

No. 636,564.

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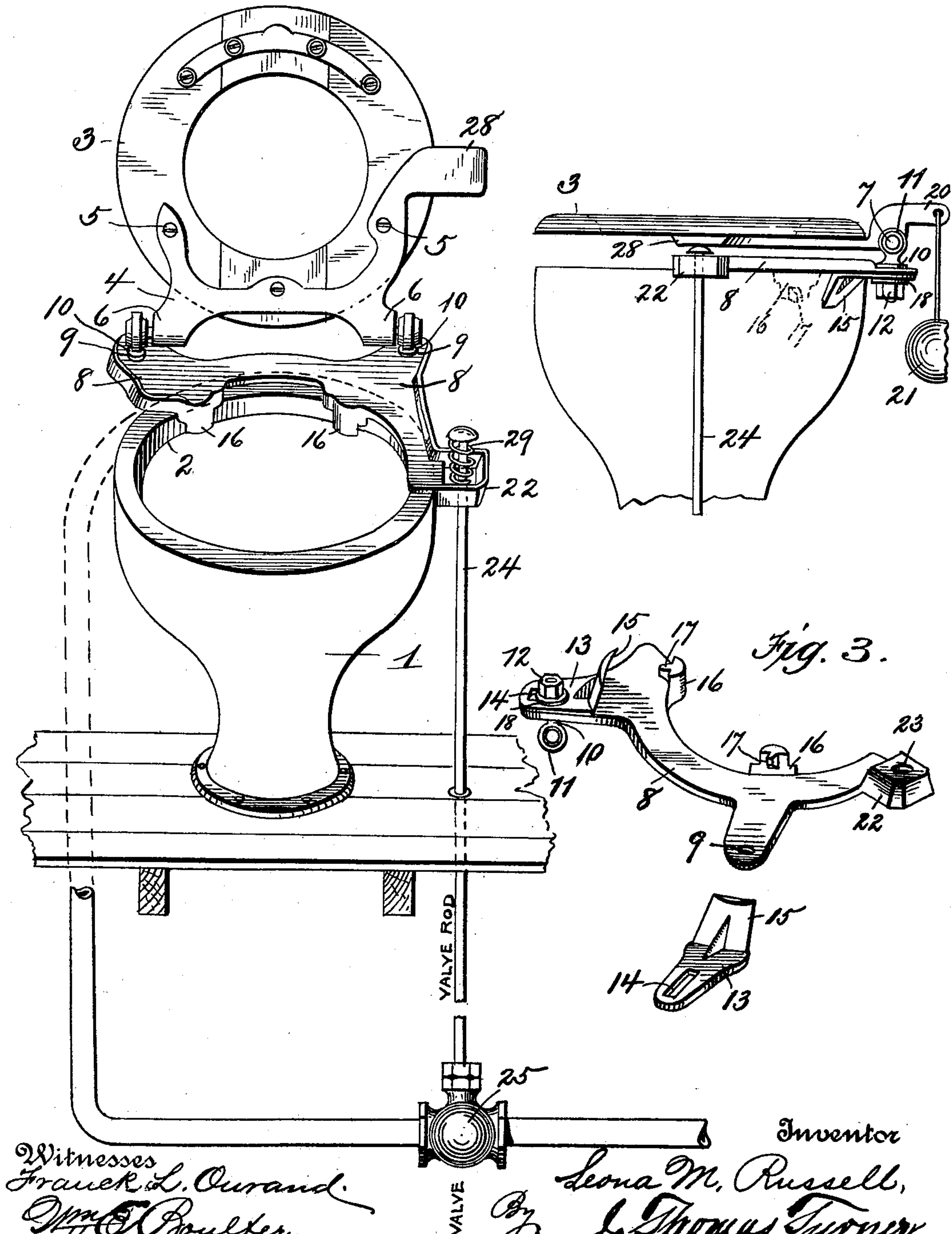
L. M. RUSSELL.
WATER CLOSET.

(Application filed July 18, 1899.)

(No Model.)

Fig. 1.

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LEONA MARCUS RUSSELL, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE
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WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 636,564, dated November 7, 1899.

Application filed July 18, 1899. Serial No. 724,241. (No model.)

To all whom it may concern:

Be it known that I, LEONA MARCUS RUSSELL, a citizen of the United States, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Water-Closets, of which the following is a specification.

My invention has relation to water-closets, and it relates more particularly to means
10 whereby a water-closet seat may be readily attached to and disconnected from the water-closet bowl and also to means whereby the bowl may be automatically flushed when the seat is lowered and such flushing continued
15 when the seat is occupied and the flow of water automatically cut off when the seat is raised.

Among the objects in view is to provide simple and inexpensive means for attaching
20 a water-closet seat to the bowl and for automatically flushing said bowl when the closet is in use, these means being adapted for application to closets of usual construction; and the invention consists in the novel construction, arrangement, and combination of parts,
25 as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a perspective
30 view of a water-closet constructed according to my invention, showing the seat in its normal raised position. Fig. 2 is a side elevation, partly broken away, showing the seat in its lowered position. Fig. 3 is a perspective
35 view of a portion of the attaching means for the seat in an inverted position and showing one of the clamping-plates detached.

1 indicates an ordinary water-closet bowl which may be constructed of porcelain or
40 metal and having, preferably, at its upper edge or rim an inwardly-projecting flange or lip 2.

3 indicates an ordinary seat which is adapted to be pivotally connected to the bowl. The
45 means for pivotally attaching the seat comprises a metal section or frame 4, secured to the underside of the seat in any suitable manner, as by screws 5, said frame having integral projections or ears 6, which latter are provided with laterally-projecting trunnions 7.
50

8 indicates a metal section having a curva-

ture corresponding to that of the bowl. Said section is provided with openings 9, through which project bolts 10, the lower ends of which are threaded and having heads 11, 55 which are perforated to receive the trunnions 7. Upon the lower ends of the bolts are adapted to be screwed nuts 12.

13 indicates plates which are slotted, as at 14, and through the slots project the bolts 10. 60 Integral with the plates 13 are downwardly-projecting lugs 15, which are adapted to cooperate with downwardly-projecting lugs 16, integral with the plate 8 at its inner edge, which lugs 16 have inwardly-projecting portions 17. The latter are adapted to engage 65 beneath the flange 2, while the lugs 13 are adapted to clamp against the outer face of the bowl, as represented in Figs. 1 and 2. It will thus be seen that by first causing the 70 portions 17 of lugs 16 to engage beneath the flange 2, then adjusting the plates 13 inwardly until the lugs 15 bear against the bowl, and then screwing the nuts 12 tightly against the under side of the plates 13 the section 8 will 75 be firmly secured to the bowl, and the seat thus will have a pivotal connection with the bowl. Owing to the provision of the slots 14 the plates 13 are not only enabled to be readily loosened after unscrewing the nuts to adapt 80 the attaching means to be readily disconnected from the bowl, but the device is adapted for use with bowls of various thicknesses.

Washers 18 may be interposed between the nuts and the plates 13, as shown. 85

It will be observed that I have provided a very simple and inexpensive means whereby a water-closet seat may be readily attached to or disconnected from the bowl.

For the purpose of automatically raising 90 the seat when not in use, any suitable means may be provided, as is usual. I show the section 4 as being provided with a rearwardly-projecting arm 20, from which is suspended a weight 21, which latter will effect the raising of the seat when not in use. Instead of 95 the weight a suitably-arranged spring might be employed for the described purpose.

The means which I employ for automatically flushing the bowl while the seat is in a 100 lowered position will now be described.

The section 8 has an integral arm or pro-

jection 22, perforated at 23, and through which perforation loosely extends a rod 24, the lower end of which is in suitable connection with a valve, as at 25, located at a suitable point in
5 a water-supply pipe or in a branch thereof, which pipe or its branch leads into the bowl adjacent to its upper edge for the purpose of flushing the same, as is usual. The perforation in the arm serves as a guide for the rod
10 24 in its reciprocating movements.

It will be noted that I do not wish to be restricted to the exact location or arrangement of the valve which controls the supply of water to the bowl or to the arrangement of
15 the supply-pipe. For instance, each closet in a dwelling may have an independent supply-pipe leading at its upper end into the bowl and provided adjacent thereto with the valve referred to and then leading down below the
20 frost-line and connected with the main supply-pipe for the dwelling, or there may be but one supply-pipe leading from the main water-pipe and said supply-pipe be provided with a branch leading to each bowl for flush-
25 ing it, a valve being then located in each branch pipe.

The connection between the lower end of the rod 24 and the valve should be such that when the rod is depressed the valve will be
30 opened to permit the water to flush the bowl and that when the rod is raised said valve will be closed to cut off the supply of water.

The section 4 has an arm or extension 28, which when the seat is lowered for use will
35 strike against the upper end of the rod, as seen in Fig. 2, and depress said rod, thus opening the valve and causing the bowl to be flushed.

For the purpose of closing the valve when
40 the seat has been raised any suitable means may be employed—as, for instance, a coiled spring 29, encircling the rod 24, and being seated in a depression formed in the arm 22, said spring operating to raise the rod when
45 the seat is raised, and thus close the valve.

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

1. A means for attaching a water-closet
50 seat to the bowl, comprising a plate or section having lugs at its inner edge, plates provided with slots and having lugs, the various lugs being adapted to engage the bowl upon its inner and outer sides adjacent to the rim,

bolts threaded at one end and provided at the opposite end with apertured heads, said bolts
55 passing through the plate or section and the slots in the slotted plates, and nuts adapted to screw upon the threaded ends of the bolts, as and for the purposes specified.

2. In a water-closet, the combination with
60 a bowl, and a seat, of a plate or section provided at one edge with lugs engaging the bowl upon its inner side adjacent to the rim, plates carried by the aforesaid plate and having lugs engaging the outer side of the bowl
65 adjacent to the rim and having slots, bolts threaded at one end and having apertured heads at the opposite end and passing through the first-mentioned plates and the said slots, nuts threaded upon the threaded ends of the
70 bolts, a plate secured upon the under side of the seat and having journals pivotally mounted in the apertures of the bolts, as and for the purpose specified.

3. In a water-closet, the combination with
75 a bowl, a water-supply pipe therefor, a valve in said pipe, and a rod in connection with said valve, of a plate carried by the bowl having a cup-shaped or recessed projection through which said rod loosely passes and by
80 which it is guided, means carried by the seat adapted to actuate the rod in one direction when the seat is lowered, and a spring seated in the cup-shaped projection and adapted to move the rod in the opposite direction when
85 the seat is raised, all for the purposes specified.

4. In a water-closet, the combination with
a bowl, a water-supply pipe therefor, a valve in said pipe, and a rod in connection with
90 said valve, of a plate carried by the bowl and having a lateral projection through which the said rod loosely passes and by which it is guided, the upper end of the rod normally extending above the said projection, a seat
95 pivotally connected with said plate, and a laterally-projecting arm carried by the seat adapted to strike the projecting end of the rod when the seat is lowered to cause the said rod to open the valve, as set forth. 100

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

LEONA MARCUS RUSSELL.

Witnesses:

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