

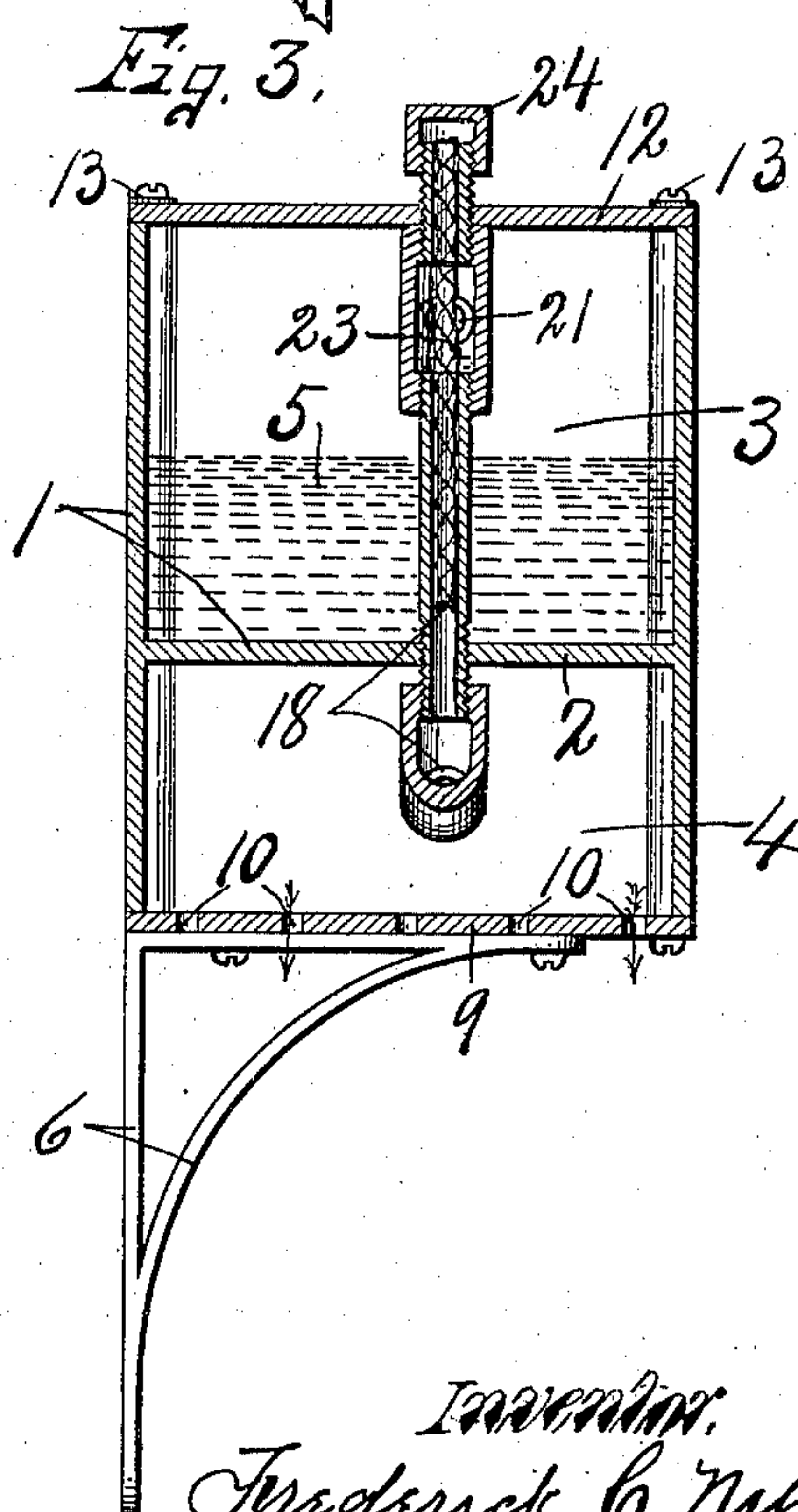
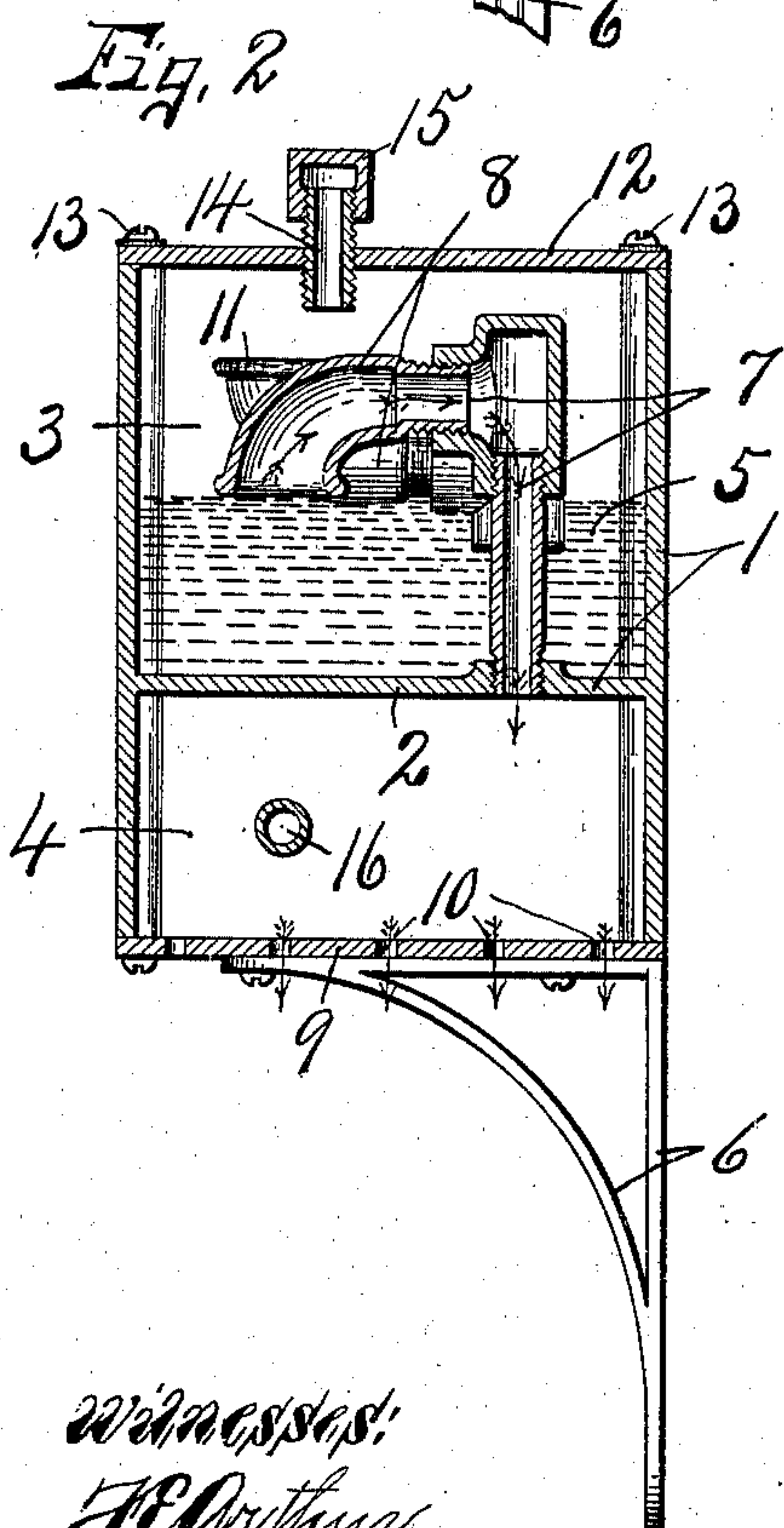
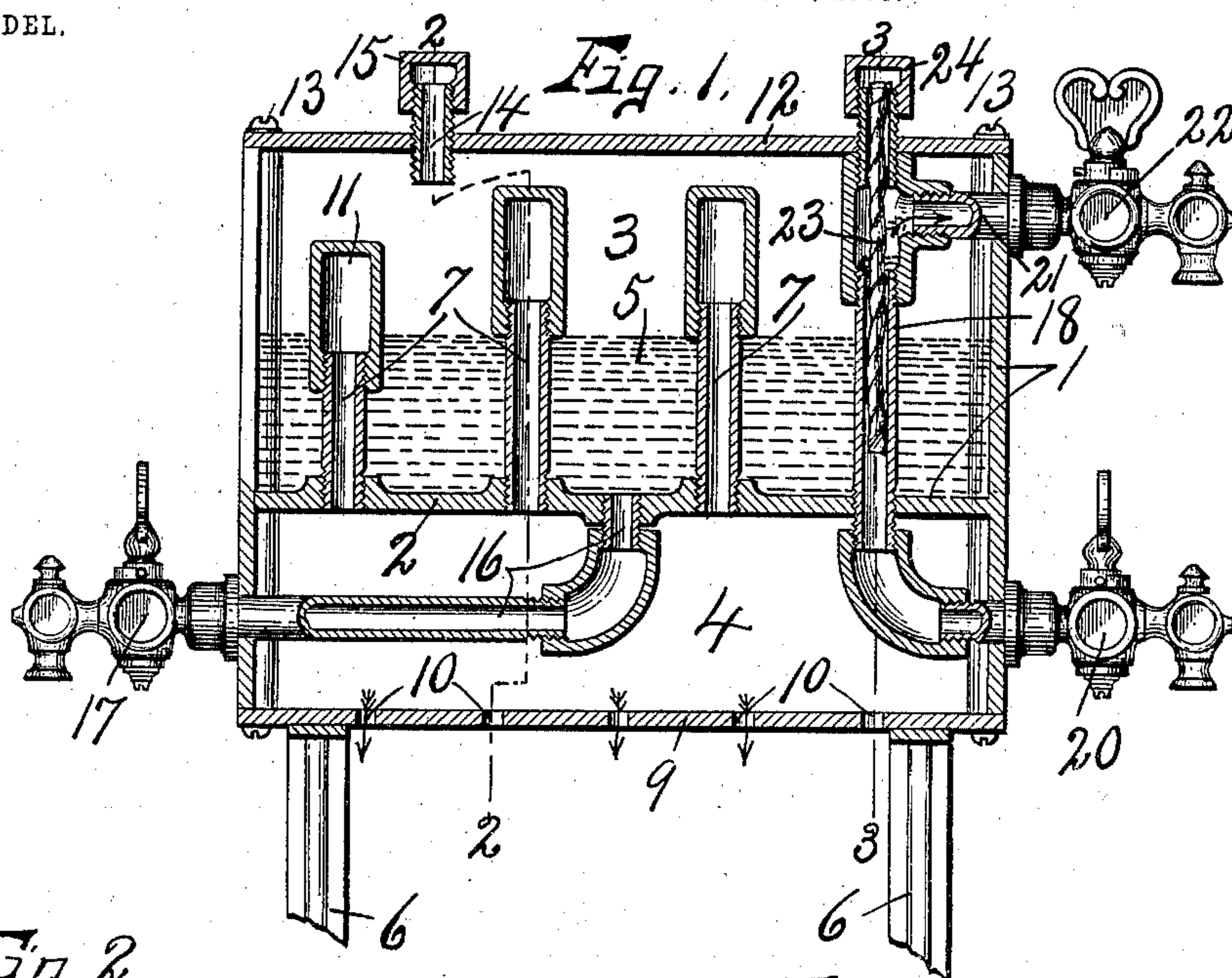
No. 748,413.

PATENTED DEC. 29, 1903.

F. C. NYE.  
DISINFECTING APPARATUS.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

FREDERICK C. NYE, OF SYRACUSE, NEW YORK.

## DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 748,413, dated December 29, 1903.

Application filed September 12, 1903. Serial No. 172,915. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK C. NYE, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and  
5 useful Improvements in Disinfecting Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in  
10 disinfecting apparatus which is adapted to be placed in the toilet-room or other locality where offensive odors or disease germs are liable to accumulate.

The primary object of this invention is to  
15 inclose a liquid disinfectant or other vaporizing material and also a liquid or other vaporizing perfume in such manner as to permit the vapor to escape into the room.

Other objects will appear in the subsequent  
20 description.

In the drawings, Figure 1 is a longitudinal vertical sectional view of my improved disinfecting apparatus. Figs. 2 and 3 are transverse sectional views taken, respectively, on  
25 lines 2-2 and 3-3 of Fig. 1.

Similar reference characters indicate corresponding parts in all the views.

In carrying out the objects of this invention I provide an upright tank 1 with a horizontal  
30 partition 2, which divides the tank into upper and lower chambers 3 and 4, the upper chamber 3 being of greater capacity than the lower chamber 4 and contains a liquid disinfectant 5. This tank may be of any desired  
35 form, size, or construction and is usually secured to one of the side walls of a room upon brackets 6.

The partition-wall 2 is provided with one or more upright vapor pipes or flues 7, having  
40 their lower ends communicating with the subchamber 4, and their upper ends communicate with the interior of the chamber 3 at points above the level of the liquid 5 through the medium of lateral tubular offsets 8, having  
45 openings in their sides immediately above the liquid-level, so that the disinfectant vapor of the liquid 5 escapes or passes upwardly into the tubes 8 and then downwardly through the pipes or flues 7 into the subchamber 4.

50 The subchamber 4 is provided with a bottom wall 9, having a series of perforations 10 where the vaporized disinfectant passes into

the room in which the apparatus is located for the purpose of deodorizing or disinfecting the vitiated air in said room. It is evident, 55 however, that one or more of these pipes or vapor-flues may be provided with an upturned extremity leading from the interior of the chamber 3, and I have therefore shown such a pipe or flue 11 having a lateral offset 60 with an opening in its upper end or side and above the liquid-level; but the vaporized disinfectant escapes in the same manner as through the pipes 7 into the subchamber 4. This chamber 4 serves merely as a reser- 65 voir for the vapor which escapes from the chamber 3 and holds such vapor in reserve, which gradually and continuously discharges through the apertures 10 into the room.

The chamber 3 is normally hermetically 70 sealed except as it communicates with the atmosphere through the medium of the pipes 7 and 11, chamber 4, and apertures 10, so as to prevent undue evaporation of the disinfecting liquid, and I therefore provide the 75 chamber 3 with an upper wall 12, which in this instance is removable to permit the interior of the chamber to be thoroughly cleansed when desired, said upper wall being secured 80 to the frame of the tank by suitable fastening means, as screws 13.

It is necessary to replenish or refill the reservoir 3 when the previous supply is exhausted or becomes ineffective, and I therefore provide the top wall with an inlet-passage 14, 85 which communicates with the interior of the chamber 3, and its outer end is normally closed by a removable cap 15 to prevent undue evaporation and also to prevent the entrance of any dust or foreign matter. It is also nec- 90 essary to make some provision for the cleansing of the chamber 3 and to permit the residue or liquid to be drawn off when desired, and I therefore provide an outlet-conduit 16, having one end secured to the wall 2 and 95 communicating with the interior of the chamber 3 and its other end extended outwardly through one of the side walls of the chamber 4 to the atmosphere and provided with a valve 17, which is normally closed when the appa- 100 ratus is in operation, but may be opened to draw off the contents of the chamber 3.

The means for introducing the vapor perfume into the room consists of a vertical



stand-pipe 18, which extends through the chamber 3, above and beneath the top wall 12 and downwardly through the horizontal partition 2, and contains a liquid perfume, the lower end being continued into the chamber 4 and laterally through the adjacent end wall of the tank and is provided with a normally closed valve 20, which may be open when desired to draw off the liquid contents of the stand-pipe 18. The upper portion of this stand-pipe within the chamber 3 is provided with a lateral offset 21, extending through the end wall of the chamber 3, and its outer end is provided with a valve 22, which is normally open to permit the escape of the vapor perfume into the room in which the apparatus is located, it being understood that the lateral offset 21 is disposed in a plane above the level of the liquid perfume. In order that this latter vapor effect may be more permanent and effective, I introduce a wick 23 into the open end of the stand-pipe, so that its lower end extends into the liquid while its upper portion extends across the inlet of the offset 21, the upper open end of the stand-pipe being normally closed by a removable cap 24 to prevent undue evaporation of the liquid perfume and at the same time to permit the stand-pipe to be refilled when desired.

In brief, the operation of this invention is as follows: The liquid disinfectant is first introduced into the chamber 3 through the inlet 14 until it reaches a level beneath the mouths of the vapor-tubes 7 and 11, after which the inlet 14 is closed by caps 15. The liquid perfume and wicks 23 are introduced into the stand-pipe 18 either before or after the disinfecting liquid is introduced into the chamber 3, after which the cap 24 is placed in operative position, it being understood that during these filling operations the valves 17 and 20 are closed and that in the operation the valve 22 is open. The apparatus is now ready for operation, during which the liquid disinfectant is vaporized and passes outwardly through the conduits 7 and 11 into the chamber 4 and thence into the room through the apertures 10 in the bottom wall 9, and the liquid perfume is simultaneously vaporized and passes outwardly into the room through the outlet 21 and valve 22.

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

1. A disinfecting apparatus comprising a tank having a horizontal partition dividing the interior of the tank into upper and lower

chambers, the upper chamber containing the disinfecting liquid, a conduit leading from the upper chamber above the liquid-level to the lower chamber, said lower chamber communicating with the atmosphere, and a discharge-conduit leading from the bottom of the upper chamber to the outside of the tank and provided with a valve for controlling the discharge of the liquid.

2. A disinfecting apparatus comprising a tank having a horizontal partition dividing the interior of the tank into upper and lower chambers, the upper chamber containing a disinfecting liquid, a conduit leading from the upper chamber above the liquid-level to the lower chamber, said lower chamber communicating with the atmosphere, conduits leading to and from the interior of the upper chamber for permitting the filling and discharging of the liquid therethrough and therefrom and separate means for closing said conduits.

3. An apparatus of the class described comprising a tank having a horizontal partition dividing the interior of the tank into upper and lower chambers, the upper chamber containing a liquid disinfectant, a vapor-pipe rising from the partition and having its upper end communicating with the interior of the upper chamber above the liquid-level and its lower end communicating with the interior of the lower chamber, said lower chamber communicating with the atmosphere, in combination with a stand-pipe containing a liquid perfume and extending through the upper and lower walls of the upper chamber and provided with means for controlling the escape of the vapor to atmosphere.

4. An apparatus of the class described comprising a tank having a horizontal partition dividing the interior of the tank into upper and lower chambers, the upper chamber containing a liquid disinfectant and the lower chamber communicating with the atmosphere, pipes connecting the interior of the upper chamber above the liquid-level with the interior of the lower chamber, a valve-conduit leading from the liquid-chamber to the outside of the tank, a stand-pipe containing a perfume and opening to atmosphere and an absorbent in the stand-pipe.

In witness whereof I have hereunto set my hand on this 3d day of September, 1903.

FREDK. C. NYE.

Witnesses:

H. E. CHASE,  
J. M. HAMMEKEN.