

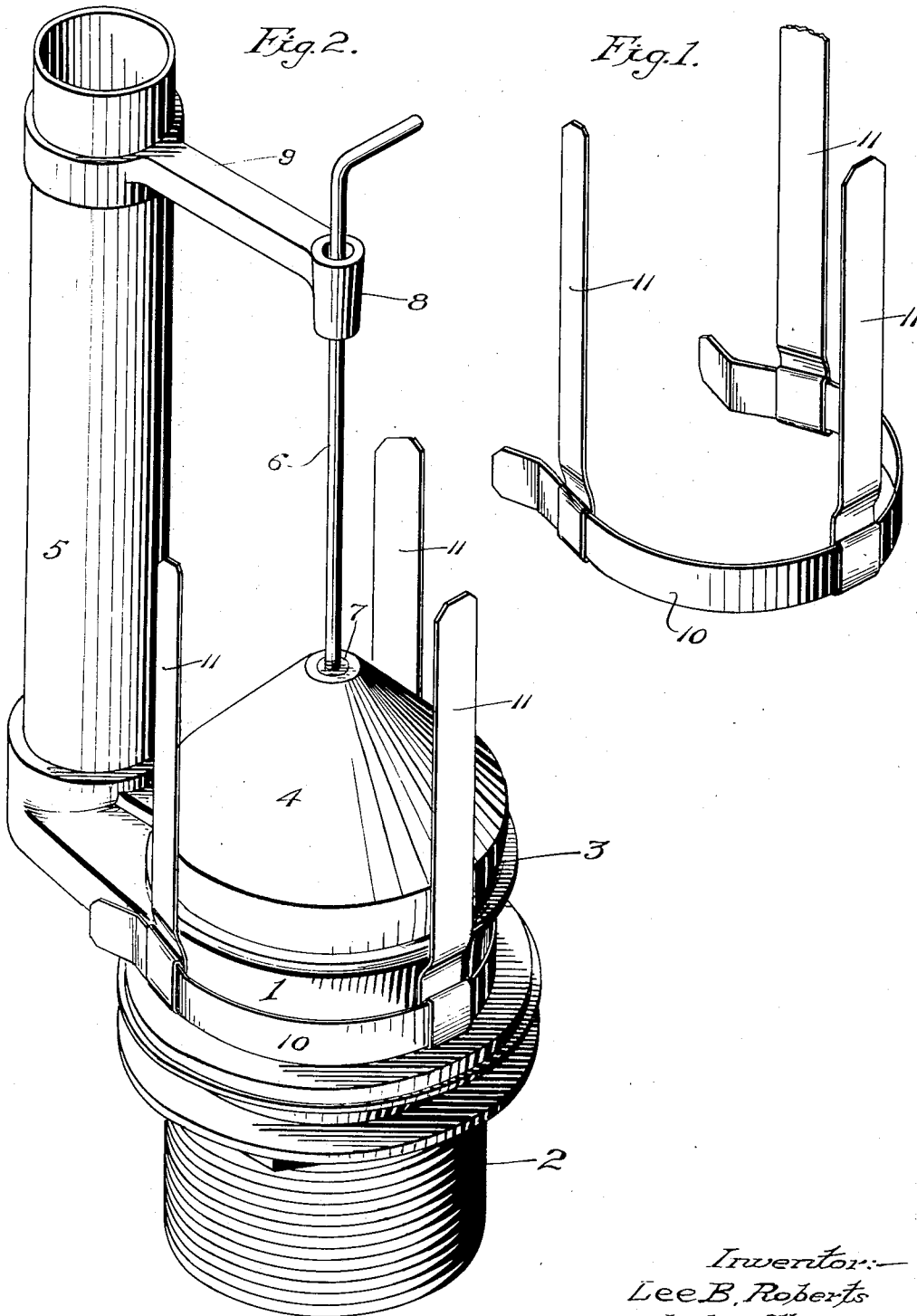
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FLUSH VALVE

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1,926,754

FLUSH VALVE

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3 Claims. (Cl. 4—57)

This invention relates to new and useful attachments for flush valve mechanisms and particularly for flush valve mechanisms of the type used in water closets.

5 The principal object of the invention is to provide new flush valve means which is applicable to standard and other flush valve mechanisms, to insure correct reseating of the valve and a complete closure thereof preventing further flow of water therethrough.

10 A more specific object of the invention is to provide a flush valve guide means which may be removably attached to flush valve mechanisms of various constructions and dimensions.

15 A further object of the invention is to provide a flush valve guide means which is efficient in operation, inexpensive to manufacture, and available to the public in the open market at a substantially nominal figure.

20 Other features and details of the invention are set forth hereinafter and shown in the accompanying drawing, in which:

Figure 1 is a view in perspective of the guide means forming the subject of the present invention; and

25 Fig. 2 is a view in perspective showing a standard flush valve and the removable guide means forming the subject of the invention associated therewith.

30 Referring now more particularly to the drawing, numeral 1 represents the fitting of a flush valve having an externally threaded portion 2 for securing the valve in the water closet tank (not shown). The upper face of the fitting is provided with a seat 3 for the valve 4. Extending upwardly from, and at one side of the fitting 1 is the usual column or overflow pipe 5.

35 The valve 4 may be of any suitable buoyant construction, and the lower portion thereof is preferably spherical in shape so that it will properly engage the seat 3 and afford a tight closure against the passage of water therethrough.

40 The means for actuating the valve 4 comprises a lift rod 6 having one end thereof secured to the upper surface of the valve 4 as at 7 and supported in a vertical position upwardly from said valve by means of a guide sleeve 8 formed in the projecting arm 9 which is secured on the overflow pipe 5. The upper end of the valve actuating means is arranged for attachment thereto of a lever or other operating mechanism (not shown).

45 The valve 4 is normally held to the seat 3 by the pressure of the water in the tank and when the said valve is lifted by means of the rod 6 from the seat 3, water will flow from the tank

through the fitting 1 to the water closet, and when the operating lever (not shown) is released to permit descent of the rod 6 and the valve 4, the weight of said valve causes it to resume the normal position on the seat 3 of the fitting.

60 Very often the valve 4, descending to its normal position on the valve seat 3 is deflected from a true vertical descent thereto by the turbulent flow of water passing through the fitting 1, and the valve often catches on the edges of the seat, remaining in that position and fails to resume its normal position on the valve seat 3 to prevent further flow of water therethrough. This results in the constant leakage of water through the valve which is annoying and results in a waste of water which soon becomes a factor of economic importance.

70 For the purpose of eliminating the aforementioned undesirable features, a novel attachment is provided which, when associated with a flush valve of the character herein described, guides the valve 4 to a correct position on the valve seat 3 at all times, closing the valve against further passage of water therethrough.

75 The valve guide means in the present instance comprises a resilient base or band 10 made of a material not subject to deterioration and corrosion by reason of contact thereof with water and which, by reason of its inherent resiliency, may be applied to a water closet flush valve mechanism, and is in no way restricted in the range of its application by the diametrical dimensions of the valve fitting 1.

80 A plurality of upstanding vertical guide fingers or arms 11 are secured on the resilient band 10 in spaced relation with respect to each other. The said arms 11, when the guide means is mounted on the flush valve, extend vertically upward adjacent the valve seat 3 and form a suitable guide within which the valve 4 is vertically displaced to permit or prevent the flow of water downwardly through the valve fitting 1.

85 The novel guide means described herein may be stamped from a single piece of material, or may be composed of an independent supporting band and vertical guide fingers which are rigidly secured thereto, as desired.

90 While I have disclosed the embodiment of my invention for the purpose of description, it will be apparent that certain modifications and changes may be made in the detail construction thereof within the scope of the appended claims.

What is claimed is:

1. A flush valve comprising a fitting through which water is adapted to flow, a valve seat of

cylindrical form at its upper end, a valve arranged to engage said seat, a lift rod for unseating said valve, and resilient means detachably embracing the fitting and having upstanding fingers to guide the valve into engagement with the seat as its descends.

2. A flush valve comprising a valve seat and valve, and means detachably associated with said valve to guide the valve into proper engagement with the seat to stop the flow of water through the valve, said guide means comprising a resilient arcuate supporting band arranged to detachably embrace the valve fitting and a plurality of vertical upstanding fingers secured thereon in spaced

relation with respect to each other and constituting a cage-like guide within which the valve operates.

3. A guide for flush valves comprising a resilient arcuate band arranged to detachably embrace the valve fitting of a flush valve, and a plurality of vertical upstanding fingers secured to said band and in spaced relation with respect to each other constituting a cage-like guide within which the valve operates, the said guide by reason of its construction, being applicable for use in conjunction with standard flush valve mechanisms.

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