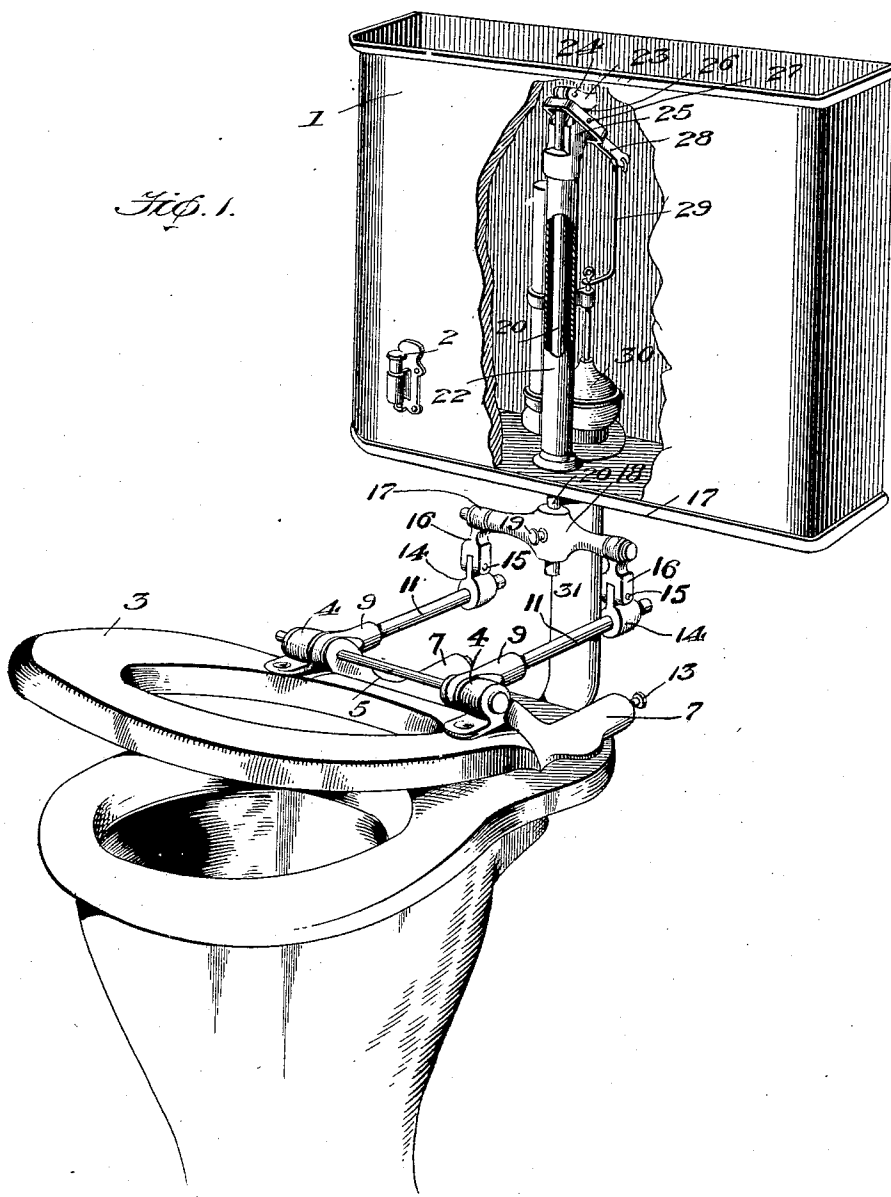


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SEAT OPERATED MECHANISM.  
APPLICATION FILED MAR. 15, 1911.

1,052,055.

Patented Feb. 4, 1913.

2 SHEETS—SHEET 1.



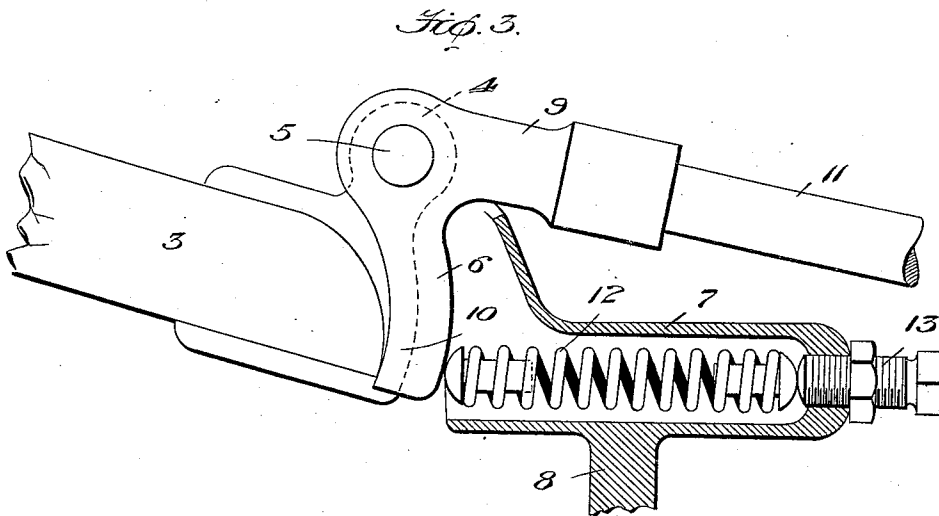
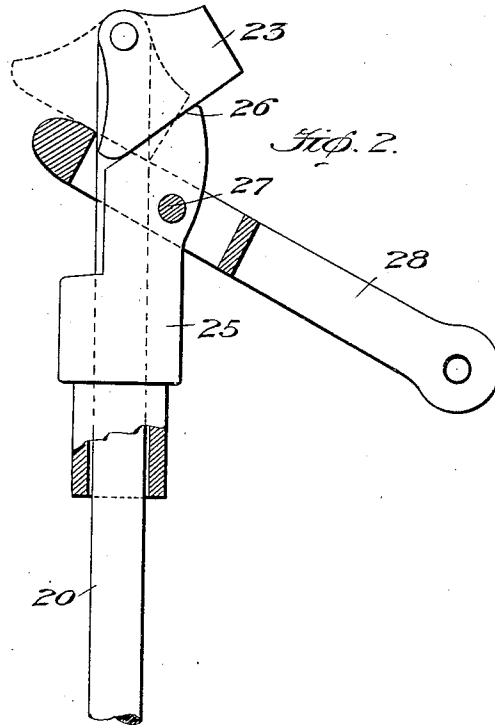
Witnesses  
*[Signature]*  
*[Signature]*

Inventor  
*William A. Henn*  
By *Frank C. Gore*  
his Attorney

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# UNITED STATES PATENT OFFICE.

WILLIAM A. HENN, OF EVANSVILLE, INDIANA.

## SEAT-OPERATED MECHANISM.

1,052,055.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed March 15, 1911. Serial No. 614,632.

*To all whom it may concern:*

Be it known that I, WILLIAM A. HENN, a citizen of the United States, residing at Evansville, county of Vanderburg, and State of Indiana, have invented certain new and useful Improvements in Seat-Operated Mechanisms, of which the following is a specification.

This invention relates to seat operated mechanisms.

The present invention has for its object the provision, in a seat-operated automatic flushing valve mechanism for water closet tanks, of a novel duplex connection between the seat and the rod which controls and operates the flushing valve, whereby the seat is operatively connected to the rod, adjustments are permitted and binding of the posts obviated due to any inaccuracies in setting or displacement of the parts from use and reliability of operation of the valve by the seat is insured.

In the accompanying drawings: Figure 1 is a perspective view showing the invention in use; Fig. 2, an enlarged view of the lever operating mechanism, dotted lines representing the position of the trip when in engagement with the lever; and Fig. 3, a detail of the pivotal mounting for the seat, the casing or housing for the spring being in section.

1 represents the flush tank which may be provided with the ordinary push button flush valve operating device 2 which may be connected to the flush valve to operate it independently of the automatic mechanism constituting the present invention, or said push button may be omitted.

The seat 3 has ears or hinges 4 pivotally mounted on a rod 5 which is in turn mounted in the posts 6 which form a part of the spring housing 7, the latter being suitably connected to the bowl by any means such as 8. Pivotally mounted on the rod 5 are bell crank levers 9 one of whose legs 10 loosely contacts with the seat 3 and the other leg having a rod 11 connected thereto. Springs 12 in the housing 7 are interposed between and bear upon the legs 10 of the levers and set or tension screws 13 whereby the tension of the springs 12 and the resistance they offer to the descent of the seat 3 and their tendency to draw down the rods 11, may be regulated. Carried by the rods 11 are links 14 which are pivoted at 15 to links or knuckles 16 in turn pivoted at 17 to a yoke

18 which is in turn adjustably connected by a set screw 19 to an operating rod 20. Within the tank 1 is a tube or casing 22 which is closed except for its lower end which opens out through the bottom of the flush tank, the operating rod 20 extending up through this tube or casing and carrying at its upper end one or more trips 23 which are pivoted to the rod at 24. Secured to the top of the casing 22 is a head 25 which has one or more releasing cams 26 adapted to engage the lower edge or edges of the trip or trips 23. Pivoted to the head 25 at 27, is a lever 28 which has an operative connection 29 with the ball valve 30 that controls the flush pipe 31.

The articulated connection between the rods 11 and the yoke 18 prevents any binding if the seat or the mechanism therefor is out of proper adjustment or alinement with the other parts of the device; employment of the yoke 18 and the duplex connections between said yoke and the seat distributes the strain on the latter, thus minimizing the liability of the seat becoming loose or distorted; the provision of the set screw 19 enables the yoke to be adjusted on the rod 20 so that any desired extent of movement of the seat can be arranged for.

When the seat 3 is depressed, the rod 20 is elevated, carrying the trip or trips upwardly and free from engagement with the cam or cams 26 and as soon as the latter are cleared, the trip swings, to assume the proper center of gravity, to a position substantially like that shown in dotted lines, Fig. 2. When the seat is released, the springs 12 force the rods 11, the yoke 18, and the rod 20 downwardly and the trip or trips 23 come into engagement with the lever 28 and also with the cam or cams 26 which then constitute a fulcrum for the trips so that the further descent of the rod 20 causes a depression of the left hand end of the lever 28 and the opening of the flush valve 22 but, on the completion of this operation, the cam or cams 26 have swung the trip or trips 23 out of engagement with the lever so that they are clear of it, this operation being assisted by the water flowing into the tank and closing the valve 30 which results in raising of the left hand end of the lever. The parts are then in the position shown in full lines, Fig. 2, ready for a repetition of the before mentioned operations.

The automatic trip shown in detail in Fig. 2 is not claimed herein and forms the subject of another application Serial No. 705,081, filed June 21, 1912, which is a division hereof.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a flushing valve operating mechanism, the combination with a movable seat, of a shiftable rod adapted to be operatively connected to a flushing valve, a yoke carried by and vertically adjustable on the rod and extending on opposite sides thereof, and operative connections between the seat and the yoke on opposite sides of the rod.

2. In a flushing valve operating mechanism, the combination with a movable seat, of a shiftable rod adapted to be operatively connected to a flushing valve, a yoke carried by the rod and extending on opposite sides thereof, said yoke being adjustable on

said rod and having means for securement at different points thereto to regulate the movement of said rod, and swinging operative connections between the seat and the yoke on opposite sides of the rod.

3. In a flushing valve operating mechanism, the combination with a movable seat, of a shiftable rod adapted to be operatively connected to a flushing valve, a yoke carried by and vertically adjustable on the rod and extending on opposite sides thereof, pivoted rods adapted for operation by the seat, and articulated connections between the rods and the yoke on opposite sides of the valve operating rod.

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

WILLIAM A. HENN.

Witnesses:

F. C. GORE,

H. F. WEAVER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."