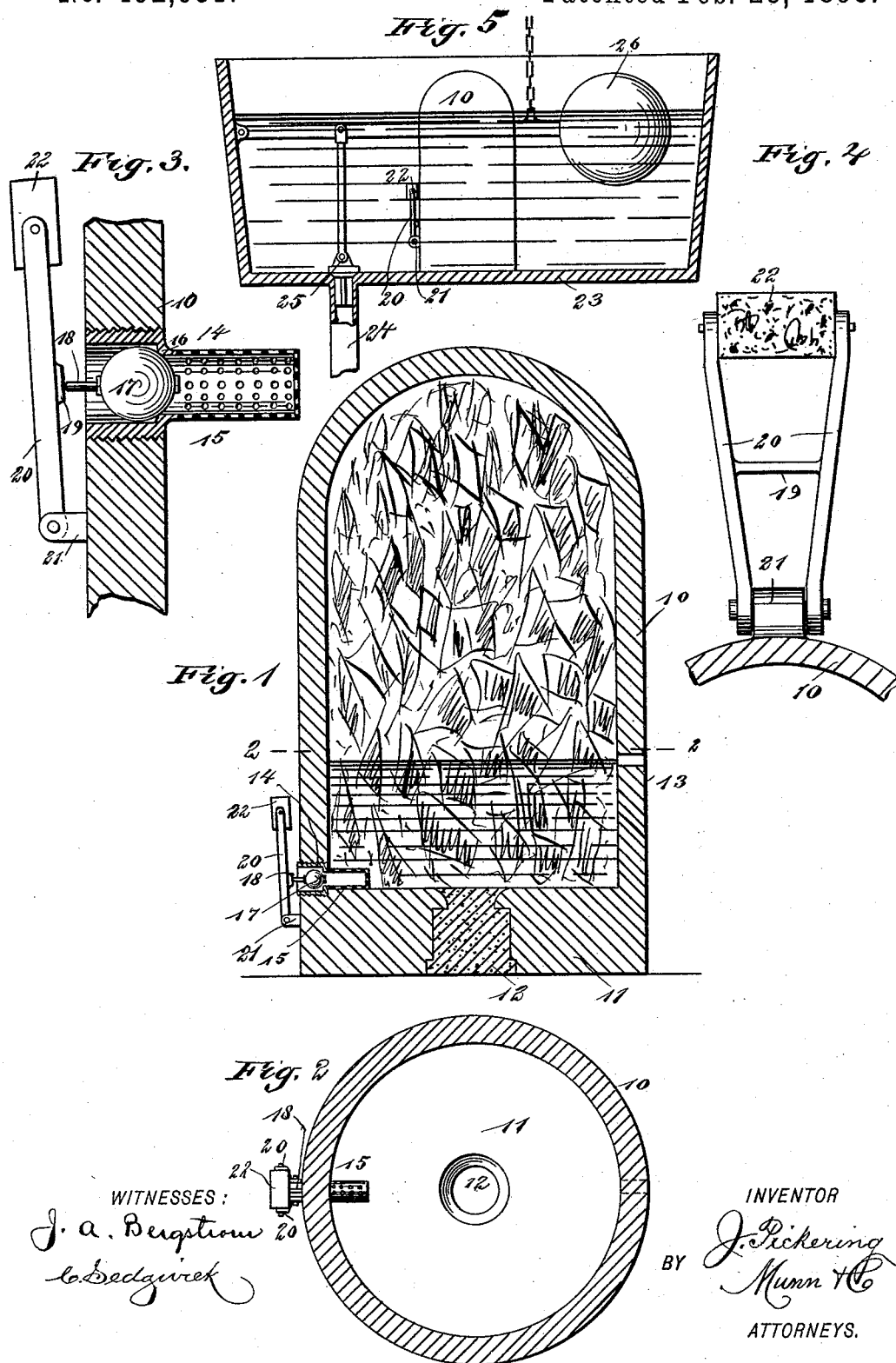


(No Model.)

J. PICKERING.
DISINFECTING DEVICE.

No. 492,631.

Patented Feb. 28, 1893.



WITNESSES:
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DISINFECTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 492,631, dated February 28, 1893.

Application filed April 15, 1892. Serial No. 429,305. (No model.)

To all whom it may concern:

Be it known that I, JOHN PICKERING, of New York city, in the county and State of New York, have invented a new and Improved Disinfecting Device, of which the following is a full, clear, and exact description.

My invention relates to improvements in disinfecting devices; and the object of my invention is to produce a cheap and simple device into which a quantity of disinfecting material may be placed and which, when placed in position in a tank such as is used for flushing purposes and especially with such tanks as are used for flushing water closets, will at every discharge of the tank eject a sufficient quantity of disinfecting solution into the water to thoroughly disinfect the bowl or other article to which the water is supplied.

To this end my invention consists in a disinfecting device, the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical section of the entire device. Fig. 2 is a sectional plan of the same on the line 2—2 in Fig. 1. Fig. 3 is an enlarged detail view of the valve mechanism of the device. Fig. 4 is an enlarged elevation of the float frame which operates the valve; and Fig. 5 is a sectional elevation of the flushing tank provided with the improved device.

The flask or vessel 10 in which the disinfecting compound is held, is provided with a flat base 11 to enable it to rest firmly on the tank bottom and it has in the bottom an aperture closed by a plug or stopper 12 through which the disinfecting compound is inserted. The flask is filled with any suitable disinfecting compound, preferably of a crystalline character, and after the compound is inserted, the plug or stopper 12 is cemented in place so as to hermetically seal the flask. In one side of the flask or vessel is a vent 13 which permits the ingress or egress of air, to the end that sufficient water may flow in and out of the flask, and a pipe 14 is inserted into one side of the flask near the bottom, the pipe having a reduced inner end 15 which extends into the flask and which is perforated to permit

the water to pass in or out through it. A seat 16 is formed at the outer end of the reduced portion 15, as shown in Fig. 3, and a valve 17 is held to close against this seat, a ball valve like that shown in the drawings being preferably employed, although other kinds of valves may be substituted. The valve is secured to a rod 18 which projects outward beyond the side of the flask and is adapted to engage a cross rib 19 on the swinging frame 20 which is pivoted at its lower end to a lug 21 on the side of the flask, and which has at its free end a float 22 which causes it to swing upward with the rise of water in the tank.

When the device is to be used, it is placed upon the bottom of the tank 23 which has a flushing pipe 24 opening therefrom, the outlet being controlled by a valve 25 and a float 26 in the usual manner, but it will be understood that any variety of tank may be used which is adapted to be alternately emptied and filled to flush any other vessel.

The operation of the device is as follows:—When the tank 23 is being emptied, the frame 20 will drop down and the valve 17 will pass from its seat so as to allow all the solution in the flask to run out and pass off with the water. When the tank is again being filled, the float 22 will rise with the water and swing the frame 20 against the rod 18 so as to close the valve, but before the valve closes water will pass inward through the pipe 14 and sufficient will enter the flask or vessel in this way to dissolve a portion of the crystalline compound therein, so that at each operation enough disinfecting solution will pass into the tank water to have the required disinfecting effect. By regulating the size of the pipe 14 and its inner perforated end and the height of the vent 13, just the required amount of solution may be made to issue from the flask at each operation of the valve mechanism, this operation taking place at the last part of the flush or flow from the tank, and the disinfecting solution remains in the bowl and trap of the closet until again used; the same applies to any article to which the water is supplied.

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

1. The combination with a tank, of a vessel

containing a soluble disinfectant and provided at or near its bottom with an opening controlled by a float-operated valve, said vessel being supported in the tank with its opening below the water level of said tank, whereby provision is made for allowing the water from the tank to flow into the vessel to dissolve the disinfectant while the tank is being filled, and the dissolved disinfectant permitted to flow out of the vessel into the tank when the said tank is being emptied, as set forth.

2. The combination with a tank, of a vessel containing a soluble disinfectant supported upon the bottom of the tank and provided with a vent a short distance from its bottom and with an opening at its bottom, said opening being controlled by a float operated valve, substantially as and for the purpose set forth.

3. A disinfecting device, comprising a flask

having a vent in one side and a pipe near the bottom, the pipe having a reduced and perforated inner end which extends into the flask, a valve held in the pipe and having an outwardly extending stem, and a swinging float frame hinged beneath the pipe and adapted to come in contact with the valve stem, substantially as described.

4. A disinfecting device comprising a flat bottom flask having a stopper-closed opening therein, a vent in one side, a pipe near its lower end, a valve held to close the pipe and having an outwardly extending stem, and a swinging float frame pivoted below the pipe and adapted to engage the outer end of the valve stem, substantially as described.

JOHN PICKERING.

Witnesses:

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