No. 634,515. Patented Oct. 10, 1899.

J. L. WADE.

# DISINFECTOR FOR AUTOMATICALLY DELIVERING DISINFECTANTS TO CHARGES OF FLUSH WATER.

(Application filed July 30, 1898.)

(No Model.)

*Fig.1.*

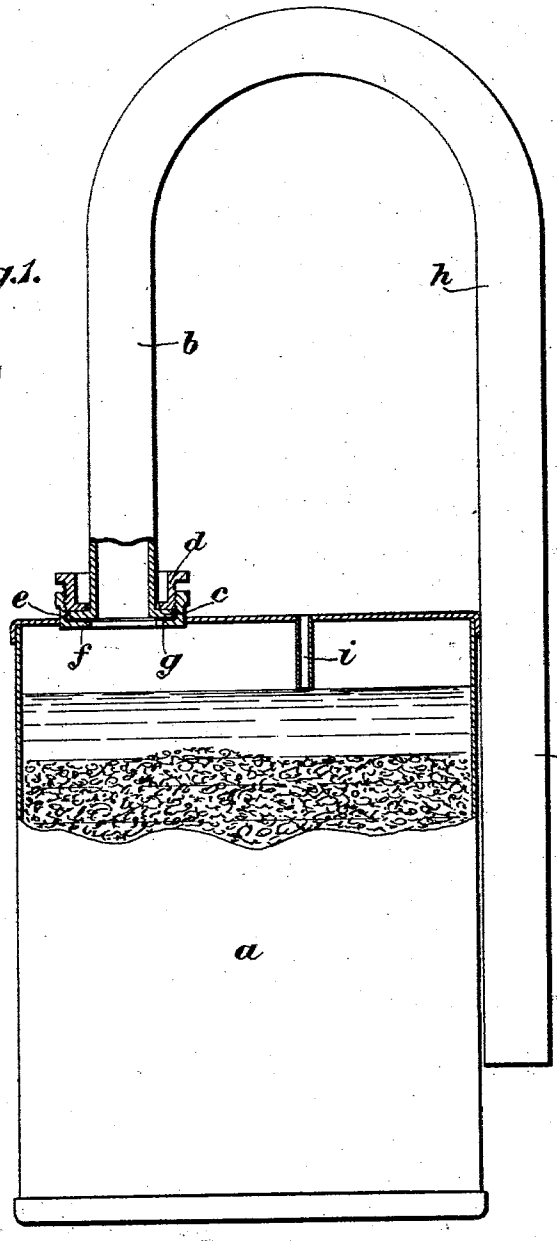
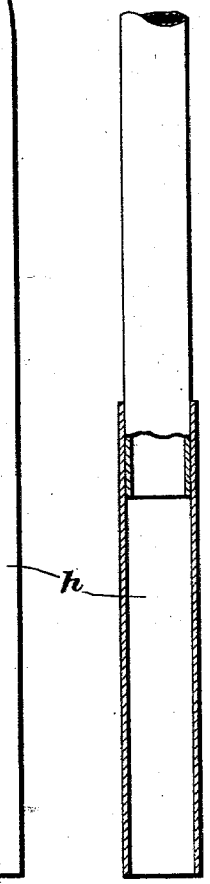



*Fig.2.*




*Witnesses.*

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# UNITED STATES PATENT OFFICE.

JAMES LUVIAN WADE, OF LONDON, ENGLAND.

## DISINFECTOR FOR AUTOMATICALLY DELIVERING DISINFECTANT TO CHARGES OF FLUSH-WATER.

SPECIFICATION forming part of Letters Patent No. 634,515, dated October 10, 1899.

Application filed July 30, 1898. Serial No. 687,319. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES LUVIAN WADE, a subject of the Queen of Great Britain and Ireland, residing at 28 West Kensington Gardens, London, England, have invented certain new and useful Improvements in Disinfectors for Automatically Delivering Disinfectant to a Charge of Flush-Water; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention for improvements in disinfectors for automatically delivering disinfectant to a charge of water relates to that class of disinfectors containing a solid disinfectant more or less soluble in water and which each time a tank or cistern is filled and emptied delivers a small quantity of the dissolved disinfectant to the water, and has for its object to provide a disinfector that when charged ready for use is applied by simply placing it inside the tank or cistern, in which it should be more or less completely immersed when the tank or cistern is full. This disinfector can thus also be easily removed for recharging or other purposes. The disinfector is applicable more particularly to flushing cisterns, water-carts, and the like.

This invention consists in a reservoir for containing the solid disinfectant, an air-tube outside the reservoir and whose upper end communicates with the top of the vessel and whose other end terminates above the bottom of the reservoir, but external to the reservoir, and a small water-inlet and disinfectant-emission tube extending a short distance inward from the top of the vessel.

In the accompanying sheet of illustrative drawings, Figure 1 is a sectional elevation of a disinfector constructed according to this invention, and Fig. 2 shows a slight modification.

The reservoir *a* is provided with an air or ∩-shaped pipe having its shorter leg *b* connected to the top of the vessel *a*. As shown, there is a flange *c* on the lower end of the leg *b* to retain the hollow screw *d* on the leg. This screw *d* screws into a nut *e*, soldered on the reservoir *a* and having an internal flange *f*. The flange *c* on the leg *b* is thus forced against the internal flange *f* and makes a tight joint, an intermediate leather or other washer *g* being preferably provided. By this arrangement the pipe can readily be removed for the insertion of fresh disinfectant through the nut *e*. The longer leg *h* of the air or ∩ pipe extends downward outside the reservoir to nearly the bottom. The reservoir *a* is also provided with a small pipe *i*, extending about one inch downward from the top.

The disinfectant is inserted into the reservoir *a*, as above described, through the nut *e* and the air or ∩ pipe firmly secured in position. The whole apparatus is then placed in the flushing-cistern and becomes filled with water up to the level of the lower end of the small pipe *i*, as shown, and the water in the apparatus becomes saturated with the disinfectant.

During the flushing operation as the flushing-cistern empties the water contained in the lower part of the leg *h* falls and thus sucks water into the reservoir *a* through the pipe *i*. As the cistern is again filled the water rises up the leg *h* and forces out through the small tube *i* all the water above the lower end of the small pipe that was drawn in at the previous flushing operation into the flushing-cistern, and as this water is saturated with the disinfectant the charge of flushing-water is rendered disinfectant for the next flushing operation.

The tube *b h* may be completely immersed or it may extend out of the water of the cistern.

In the modification shown in Fig. 2 the longer leg *h* is made adjustable, so that the quantity of disinfectant delivered to the charge of water can be varied. It will readily be seen that the reservoir *a* can be made of any shape to suit the tank or cistern to which it is applied.

The upper end of the tube *i* may terminate anywhere below the level of the water in the flushing-cistern when full and its lower end must be below the termination of the lower end of the leg *b*. The other leg *h* must terminate below the lower end of the tube *i*.

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

A disinfector consisting of a disinfectant-reservoir, a small water-inlet and disinfectant-emission tube whose lower end extends

downward into the reservoir, an air-tube having its upper end connected to the reservoir and terminating above the lower end of the inlet and emission tube and having its lower end terminating external to the reservoir and below the lower end of the inlet and emission tube.

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

JAMES LUVIAN WADE.

Witnesses:
JOHN W. MACKENZIE,
ALBERT JONES.