be simple and efficient in construction and operation, substantially fool-proof, not likely to get out of order, and otherwise well adapted for the purposes set forth.

Other objects and features of novelty will be apparent as the following description proceeds, reference being had to the accompanying drawings, in which.

Figure 1 is a perspective view of a flush tank, parts being broken away to show the valve mechanism and showing the present invention as applied thereto.

Figure 2 is an enlarged plan view of a device according to the preferred embodiment of the present invention.

Figure 3 is an elevation of the structure shown in Fig. 2.

Figure 4 is a side elevation of the device shown in Figs. 2 and 3, and

Figure 5 is a section taken along the line 5—5 of Fig 3.

Referring more particularly to the drawings, the flush tank illustrated in Figure 1 comprises a tank 10, generally of porcelain or ceramic enamel over metal such as iron or steel and provided with a cover 11 of similar construction.

An inlet pipe 12 is provided with an inlet valve 13 controlled by a float 14. An outlet pipe 15 is controlled by a float valve 16 having a vertical stem 17. A link 18 connects the stem 17 to a lever 19 which is controlled by a handle 20. Adjacent the seat 21 of the valve 16 is a support 22, which generally comprises an overflow pipe for the tank. This structure is well known in the art and forms no part of the present invention other than in combination with structure now to be described.

The flush guide arm according to the preferred embodiment of the present invention is illustrated in detail in Figs. 2, 3, 4 and 5. This device comprises a body portion 25, part of which is formed into a supporting collar 26 having a bore 27 adapted to receive the support 22. A set screw 28 is threaded into one side of the collar 26 and projects into the bore 27 so as to engage the support 22 and thus secure the body 25 in adjusted positions along the support 22, and also in adjusted positions angularly thereabout.

The body 25 is provided with a recess or slide 29 which extends substantially perpendicularly to the bore 27 and at one side thereof. The slide 29 receives an arm 30 which is adjustable within the slide 29, as shown by the dotted lines in Figure 2, and one side of the slide 29 is provided with a set screw 31 for securing the arm 30 in any desired adjusted position therealong.

One end of the arm 30 carries a head 32 provided with intersecting bores 33 and 34.

The body portion 25 is preferably constructed of rubber, rubber composition, or other non-metallic material, such as fiber, but, of course, this element may be constructed of various metals. The arm 30 is also preferably constructed of rubber, or the materials mentioned for the body portion 25. However, it is very desirable to have the head 32 constructed of non-metallic material, in order that the bore 33 or the bore 34 may fairly snugly receive the stem 17 of the outlet valve, without any possibility of binding due to corrosion.

While the arm 30 and the recess or slide 29 may be of practically any cross section, the preferred embodiment shown is rectangular, and the bores 33 and 34 are respectively perpendicular to the faces of the arm 30. This arrangement permits the arm 30 to be withdrawn from the slide 29 and reinserted so that a different face thereof may be brought into position under the set screw 31, and the other of the bores 34 and 35 may receive the stem 17. Thus where the head 32 is constructed of relatively soft material and the stem 17 may wear away the bore 33 and enlarge the same, this arrangement will permit

a fresh face of the arm 30 to be engaged by the set screw and provide a fresh bore 34 for guiding the stem 17 and thus prolong the efficient use of the device.

While one embodiment of the invention has been illustrated and described in such detail as to enable any one skilled in the art to practice the invention, nevertheless it is to be understood that the invention is not to be limited to any of the details disclosed, other than as necessitated by the development of the prior art, but instead the invention embraces such embodiments of the broad idea as fall within the scope of the subjoined claims.

Having thus described my invention what I claim is:

1. A flush guide arm comprising a body portion having a recess and a bore forming a supporting collar, a member slidable in said recess and carrying a pair of angularly disposed guides, and means for clamping said member in adjusted position in said recess, said member and said recess being so constructed and arranged that said member may be clamped therein to permit the use of either of said angularly disposed guides.

2. A flush guide arm comprising a body portion having a bore forming a supporting collar, an arm carried by said collar, comprising a pair of angularly disposed guides, said arm being adjustable to permit either of said guides to be brought into guiding position.

3. A flush guide arm comprising a body portion having a bore forming a supporting collar and a polygonal recess transverse to said bore, an arm slidable in said recess, said arm having a pair of angularly disposed guides, and means for clamping said arm in said recess in either of two angular positions selectively, whereby either of said guides may be brought into guiding position.

4. In a device of the class described, the combination of a collar adapted to be mounted upon a cylindrical support in various angular positions an arm slidably mounted on said collar, said arm carrying a plurality of guides for a valve stem, said guides being arranged angularly with respect to each other and means for securing said arm in adjusted position on said collar both angularly and longitudinally.

5. In a device of the class described, a body portion having therein a vertical cylindrical opening and a polygonal transverse opening, said vertical opening being adapted to surround a cylindrical standard upon which the body portion is to be supported, a polygonal flush guide arm slidably mounted in said transverse opening, said guide arm having therein a plurality of valve stem guides, each being normal to one surface of said polygonal guide arm.

6. In combination, a non-metallic arm having guides formed therein, a collar for attachment to a cylindrical support, said collar having a recess receiving said arm, clamping means associated with said recess and engageable with said arm, said arm and recess being constructed to permit said arm to be brought into engagement with said clamping means, in different angularly disposed positions of said arm, and said guides being so disposed that a fresh guide may be brought into guiding position by arranging said arm in a different angularly disposed position.

In testimony whereof, I hereunto affix my signature.

MILTON H. MARTINDELL.