W. U. GRIFFITHS.

INTERLOCKING FLUSH TANK LEVER AND FULCRUM.

APPLICATION FILED NOV. 26, 1918.

1,344,128. Patented June 22, 1920.

Fig. 1.

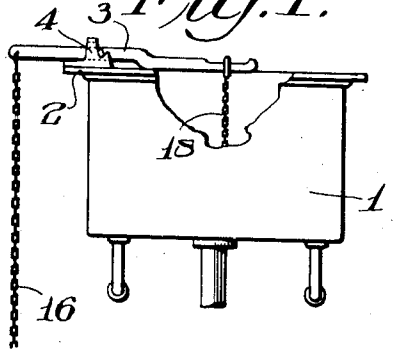


Fig. 2.

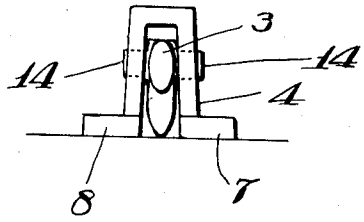


Fig. 3.

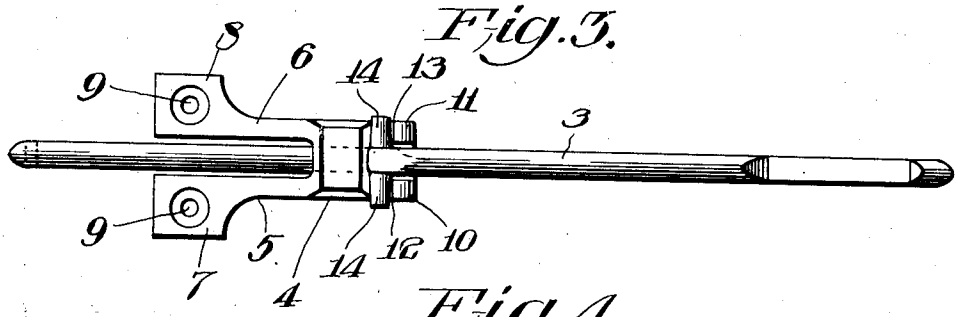


Fig. 4.

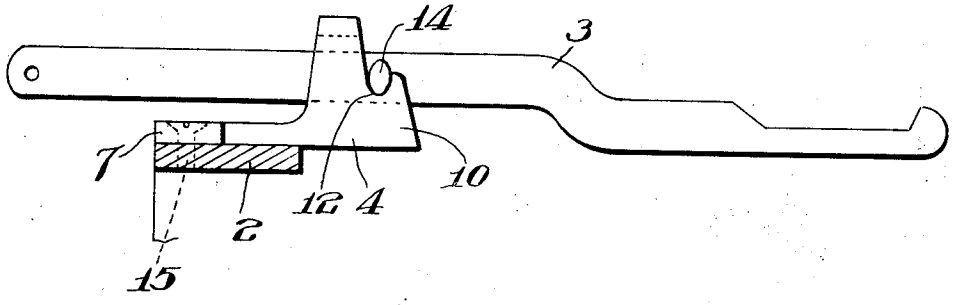
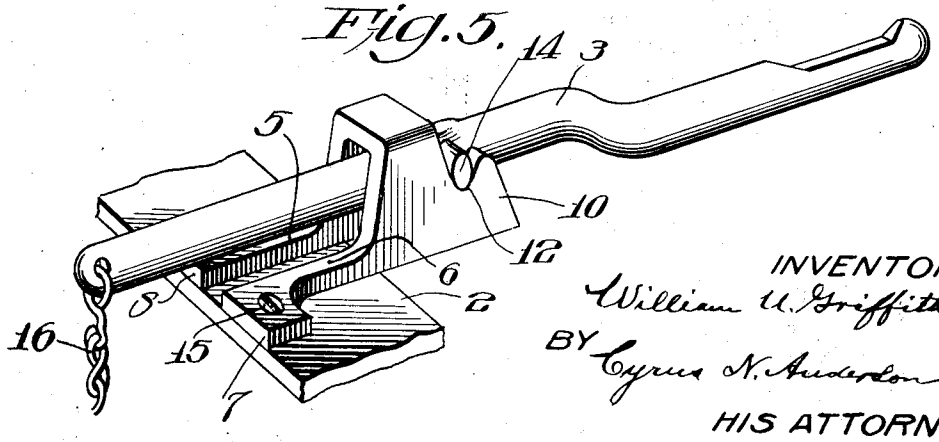


Fig. 5.



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INTERLOCKING FLUSH-TANK LEVER AND FULCRUM.

1,344,128. Specification of Letters Patent. Patented June 22, 1920.

Application filed November 26, 1918. Serial No. 264,154.

To all whom it may concern:

Be it known that I, WILLIAM U. GRIFFITHS, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Improvement in Interlocking Flush-Tank Levers and Fulcrums, of which the following is a specification.

My invention relates to flush tank levers and the fulcrum supports for the same and other similar constructions, and has for one of its objects to provide a construction in which the lever is interlocked with and supported upon its fulcrum in such manner that it cannot become displaced accidentally with respect thereto during operation.

A further object of my invention is to provide a construction which can be manufactured cheaply and which may be readily secured in operative position upon or with respect to a flush tank or other like structure.

Other objects and advantages of my invention will be pointed out in the detailed description thereof which follows or will be apparent from such description.

In order that my invention may be more readily understood and its practical advantages fully appreciated, reference should be had to the accompanying drawing in which I have illustrated one mechanical embodiment of the same.

In the drawing:—

Figure 1 is a view in side elevation of a flush tank provided with a lever and fulcrum constructed in accordance with my invention, said tank being partially broken away and removed;

Fig. 2 is a view in end elevation of the lever and fulcrum looking toward the right in Fig. 1;

Fig. 3 is a top plan view of the same;

Fig. 4 is a transverse sectional view of a supporting plate or bar for the fulcrum and lever and showing the said fulcrum and lever in side elevation; and

Fig. 5 is a view in perspective of the fulcrum and lever and of a portion of the support therefor.

In the drawing:—1 designates a flush tank for flushing sanitary devices of various kinds and characters and 2 a bar or plate at the top of the tank to which the fulcrum for the lever 3 is secured. It will be understood that any suitable means for supporting the fulcrum may be employed. The fulcrum comprises the portion 4 which is of U-shape in cross section, the portions 5 and 6 which project outwardly from the lower ends of the U-shaped portion 4, which projections are provided with flattened and widened out portions 7 and 8 provided with perforations 9, and the inwardly or forwardly projecting portions 10 and 11 which are provided with notches 12 and 13 for the reception of the trunnions 14 projecting in opposite directions from points upon the lever 3 intermediate its ends, as shown.

The fulcrum member is secured to the supporting bar or plate 2 at the upper edge of the tank 1 by means of screws 15, only one of which is shown. The lever 3 is adapted to be operated by means of a chain 16 or equivalent means which is attached to the outer end thereof. To the inner end portion of the lever 3 the upper end of a chain 18 is connected while the lower end of said chain is connected to a valve, not shown, which controls the outlet port by means of which water or other liquid may be discharged from the tank 1.

It will be observed that the lever 3 extends between the opposite sides of the U-shaped portion 4 of the fulcrum and underneath the cross piece or bridge at the upper end or side of said U-shaped portion.

It is apparent that downward movement of the inner portion of the lever from the tank 1 and upward movement of the outer end portion of said lever which projects outside of the said tank is limited by contact of the upper end of a part of the outwardly projecting portion of said lever near the trunnions 14 with the underneath outer edge portion of the top portion or bridge part of the part 4 of the fulcrum.

Pivotal movement of the lever 3 in an opposite direction is limited and controlled by contact of the lower side of the outer end portion with the outer upper edge portion of the bar or plate 2 or any other part which might be in the path of the said outer end portion and with which it would contact to limit the downward swinging movement of the outer end portion of said lever and consequently limit the upward swinging motion of the inner end portion thereof.

The height of the opposite sides of the part 4 and of the portions of the projections 10 and 11 beyond the notches 12 and 13 bears such relation to the thickness or height of the lever 3 and to the trunnion 14 that after the fulcrum has been secured by the

screws 15 to its support the said lever cannot be removed without first detaching and removing the fulcrum from its support.

It will be seen that by means of my invention a construction is provided in which the lever is so interlocked with and supported upon the fulcrum that it cannot be removed or displaced with respect to the said fulcrum accidentally during operation; also that the construction is simple and may be cheaply and economically manufactured; and also that the lever and fulcrum may be readily assembled and the fulcrum thereafter secured in position upon its support.

It will be understood that my invention is susceptible of embodiment in other forms of construction than that shown within the scope of the claims.

I claim:

1. In combination, a lever having trunnions thereon, a fulcrum having an opening therethrough and notches in the top edges of said fulcrum on opposite sides of said opening in which the said trunnions are seated and the said lever extending through said opening, and means for limiting the pivotal movement of said lever and for retaining the said trunnions in said notches.

2. In combination, a lever having laterally extending trunnions intermediate its ends, a fulcrum having a portion of U-shape in cross section and having projections extending in opposite directions from the opposite edges of the said U-shaped portion, notches in the top edges of one pair of said projections in which the said trunnions are seated, a support for the said fulcrum and means for securing the other pair of the projections from said fulcrum to said support, and the said support and the top of the said U-shaped portion of the said fulcrum operating to interlockingly secure the said lever to said fulcrum.

3. In combination, a lever having trunnions intermediate its ends, a fulcrum having spaced sides connected at their upper edges by means of a connecting bridge, said sides having notches in their upper edges and the said lever extending through the space between the said sides and underneath the said connecting bridge, a support for said fulcrum, and means for connecting the said fulcrum to said support, the said bridge and support coöperating to retain the said trunnions in said notches.

In testimony that I claim the foregoing as my invention, I have hereunto set my hand this 25th day of November, A. D. 1918.

WILLIAM U. GRIFFITHS.