J. N. MITCHELL.

DISINFECTING APPARATUS.

APPLICATION FILED JUNE 27, 1907.

903,154. Patented Nov. 3, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

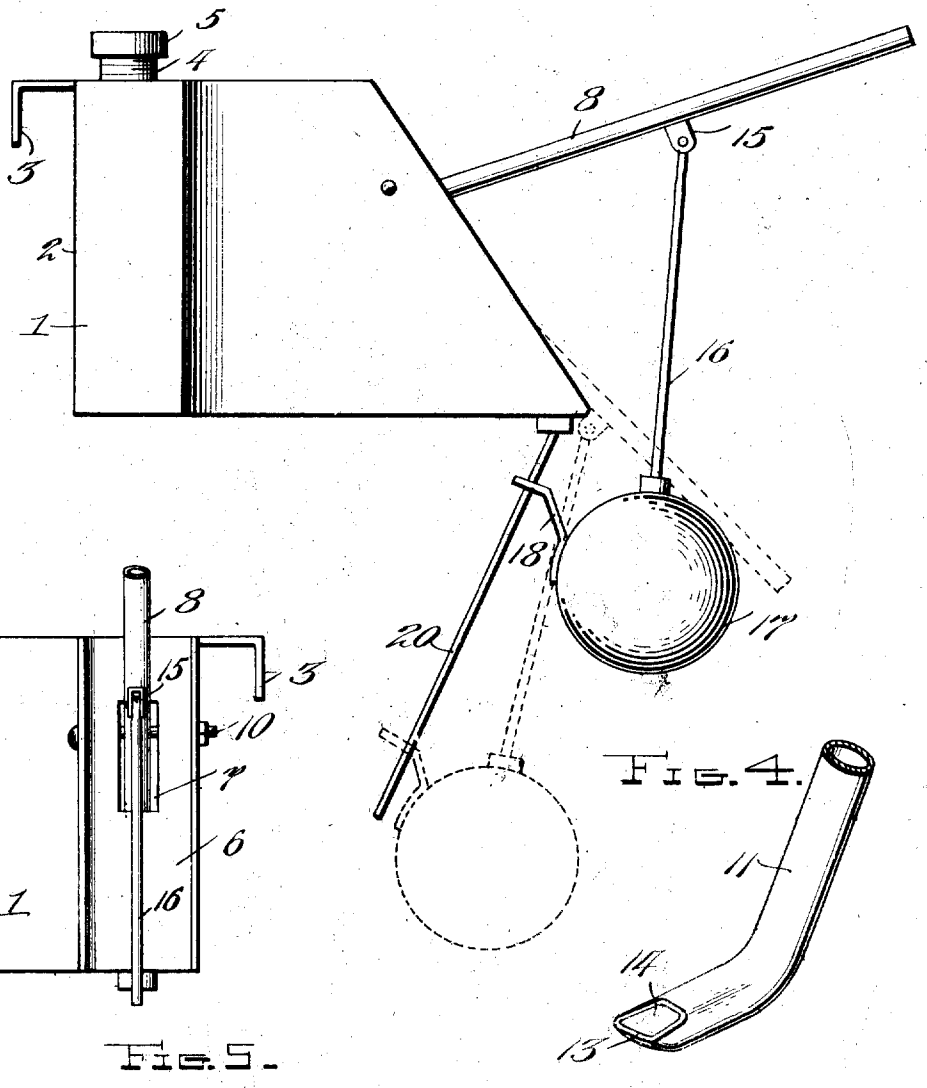


Fig. 5.

Fig. 4.

Witnesses

Frank B. Hoffman

H. M. Test

Inventor

James N. Mitchell

By Geo. C. Poulton

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2 SHEETS—SHEET 2.

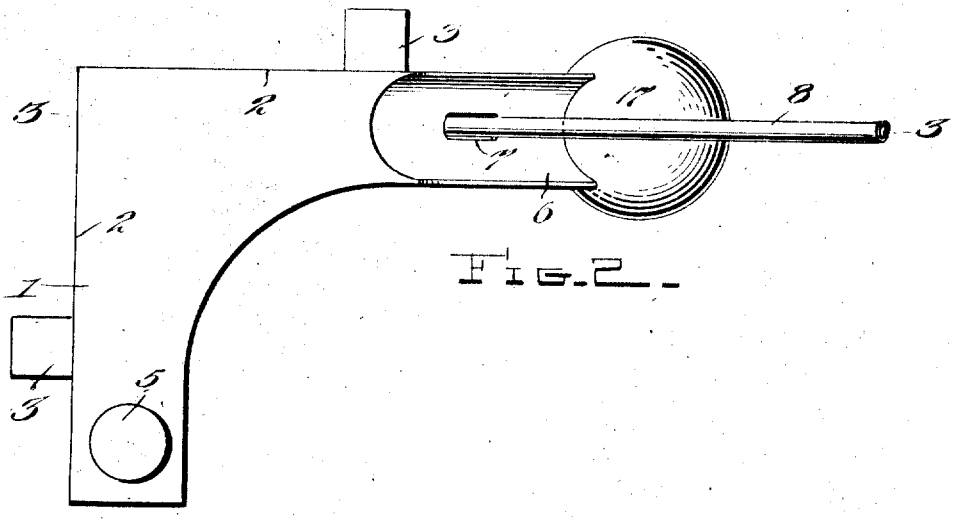


FIG. 2.

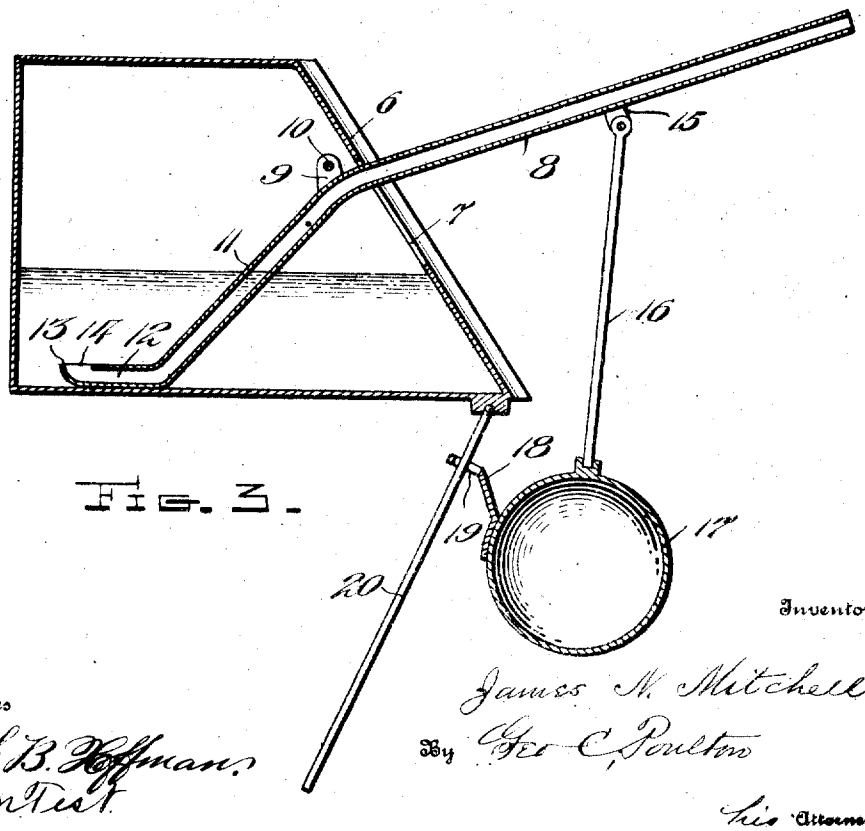


FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES N. MITCHELL, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF TWO-THIRDS TO J. WALTER MITCHELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

DISINFECTING APPARATUS.

No. 903,154. Specification of Letters Patent. Patented Nov. 3, 1908.

Application filed June 27, 1907. Serial No. 381,116.

To all whom it may concern:

Be it known that I, JAMES N. MITCHELL, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Disinfecting Apparatus, of which the following is a specification.

This invention relates to disinfecting apparatus; and the object of the invention is to provide a simple and improved apparatus which may be used in connection with a flushing tank of ordinary construction for the purpose of supplying a charge of disinfecting liquid whenever the flushing tank is operated; the disinfecting liquid being discharged directly into the water used for flushing purposes for admixture therewith.

A further object of the invention is to provide a simple and improved construction whereby the improved apparatus is automatically actuated to deliver a charge of disinfectant whenever the flushing tank, in connection with which it is used, is operated.

Still further objects of the invention are to simplify and improve the construction and operation of this class of devices; and with these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the drawing Figure 1 is a side elevation of a disinfecting apparatus constructed in accordance with the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical sectional view taken on the plane indicated by the line 3—3, in Fig. 2. Fig. 4 is a perspective detail view showing one end of the pivoted tubular member which is used for discharging the disinfectant. Fig. 5 is a front elevation of the apparatus.

Corresponding parts of the several figures are denoted by like characters of reference.

The improved apparatus comprises a receptacle or reservoir 1 which may be of any desired shape and dimensions; preferably however, it is made approximately L-shaped, in plan, for the reason that a vessel of this configuration may be readily accommodated in one corner of an ordinary flushing tank, without obstructing or interfering with the mechanism of such tank. The side walls 2, 2 of the vessel 1, which are disposed at right angles to each other, are provided near the upper edge of the vessel with hook shaped lugs 3, 3, adapted to engage over the upper edge of a flushing tank, upon which the vessel 1 may thus be suspended in position for operation. The top of the vessel 1 is formed with a filling aperture surrounded by a neck or flange 4 having a screw cap 5.

One of the narrow end walls of the vessel 1 which is preferably inclined and curved to form a seat for the discharge pipe 8, as shown at 6, is provided with a slot or aperture 7 adjacent to which the discharge pipe or tube 8 is pivotally supported; said tube being provided with ears or lugs, as shown at 9, for the passage of a transversely disposed pivotal pin or supporting member 10. The inner end of the tube 8, which projects into the vessel 1, is bent downward, as shown at 11, and said tube is further bent to form an approximately horizontally disposed terminal portion constituting a scoop 12 which may normally rest upon the bottom of the vessel 1, and which is provided with a terminal upturned lip 13 adjacent to the aperture 14. It will be readily seen, by reference to Fig. 3, that when the discharge tube occupies its normal position, with the scoop 12 resting upon the bottom of the vessel 1, the liquid contents of said vessel will enter through the aperture 14 and rise within the tube; when the latter is tilted, the scoop 12 will be elevated to a position above the level of the fulcrum or pivotal supporting point of the tube, and a portion of the liquid will be discharged through the outer end of said tube.

The tube 8 is provided with ears or lugs, as shown at 15 serving to pivotally support a rod 16 carrying at its lower extremity a float 17 which is provided with a bracket 18 having an aperture 19 engaging a guide rod 20 which is suitably connected with and extends downwardly from the bottom of the vessel 1.

The parts are to be so proportioned, that when the vessel 1 is suspended or supported in position in an ordinary flushing tank, at one of the upper corners of such tank, the water in said tank, at its highest level, will not reach the slot 7 adjacent to which the tube 8 is pivoted, this being obviously necessary in order to prevent the contents of the vessel 1 from being diluted with water entering through the slot 7. The outwardly ex-

tending end 8 of the discharge tube will normally overbalance the inner end of said tube, but it will be sustained in an elevated position, as shown in Figs. 1 and 3 in full lines, by the action of the float 17 which latter is submerged in the water contained in the flushing tank. When the flushing tank is operated to discharge the water contained therein, the float 17 descends, and the discharge pipe or tube will be tilted until it assumes the position shown in dotted lines in Fig. 1; a charge of the disinfectant liquid which has been previously placed in the vessel 1 will thus be discharged directly into the flushing tank where it mingles with the water contained in said tank and passes with said water to the pipes that are to be flushed. As the water in the flushing tank is restored to its normal level, the float 17 will rise, and the discharge pipe will be returned to its normal or initial position, with the scoop 12 submerged in the disinfecting liquid which enters through the aperture 14, thus charging the tube 4 for a repetition of the operation.

The improved apparatus is extremely simple in construction, and it may be readily mounted in position for operation upon a flushing tank of ordinary construction; the improved apparatus being entirely automatic in its operation, and independent of the mechanism of the flushing tank, except to this extent that the float whereby the discharge tube is actuated, is operated by the water contained in the flushing tank. The device may be manufactured and placed upon the market at a moderate expense, and it is thoroughly useful and efficient for the purpose for which it is provided.

Having thus described the invention, what I claim is:

A structure of the character described comprising a vessel, the two portions of which are at right angles to each other, the free end of one portion being inclined and having an inwardly curved wall, said wall having a slot, a tube extending through said slot and pivotally supported within the vessel, a float pivoted to the tube and carrying a bracket, and a rod depending from the vessel and coöperating with said bracket to guide the float.

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

JAMES N. MITCHELL.

Witnesses:

GEO. C. POULTON,

MAYO C. MITCHELL.