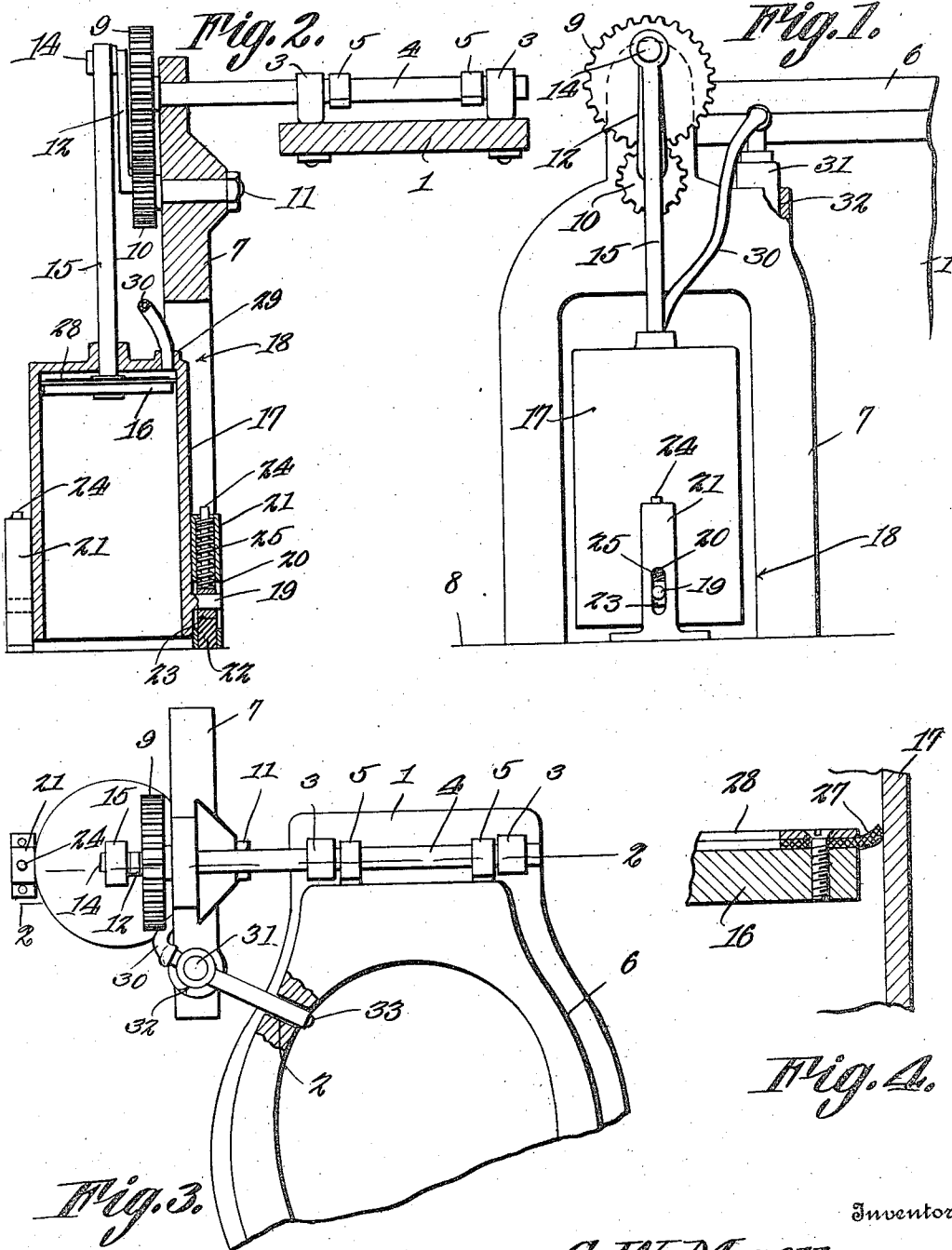


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CLOSET ATTACHMENT.
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Witness

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CLOSET ATTACHMENT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLARKSON W. MACY, a citizen of the United States, residing at Converse, in the county of Miami and State of Indiana, have invented a new and useful Closet Attachment, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed for deodorizing and disinfecting a water closet, and the invention aims to provide novel means, actuated by the seat of the water closet, whereby disinfectant will be supplied to the bowl portion of the water closet.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention;

Fig. 2 is a vertical section taken approximately on the line 2—2 of Fig. 3;

Fig. 3 is a top plan wherein parts are broken away;

Fig. 4 is a fragmental vertical section taken through the piston head.

In the drawings, the numeral 1 denotes the bowl of a water closet, provided with bearings 3 in which is mounted to rock, a shaft 4. Hangers 5 are secured to the shaft 4 and are attached to a seat 6, having a transverse groove 2 in its under surface.

The numeral 7 denotes a support attached to the floor 8. The shaft 4 is journaled in the upper end of the support 7. Attached to the shaft 4 is a gear wheel 9 meshing into a pinion 10 carried by a shaft 11 mounted in the support 7. The diameter of the gear wheel 9 preferably is twice the diameter of the pinion 10. Although the part 10 has been denominated a pinion, the part 9 being designated a gear wheel, it is not necessary that these elements be toothed around their

entire peripheries, since neither of them, ordinarily, makes a complete revolution. The pinion 10 is provided with an arm 12 pivoted at 14 to a plunger 15 carrying a head 16.

The numeral 17 denotes a cylinder in which the head 16 reciprocates, the plunger 15 passing through the top of the cylinder. The cylinder 17 is received partly in an opening 18 formed in the support 7. The cylinder 17 has trunnions 19 mounted to move vertically in slots 20 formed in guides 21 attached to the floor 8. In the lower ends of the guides 21 are mounted cushion blocks 22, which may be resilient, the cushion blocks 22 serving as supports for bearings 23 in which the trunnions 19 of the cylinder 17 are mounted to rock, the bearings 23 being adapted to reciprocate vertically in the guides 21, under circumstances which will be pointed out hereinafter. The bearings 23 have upstanding stems 24 which, being slidably received in the tops of the guides 21 aid in directing the vertical movement of the bearings 23. Compression springs 25 surround the stems 24, the upper ends of the springs engaging the tops of the guides 21, and the lower ends of the springs engaging the bearings 23, to hold the same normally down on the cushion blocks 22.

The head 16 is provided with an upwardly inclined peripheral valve rim 27, held in place by a retaining ring 28 or otherwise, the valve rim 27 coacting with the inner surface of the cylinder 17. The construction of the valve rim 27 is such that when the head 16 moves upwardly, air will be trapped between the top of the cylinder 17 and the head 16. The valve rim 27, however, will yield when the head 16 moves downwardly, to permit air to pass from the lower portion of the cylinder 17 into the upper portion thereof, it being noted that the bottom of the cylinder 17 is open. Assembled with the top of the cylinder 17 is a nipple 29 with which is connected a flexible tube 30, united with an atomizer 31 seated in a recess 32 formed in the support 7, the atomizer including a nozzle 33 projecting across the upper edge of the water closet bowl 1 and adapted to discharge thereinto, the groove 2 in the seat 6 receiving the nozzle of the atomizer, when the seat is in a lowered position on the bowl 1.

In practical operation, when the seat 6

is raised, the shaft 4 is rotated, and a one-quarter revolution of the gear wheel 9 will impart a one-half revolution to the pinion 10, the arm 12 of the shaft 11 depressing the plunger 15 and moving the head 15 downwardly in the cylinder 17, the air rushing upwardly past the yieldable valve rim 27. When the seat 6 is swung downwardly, the head 17 is raised, and air trapped between the head 16 and the upper end of the cylinder 17 is forced through the tube 30 to the atomizer 31, the nozzle 33 of the atomizer discharging into the water closet bowl 1 and effecting a disinfection or a deodorization thereof.

In case the seat 6 should be slammed down with too much force, producing too quick an upward movement of the head 16, then the springs 25 will yield and permit the bearings 23, the trunnions 19 and the cylinder 17 to move upwardly, thereby avoiding a pronounced shock. The springs 25, reacting on the bearings 23 will force the same down gradually, restoring the cylinder 17 to a normal, depressed condition, the bearings 23 then resting on the cushion blocks 22.

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

1. In a device of the class described, a water closet bowl; a movable seat for the bowl; a shaft whereon the seat is carried; driving mechanism connected with the shaft and including a crank; a cylinder; bearings wherein the cylinder is mounted to rock; a piston working in the cylinder and pivoted to the crank; a sprayer discharging into the bowl; and a conduit leading from the cylinder to the sprayer.

2. A device constructed in accordance with claim 1, in combination with means

for supporting the bearings for movement in the direction of the length of the cylinder.

3. A device constructed in accordance with claim 1, in combination with means for supporting the bearings for sliding movement in the direction of the length of the cylinder; and means for cushioning the sliding movement of the bearings.

4. In a device of the class described, a water closet bowl; a movable member operating above the bowl; a fluid pressure cylinder; a piston working in the cylinder; means for operatively connecting the piston with the movable member; a sprayer discharging into the bowl; a conduit leading from the cylinder to the sprayer; and means for mounting the cylinder yieldably for limited movement responsive to the pressure created in the cylinder by the piston.

5. In a device of the class described, a water closet bowl; a movable member operating above the bowl; a fluid pressure cylinder; a piston working in the cylinder; means for operatively connecting the piston with the movable member; a sprayer discharging into the bowl; a conduit leading from the cylinder to the sprayer; means for mounting the cylinder for longitudinal movement, responsive to the pressure created in the cylinder by the piston; and yieldable means for limiting the longitudinal movement of the cylinder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CLARKSON W. MACY.

Witnesses:

WALTER POWELL,
JAMES F. HOWE.

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