

J. J. FRIEL & G. CRUSOE.
 AUTOMATIC FLUSHING TANK.
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936,709.

Patented Oct. 12, 1909.

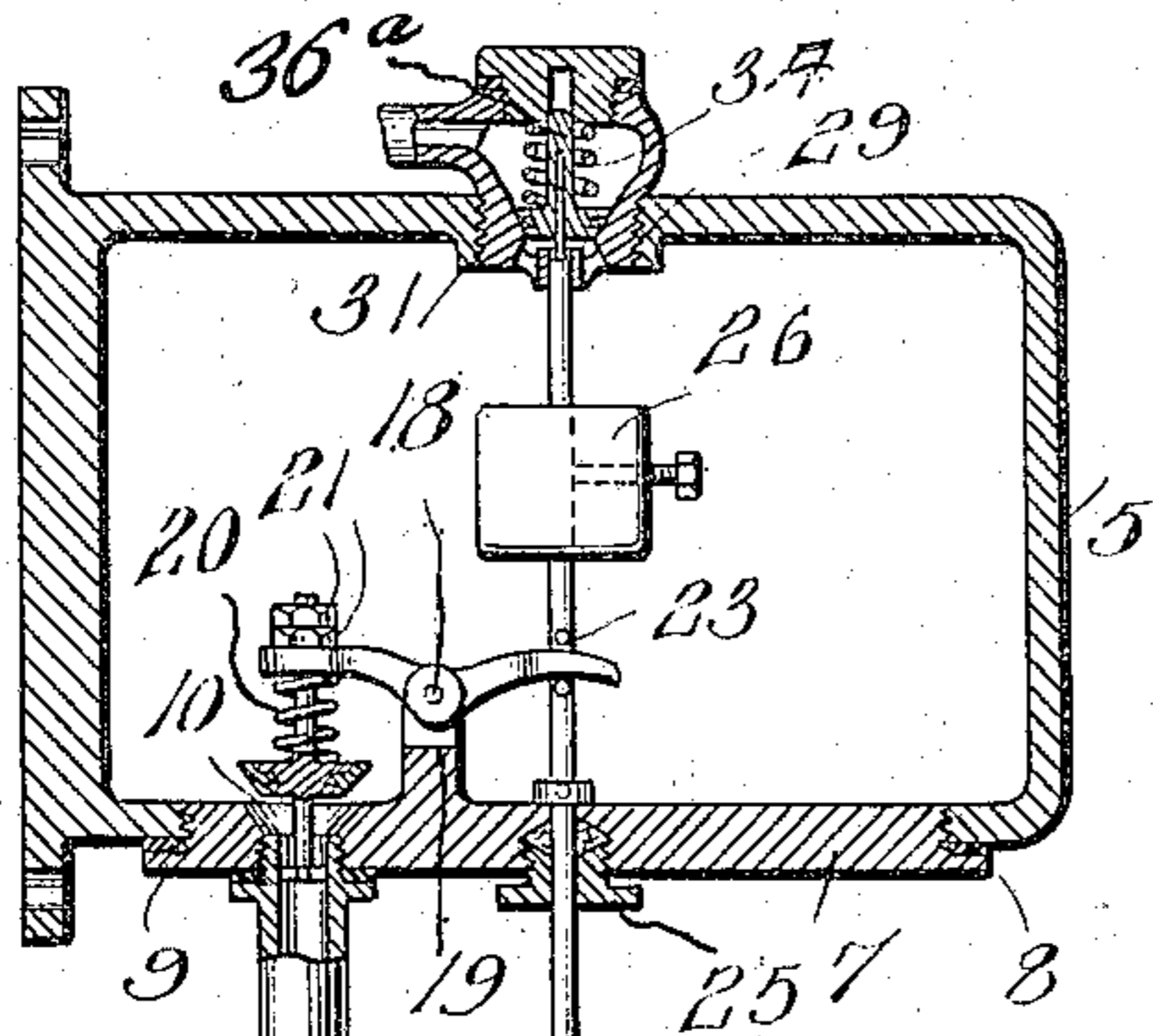


Fig. 1.

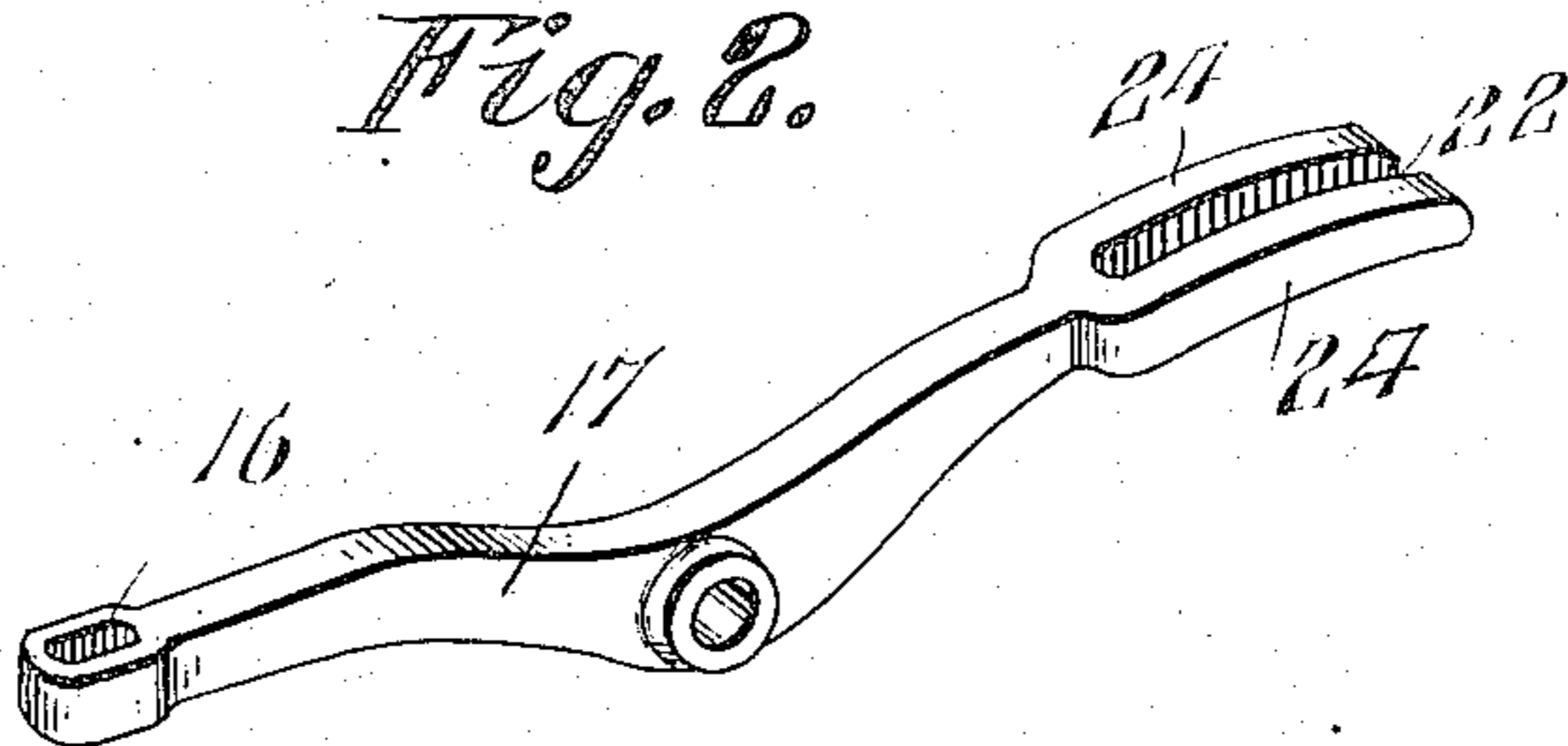


Fig. 2.

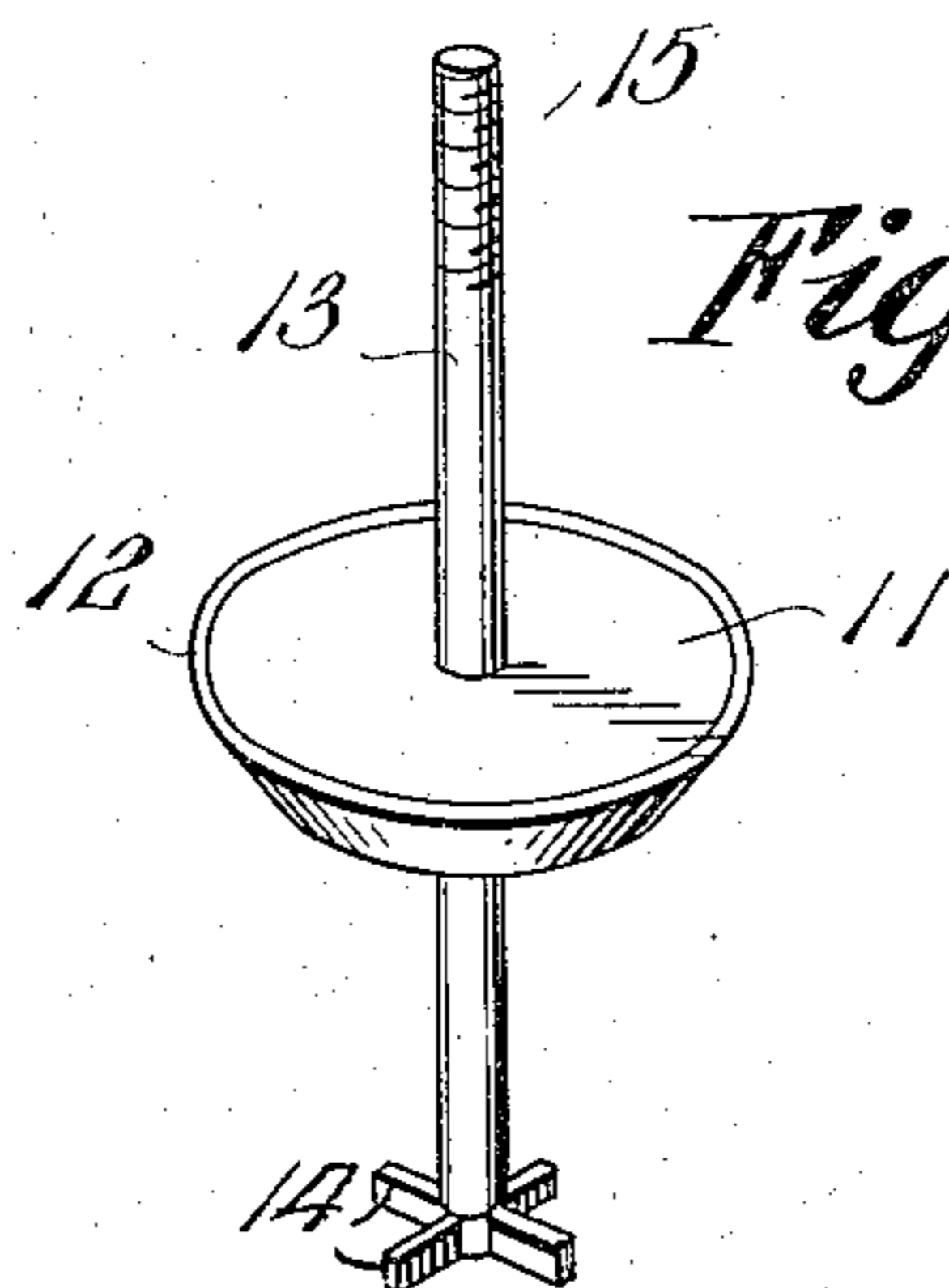


Fig. 3.

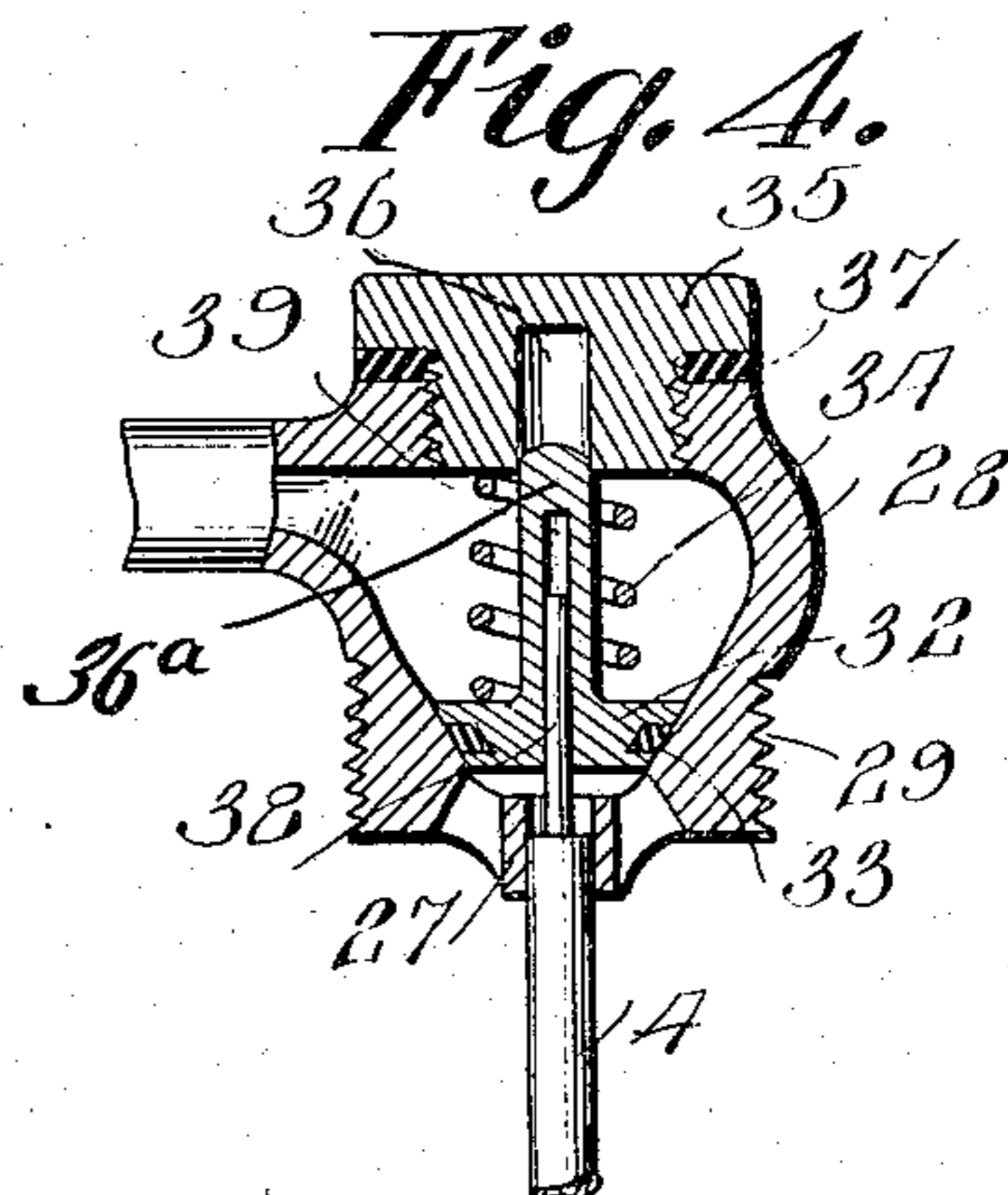


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN J. FRIEL AND GEORGE CRUSOE, OF WILKINSBURG, PENNSYLVANIA.

AUTOMATIC FLUSHING-TANK.

936,709.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN J. FRIEL and GEORGE CRUSOE, citizens of the United States of America, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Automatic Flushing-Tanks, of which the following is a specification.

This invention relates to automatic flushing tanks, and one of the principal objects of the same is to provide means whereby the tank of a water closet will be filled and flushed whenever used.

Another object is to simplify the construction generally in devices of this character.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of a closet and a vertical section of a flushing tank. Fig. 2 is a perspective view of a lever employed for operating the valve. Fig. 3 is a perspective view of the outlet valve. Fig. 4 is a detail sectional view of the inlet valve.

Referring to the drawing for a more specific description of our invention, the numeral 1 designates an ordinary closet bowl provided with a cover 2 having a projecting bracket 3 disposed in alinement with a rod 4 mounted to slide in the tank 5. A flushing pipe 6 is connected with the tank 5 through the medium of a bottom 7 provided with screw threads 8 which engage similar threads in the bottom of the tank, thus making the bottom 7 removable. A gasket 9 is fitted between the outwardly extending flange on the bottom 7 and the body of the tank. The flushing pipe 6 is fitted in a threaded opening in the bottom 7. A flaring valve seat 10 is formed in the upper surface of the bottom 7 in line with the pipe 6, and a frusto-conical valve 11 provided with a gasket or rubber jacket 12 is mounted upon a stem 13, the lower end of which is provided with a radial guide member 14. The upper end of the stem 13 is screw-threaded, as at 15, said threaded portion passing through a slot 16 in a lever 17 pivoted at 18 to a lug 19 formed upon the removable bottom 7. A spring 20 surrounds the stem 13 and bears at one end against the valve 11, while the upper end bears against the lower surface of the lever 17. Lock nuts 21 are secured to the threaded portion 15 of the stem 13 to hold the valve 11

in adjusted position. The outer end of the lever 17 is bifurcated, as at 22, and the rod 4 is provided with stops 23, one located upon the upper side and the other upon the lower side of the arms 24 of the lever 17, as shown more particularly in Fig. 1. The rod 4 passes through a stuffing box 25 fitted to the bottom 7. A weight 26 is adjustable upon the rod 4 by means of a binding screw.

The upper end of the rod 4 is fitted to slide in a tubular bearing 27 formed on a valve casing 28 provided with screw threads 29 to engage the threads 30 formed upon a boss 31 in the upper side of the tank 5. A valve 32 provided with a packing 33 and adapted to fit the walls of the valve casing 28 is held to its seat by means of a spring 34 bearing at one end against the valve, and the opposite end of which bears against a removable plug 35 fitted in the upper end of the casing 28 provided with a recess 36 for the valve stem 36^a. A pin 38 formed upon or secured to the upper end of the rod 4 extends through the valve 32 and into the valve stem, a socket 39 being formed in the valve and stem to accommodate the pin 38.

The operation of our invention may be briefly described as follows: The weight 26 on the rod 4 pushes said rod downward against the bracket 3 on the seat 2 and thus lifts the valve 11 from its seat and permits water to flow through the flushing pipe 6 to the bowl. When pressure is applied to the seat 2 the rod 4 is pushed upward, which closes the valve 11 and opens the valve 32 to fill the tank 5 with water. Thus the tank is filled and the bowl is flushed at each operation.

From the foregoing it will be obvious that our invention is of simple construction, cannot readily get out of order and can be produced and installed at slight cost.

Having thus described the invention, what is claimed as new, is:—

In a device of the character described, the combination of a seat, a bracket extending from the seat, a rod supported upon said bracket, said rod extending upwardly into a flush tank, a weight on said rod within the tank, an inlet valve in the flush tank, the upper end of said rod having a pin extending therefrom to lift said inlet valve for filling said tank, a flush pipe leading from the lower portion of the tank to the bowl,

a valve for said pipe, a lever pivoted within
said tank, one end of said lever being con-
nected to the stem of the valve for the flush
pipe and the opposite end of said lever being
5 provided with spaced arms to embrace said
rod, and stops on said rod at the opposite
sides of said arms.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

JOHN J. FRIEL.
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Witnesses:

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