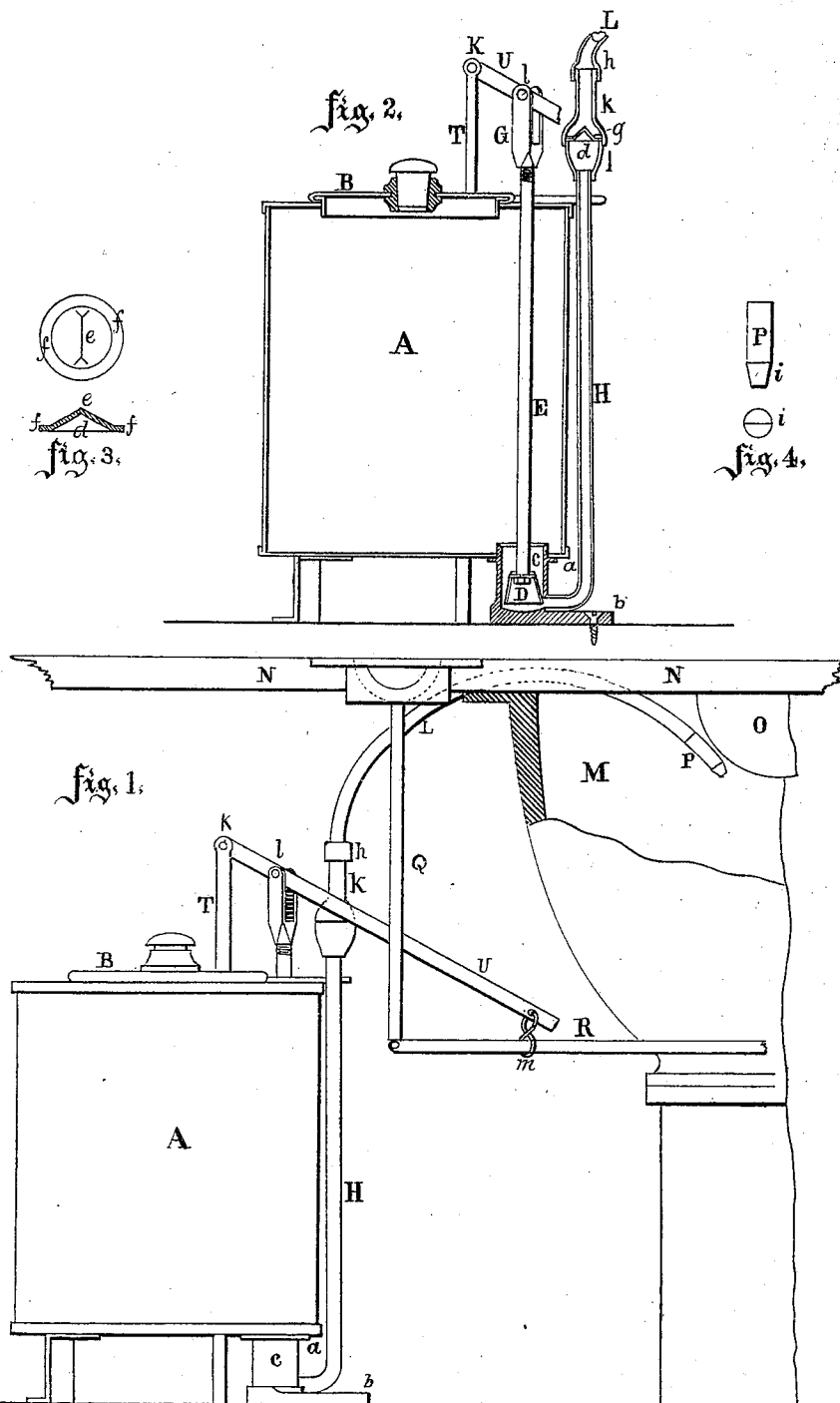


J. M. B. BAKER.
Disinfecting and Deodorizing Apparatus for
Water-Closets.

No. 141,100.

Patented July 22, 1873.



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IMPROVEMENT IN DISINFECTING AND DEODORIZING APPARATUS FOR WATER-CLOSETS.

Specification forming part of Letters Patent No. **141,100**, dated July 22, 1873; application filed June 12, 1873.

To all whom it may concern :

Be it known that I, JOHN MORCOMBE BROMLEY BAKER, of Lennox Road, Southsea, in the county of Hants, England, have invented an Improved Disinfecting and Deodorizing Apparatus for Water-Closets and other purposes, of which the following is a specification:

This invention consists in constructing an apparatus for the purpose of injecting into the pan of a water-closet or urinal a given quantity of any suitable disinfecting fluid.

The following is an example of my said invention as applied to water-closets: Under the seat of the closet I place my apparatus, which consists of a cylinder of metal to contain disinfecting fluid. In this cylinder and near the bottom thereof I fix a small pump-barrel fitted with an elastic or flexible plunger or bucket. To this pump-barrel, which is fixed to the bottom of the aforesaid cylinder, I connect a small pipe, which extends to the top of the pan of the closet, and at a short distance up the aforesaid pipe I fix a valve, and I connect the rod of the aforesaid pump to the ordinary lever that works the plug for flushing the pan of the closet, the effect of which is as follows: Upon pulling up the plug the plunger of the pump will be raised, and thereby allow a small quantity of the disinfecting fluid to enter the aforesaid pump-barrel; and upon the plug being forced down the plunger of the pump will also descend and force the disinfecting fluid that is beneath the plunger up the pipe leading from the pump to the pan of the closet, at the same time causing the valve in the said pipe to open and allow a certain quantity of the disinfecting fluid to be injected into the pan during the flushing thereof and while the water therein is in motion, thereby thoroughly mixing and charging the flushing water with the disinfecting fluid. The aforesaid pipe must be fully charged before it is ready for use. This may be done by working the plug up and down several times.

In order to explain the details of my said invention and their functions, I will now proceed to describe the illustrative sheet of drawings accompanying this specification, by reference to the numeral figures and letters marked thereon, as follows:

Figure 1 represents an elevation of my improved apparatus as it would appear when applied to the pan of a water-closet. Fig. 2 is a transverse and vertical section of my said improvements. Figs. 3 and 4 represent detached parts, hereinafter particularly described and referred to.

On each of the above-mentioned figures similar letters of reference are employed to denote corresponding parts.

A marks a cylinder or reservoir, of metal or earthenware, with a loose top, B, for charging it with disinfecting fluid. C is a pump-barrel, smooth on the inside. *a* is a flange for fixing the barrel C to the bottom of the reservoir A, and *b* is a foot cast on the said barrel for fixing it to the floor. D is an India-rubber plunger or bucket fitting loosely within the barrel C, and E is a rod connected by its lower end to the plunger D and by its upper end to a fork-shaped piece, G, into which the rod E is screwed, and may be adjusted so as to either lengthen or shorten the stroke of the plunger D for discharging any required quantity of the disinfecting fluid from the reservoir and inject it into the pan, as before stated. H is a metal pipe, screwed or otherwise fixed in the barrel C by its lower and curved end. The upper end of the pipe H is fixed in a casting, I, which carries a valve, *d*, on its upper edge. The construction of this valve and manner of holding it in position are as follows: The valve *d* is made of vulcanized India rubber with a slit, *e*, at its apex, as represented at Fig. 3. The flanged part *f* thereof should be made with a ply of woven or textile fabric at such part to prevent distortion or alteration of shape when the valve is screwed in its place, as at Fig. 2, where K marks a screwed connecting piece, the flanged part *g* thereof screws tightly onto the flanged part *f* of the valve *d*, thereby securely fixing it water-tight in proper position. L is another metal pipe (copper by preference) connected at one end by the union *h* to the piece K, its other end leading into an ordinary closet-pan, M, the pipe L passing over the edge of the pan and between it and the seat N, as represented at Fig. 1. The valve *d* is employed to prevent the return of the disinfecting fluid into the reservoir A when the plunger D is at rest, thereby

keeping the pipes H and L always full of the disinfecting fluid, and obviating the necessity for filling the said pipes with the disinfecting fluid at each downward stroke of the plunger of the pump. O marks the ordinary water-scatterer of a closet. I would here remark that in order to prevent the formation of salts within the pipe L when the apparatus is at rest, and which, if not prevented, would obstruct the free passage of the disinfecting fluid, I fix an elastic tube, P, on that end of the pipe L which enters the pan; and I form the outer end of the tube P, flattened, as at *i*, Fig. 4, the effect of which is to close this end of the pipe and exclude the entrance of air thereinto. Q R are the rod and lever commonly used in water-closets for actuating the plug, by which the water passes for flushing the pan M. For the purposes of my invention I connect the parts Q and R with my aforesaid improvements in the following manner: T marks a standard fixed to the floor of the closet. To the upper end of this standard I pivot at *k* one end of a rod, U, and connect this rod at *l* to the fork G, and, finally, connect the other end of the rod U to the lever R by links *m*. By thus connecting the several rods and levers together, and imparting upward movement to the rod Q, the rod E and plunger will be raised during the opening of the plug, by which the water passes for flushing the pan. A reverse movement of the rod Q will cause the disinfecting fluid to be mixed with the water as it enters the pan, and thus effectually accomplish the object of this invention.

The injection of a measured quantity of the

disinfecting fluid into a receptacle, as above described, may be applied to urinals constructed with a pull-valve, or on the well-known principle of injecting a regulated quantity of water by a treadle-lever operated by the feet of the person using the urinal.

Having now described the nature of my said invention for an improved disinfecting and deodorizing apparatus for water-closets and other purposes, and in what manner the same is to be performed, I wish it to be understood that I am aware the supply of disinfecting fluid to water-closets has been suggested. I do not, therefore, claim, generally, such supply; nor do I claim as my invention the exclusive use of any of the separate parts above described and referred to, except in so far as the same may be employed, in combination and for the purposes of my said invention; and I hereby declare my invention to consist in, and

I claim—

1. In combination with the reservoir A, the barrel C, plunger D, rod E, rod U, lever R, and pipes H L communicating with the closet-pan M, all arranged and operating substantially as described, for the purpose specified.

2. In combination with the pipes H and L and barrel C, the intermediate valve *d*, constructed, arranged, and operating substantially as herein described.

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