No. 734,336. PATENTED JULY 21, 1903.

W. S. JOHNSON.

AUTOMATIC WATER CLOSET SEAT.

APPLICATION FILED DEC. 17, 1902.

NO MODEL.

Fig. 1.

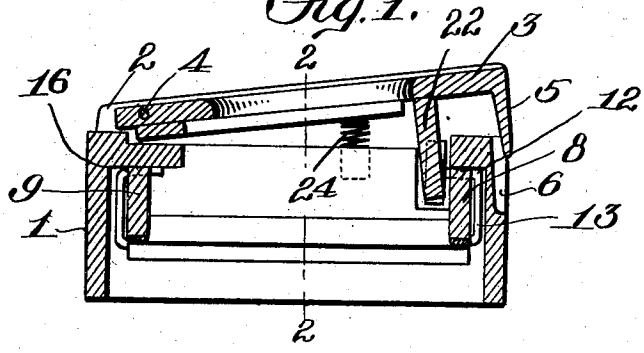


Fig. 2.

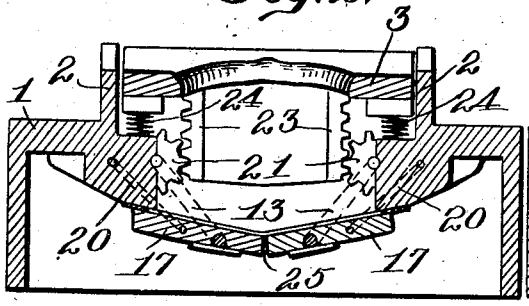


Fig. 4.

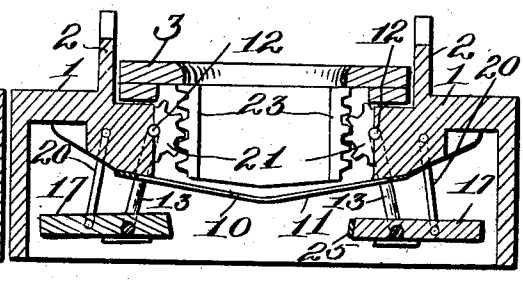


Fig. 3.

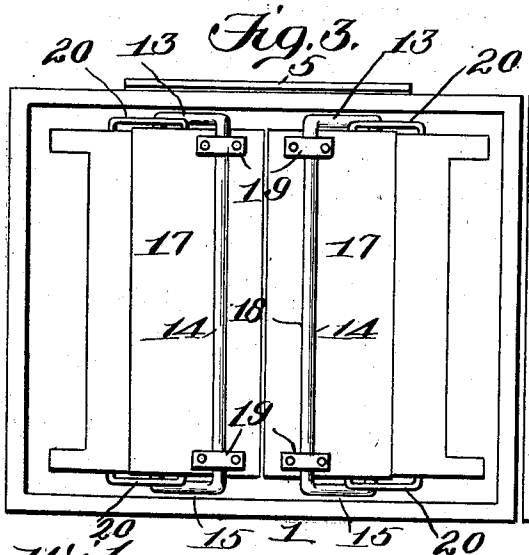
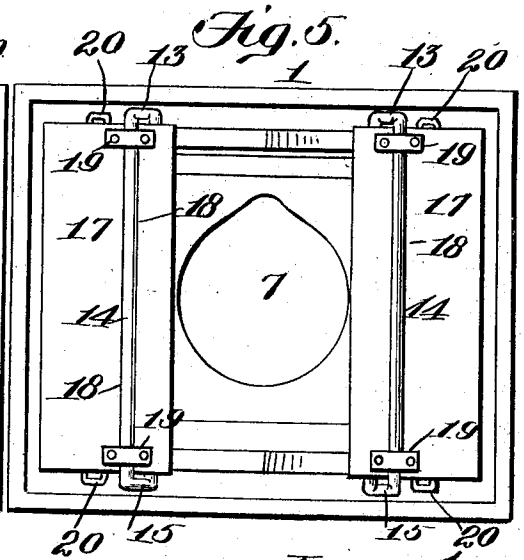


Fig. 5.



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No. 734,336. Patented July 21, 1903.

UNITED STATES PATENT OFFICE.

WINFIELD SCOTT JOHNSON, OF DUQUOIN, ILLINOIS.

AUTOMATIC WATER-CLOSET SEAT.

SPECIFICATION forming part of Letters Patent No. 734,336, dated July 21, 1903.

Application filed December 17, 1902. Serial No. 135,506. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD SCOTT JOHNSON, a citizen of the United States, residing at Duquoin, in the county of Perry and State of Illinois, have invented new and useful Improvements in Automatic Water-Closet Seats, of which the following is a specification.

This invention relates to water-closets; and it has for its object to provide improved and simple means for automatically opening and closing the passage through the water-closet.

The invention comprises a pair of normally closed pivoted shutters beneath the closet-seat and means operated by downward pressure on the closet-seat for opening said shutters.

In the accompanying drawings, forming a part of this specification, Figure 1 is a central sectional view of my improved closet-seat. Fig. 2 is a transverse section on the line 2 2, Fig. 1, the pivoted shutters being shown in closed position. Fig. 3 is an under plan view, the pivoted shutters being shown in closed position. Fig. 4 is a view similar to Fig. 2, the pivoted shutters being shown in open position; and Fig. 5 is a view similar to Fig. 3, the pivoted shutters being shown in open position.

Like reference characters refer to like parts in the several views.

The casing 1 of my improved water-closet is provided on its upper surface with the longitudinally-extending flanges 2 2, which inclose the closet-seat 3. At its rear end the closet-seat 3 is hinged or pivoted to the flanges 2 by the pins or bolts 4. A downwardly-extending flange 5 is provided on the extreme forward end of the pivoted seat 3. When the seat 3 is depressed, the flange 5 fits into a cut-away portion 6 of the casing 1, limiting the downward movement of the seat 3 and providing a flush joint between the casing 1 and the seat 3.

The casing 1 in front of the aperture 7 through the seat 3 is provided with a transverse downwardly-extending wall or flange 8. A similar flange is provided at the rear end of the casing 1. Both flanges 8 and 9 are preferably flattened at their lowermost portions, as shown at 10 11, Fig. 4, to provide bearing-surfaces for the pivoted shutters, hereinafter to be described, when said shutters are in closed position.

Extending through the upper portion of the front flange 8 are two rods 12, each of which is bent downwardly at an angle, as shown at 13, and then rearwardly, as shown at 14, Figs. 3 and 5. At its rear end each of the rods 12 is bent upwardly at 15 and forwardly at 16 through the rear flange 9 of the casing 1. The rods 12 are journaled in the flanges 8 and 9, so that they are capable of swinging therein.

Attached to the lower portion 14 of each rod 12 is a shutter 17. Each of the shutters 17 is preferably attached to its rod 12 by providing a groove 18 in the lower surface thereof, into which groove the portion 14 of the rod 12 fits. To retain the rods 14 in the grooves 18 of the shutters 17, straps or cross-pieces 19, screwed or otherwise secured to the under face of the shutters, are provided, as clearly shown in Figs. 3 and 5. It will be understood that the rods 14 are not rigidly mounted in the grooves 18 of the shutters, but are capable of turning slightly therein as said shutters are swung to opened or closed position. A small bent or auxiliary rod 20 is provided at each end of each shutter 17, each rod 20 being journaled at one end in the shutter 17 and at the other end in the flange 8 or 9 of the casing 1. The rods 12 and 20 provide means for supporting and swinging the shutters 17 to open and close the passage through the closet.

Upon the end of each rod 12 adjacent to the flange 8 of the casing 1 is rigidly mounted a pinion 21, by the partial rotation of which each rod 12 may be partially turned to open or close the shutters 17.

The seat 3 is provided with a transverse downwardly-extending flange 22 adjacent to the flange 8 of the casing 1. At each of its ends the flange 22 is provided with a vertical rack-bar 23, which meshes with one of the pinions 21 on the rods 12. A plurality of coil-springs 24, each bearing at one end against a portion or in a socket of the casing 1 and at its other end against the under surface of the seat 3, is provided to normally hold the seat 3 in raised position.

Any suitable packing 25 may be provided upon one or both of the shutters 17 to pro-

duce a tight joint between said shutters when they are in closed position.

Constructed as above described the operation of my improved device is obvious. The springs 24 by holding the seat 3 in raised position cause racks 23 and pinions 21 to normally hold the shutters 17 tightly closed. When, however, pressure is applied to the seat 3 by a person sitting thereon, the springs 24 are compressed, the pinions 21 are partially turned by the racks 23, the rods 12 are operated, and the shutters 17 are caused to swing away from each other, as shown in Fig. 4.

In addition to the packing on the inner edges of the shutters 17 the flattened portions 10 11 of the flanges 8 and 9 may be provided with felt or other suitable packing to produce a tight closure of said shutters, and packing may further be provided along the upper outer edges of said shutters, as will be understood.

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

1. In a device of the character described, a downwardly-movable seat, a plurality of pivoted links, a shutter supported by said links and arranged to swing, and means operated by the movement of said seat for swinging said shutter.

2. In a device of the character described, a downwardly-movable seat, a plurality of pivoted links, a plurality of shutters supported by said links and arranged to swing to opened or closed position, and gear mechanism operated by the movement of said seat for operating said shutters.

3. In a device of the character specified, a casing, a seat pivoted on said casing, means for normally holding said seat in raised position, a pair of racks on said seat, a pair of rods journaled in said casing, a pinion on each of said rods meshing with one of said racks, a shutter attached to each of said rods, and a plurality of auxiliary rods, each journaled to one end in said casing and at the other end in one of said shutters.

4. In a device of the character specified, a casing, a pair of upwardly-extending flanges on said casing, a seat pivotally mounted between said flanges, a downwardly-extending flange on said seat, a pair of racks on said downwardly-extending flange, a plurality of springs, each bearing at one end against said casing and at the other end against said seat, a pair of downwardly-extending flanges on said casing, a pair of bent rods, each journaled in the downwardly-extending flanges of said casing, a pinion on each of said rods, each meshing with one of said racks, a shutter attached to each of said rods, and a plurality of auxiliary rods, each journaled at one end to one of the flanges of said casing and at the other end to one of said shutters.

5. In a device of the character specified, a casing or base, a seat pivoted on said casing, a pair of racks on said seat, means for normally holding said seat in raised position, a pair of downwardly-extending flanges on said casing, the lower portions of said flanges being flattened, packing applied to the flattened portions of said flanges, a pair of rods journaled in said casing, a pinion on each of said rods, said pinions meshing with said racks, a shutter attached to each of said rods, and packing on the edges of said shutters.

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