

No. 626,645.

Patented June 6, 1899.

L. H. WILLIAMS.
WATER CLOSET.

(Application filed Dec. 8, 1898.)

(No Model.)

Fig. 1.

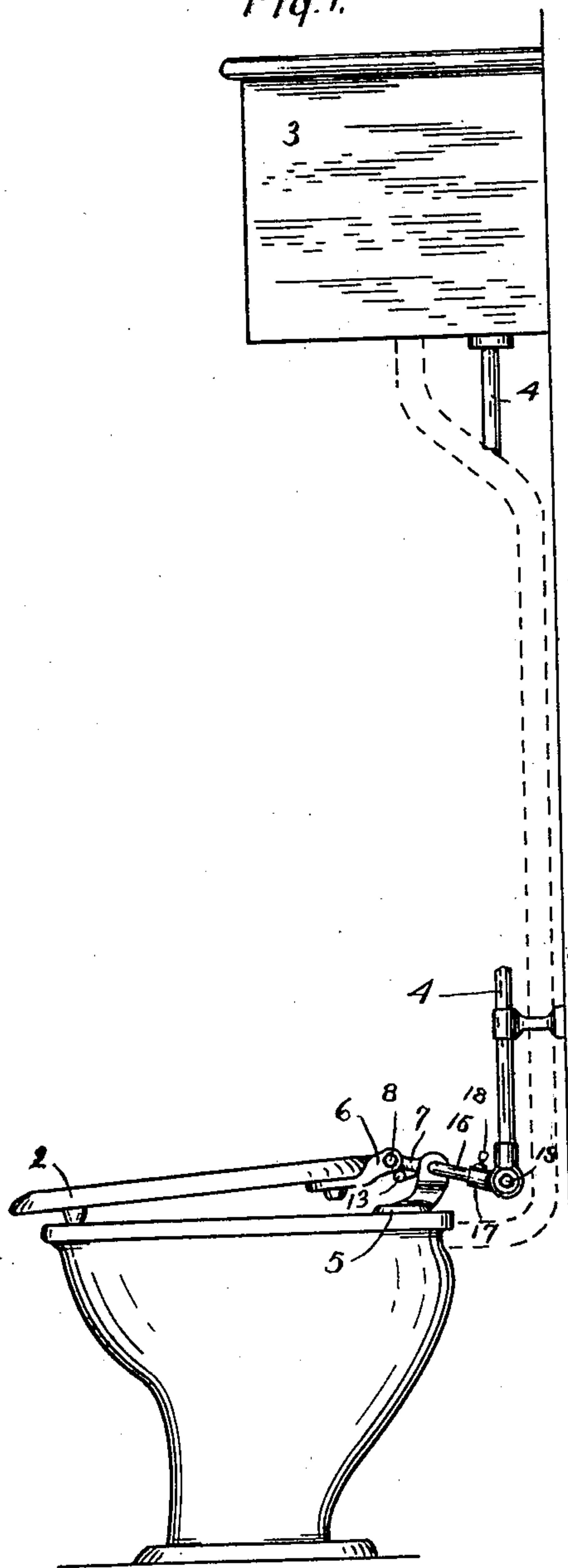


Fig. 2.

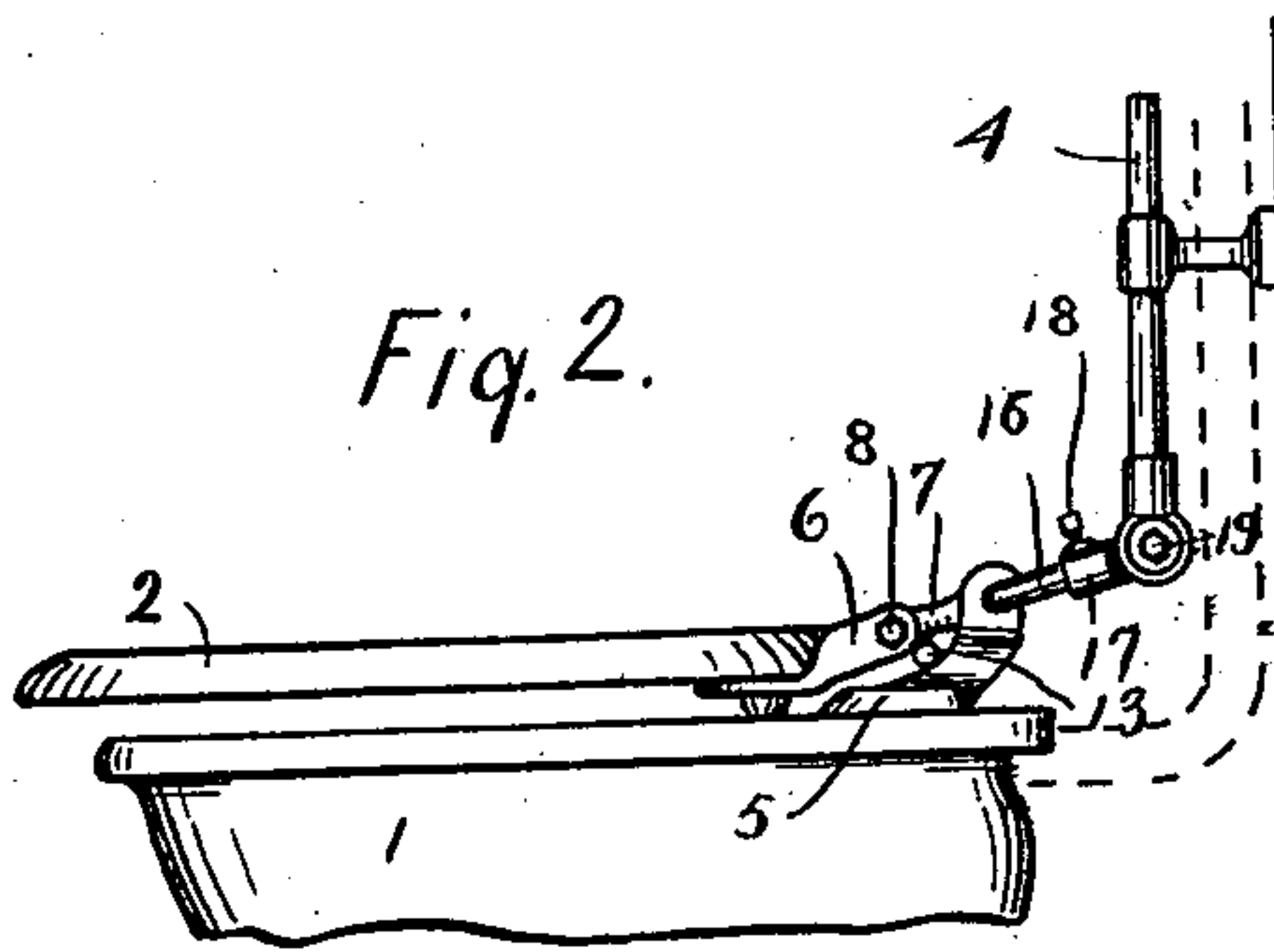


Fig. 3.

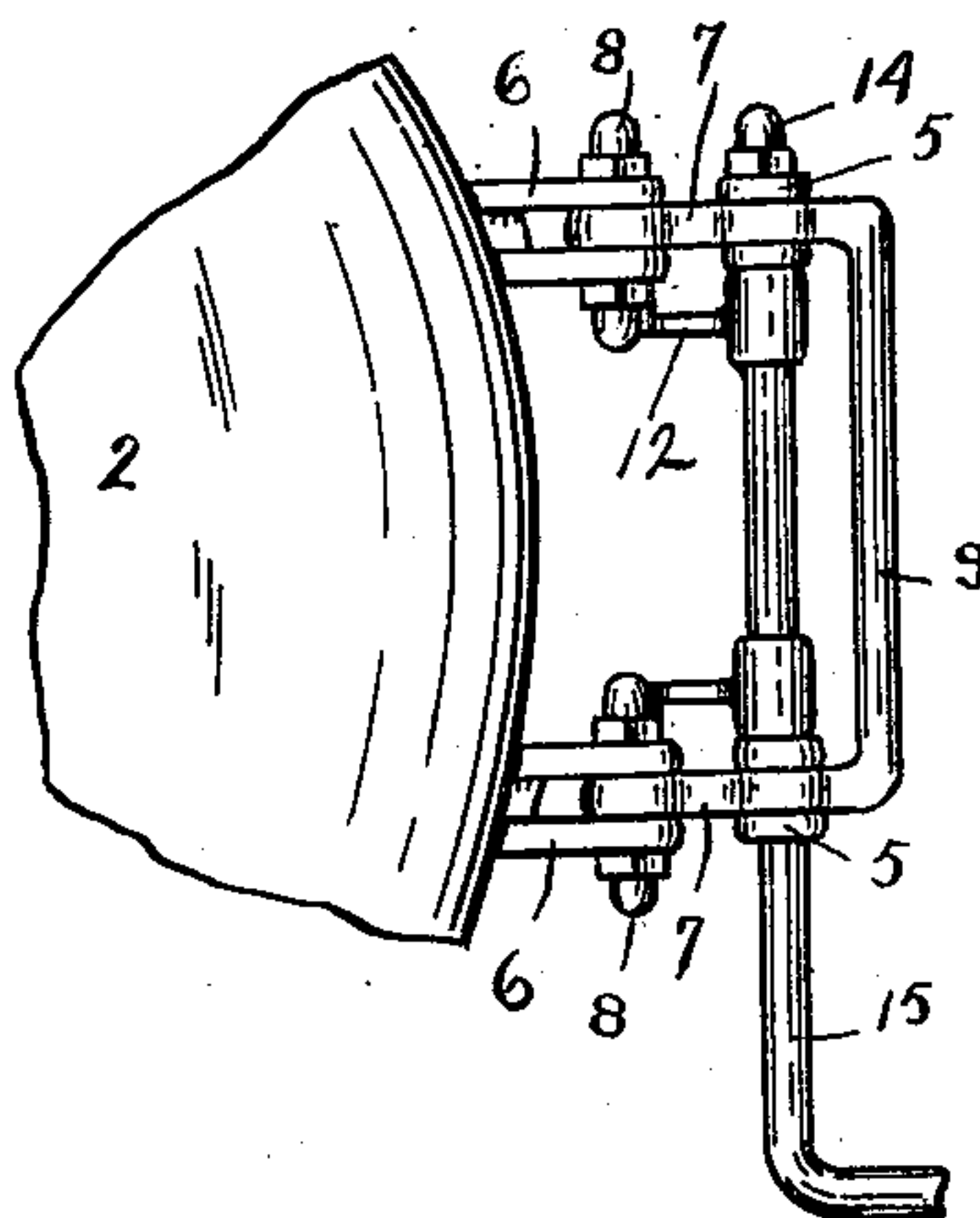
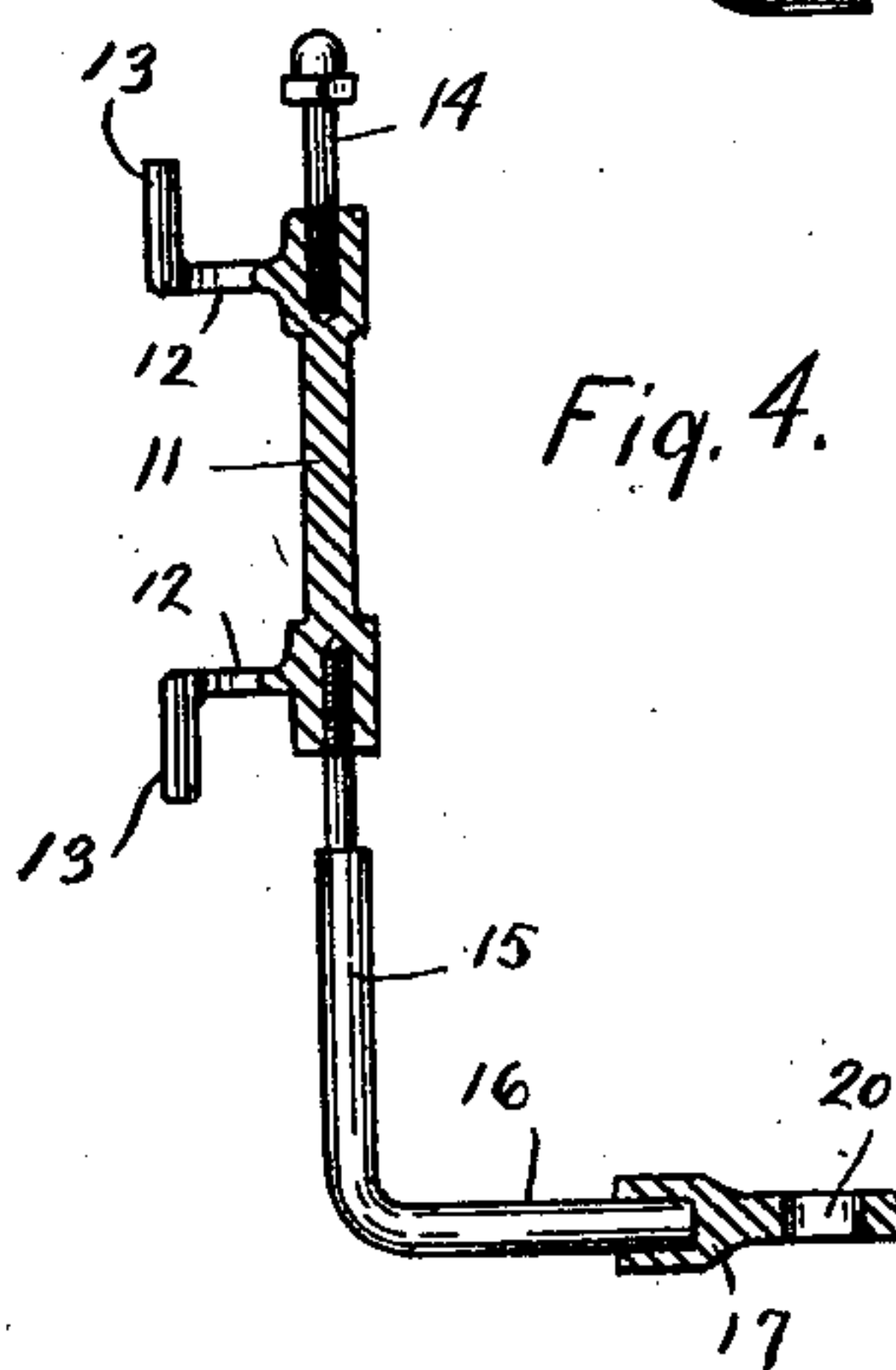


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 626,645, dated June 6, 1899.

Application filed December 8, 1898. Serial No. 698,663. (No model.)

To all whom it may concern:

Be it known that I, LEE H. WILLIAMS, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Water-Closet; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

My invention relates to means for actuating the valve rod or chain extending from the flushing-tank of a water-closet by means of the depression of the rear end of the seat. To that end I hinge the seat so that its rear end will be depressible. I then provide a lever mounted independent of the seat-hinge, with one end extending in the path of the seat and the other end connected with the valve-actuating rod or chain, whereby the rear end of the seat when depressed will engage and actuate said lever, and it in turn will cause the actuation of the valve-rod. This permits the independent movement of the seat, and especially the independent movement of the valve-actuating rod. Furthermore, it renders the device very sensitive. The form of the lever may be such as to increase or decrease the weight necessary to operate it. Also the form of lever is not affected by the kind of hinge employed. Hence it can be used in connection with any kind of a hinge that will permit the rear of the seat to be depressed. In addition the parts of the device are very simple and positive in their action and can be readily taken apart.

The various features of my invention will more fully appear from the accompanying drawings and the description and claims following.

Figure 1 shows in side elevation a water-closet with the valve-rod partly broken away and with the seat in its unoccupied position. Fig. 2 is a side view of the hinge, seat, and the lever with the bowl partly broken away, showing the seat in its depressed position. Fig. 3 is a plan of the lever and seat-hinge. Fig. 4 is a plan of the lever itself, parts being in section.

In detail, 1 is the bowl of a water-closet, 2 the seat, and 3 the flushing-tank. It is

understood that the flushing-tank contains some kind of valve construction which will permit the water to escape when desired and prevent its escape when not desired. This valve construction, whatever it may be, is actuated by the valve-rod 4. In the construction shown and used the valve is so actuated as to permit the escape of the water by the lowering of the valve-rod, the elevation thereof having no effect excepting to place the upper end of said rod in position for actuating the valve in the flushing-tank. One form of such valve construction and its operation of the valve-rod is shown in the patent to David D. Buick, No. 558,532, dated April 28, 1896. But this invention is not confined at all to any particular valve construction or valve-actuating means in the flushing-box. It relates rather to the means for actuating the valve by the depression of the seat.

On the bowl there are mounted two bearing-posts 5. The rear end of the seat has secured to it, practically as a part of it, two metallic projections 6. These projections are hinged to the posts 4 by the links 7. This may be done with the parts in any desired form; but I show the projections having two ears with the pin 8 therethrough and carrying one end of the link 7. I also connect the other ends of the two links by the rod 9 in order to make the two hinges move with uniformity and prevent one side of the seat from being lower than the other at any time in the operation of the seat. It is immaterial whether the rod 9 be placed where it is shown or elsewhere, as it has no function excepting the rigid connection of the links 7.

The lever that actuates the valve-rod is made in a peculiar form in order to be convenient. Although it is mechanically one lever, it consists of the rod 11, with its ends threaded internally and at each end having an arm 12, that extends into engagement with the rear end of the seat or the projections 6, which are essentially a part of the seat. These arms may extend straight under the seat or be turned laterally to form the fingers 13.

Into one end of the rod 11 the bearing-pin 14 is screwed, and into the other end of said rod 11 the rod 15 is screwed, it acting also as

a bearing-rod. The bearing-pin 14 and the rod 15 have bearings, in the form shown, in the posts 5, and the links 7 are pivoted thereon. The pivoting of said links on the bearing pin and rod rather than mounting them separately is adopted merely for convenience, for there is no mechanical connection between the two and they can be separately mounted. The rod 15 is extended laterally as far as desired and is turned rearward to make the rearward-projecting arm 16. To said arm I adjustably secure the extension 17 by means of the set-screw 18. To the end of said extension 17 I pivotally secure the valve-rod. The means shown is by the screw-pin 19, that extends through the slot 20 in said extension 16. While said lever, as shown, consists of the parts numbered from 11 to 16, inclusive, it mechanically is nothing more than a straight lever mounted between its ends—one end, the arm 12, extending into the path of the depressible end of the seat and the other end, the parts 16 and 17, being connected with the valve-rod. The seat acts on the arm 12 and causes the other end of the lever, the extension 17, to elevate the valve-rod. When the seat is unoccupied, the weight of the valve-rod causes the rear end of the lever—that is, the extension 17—to move downward and by means of the lever, through the arm 12, the rear end of the seat is lifted upward into the position shown in Fig. 1. During this operation the closet is being flushed.

The construction of the lever with the parts and in the manner shown makes it convenient in use and in taking apart the device. It is seen that the seat can operate the lever only when depressed, its elevation having no effect on the lever. The gravity of the valve-rod alone operates the lever after the depression of the seat. Where no flushing device is used or there is no connection between it and the seat, the lever may be omitted and the seat still hinged, as set forth.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A water-closet including a seat so hinged as to be vertically movable at the rear, a lever independent of the seat-hinge and with a free end extending into the path of the rear end of the seat whereby said lever is operated when the seat is depressed, and valve-actuat-

ing means extending from such lever to the flushing-tank.

2. A water-closet including a seat so hinged as to be depressible at the rear, a lever independent of the seat-hinge pivoted between its ends with one end thereof extending disengaged into the path of the rear end of the seat, and valve-actuating means extending from the other end of the lever to the flushing-tank.

3. A water-closet including a seat so hinged as to be depressible at the rear, a pair of posts, a lever independent of the seat-hinge formed of a horizontal rod between said posts with its ends internally threaded and with arms extending disengaged into the path of the rear end of the seat, bearing-pins screwed into the threaded ends and having bearings in said posts, one of said bearing-pins being extended and provided with a rearward extension, and valve-actuating means extending from such rearward extension of the lever to the flushing-tank.

4. A water-closet including a seat with rearward projections therefrom, links for hinging said projections, a lever independent of the seat-hinge consisting of a horizontally-pivoted rod with arms extending disengaged under such projections and with a rearwardly-extending arm, and valve-actuating means extending from the rear arm of such lever to the flushing-tank.

5. A water-closet including a seat provided with rearward projections, a pair of posts, a lever independent of the seat-hinge consisting of a horizontal portion mounted in said posts and having arms extending disengaged under said projections from the seat and also a rearwardly-extending arm, links pivoted on the horizontal portion of said lever and pivotally connected with said extension from the seat, said links being rigidly connected with each other, and a valve-actuating rod pivoted to the rear arm of the lever and extending to the flushing-tank.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

LEE H. WILLIAMS.

Witnesses:

M. C. BUCK,

V. H. LOCKWOOD.