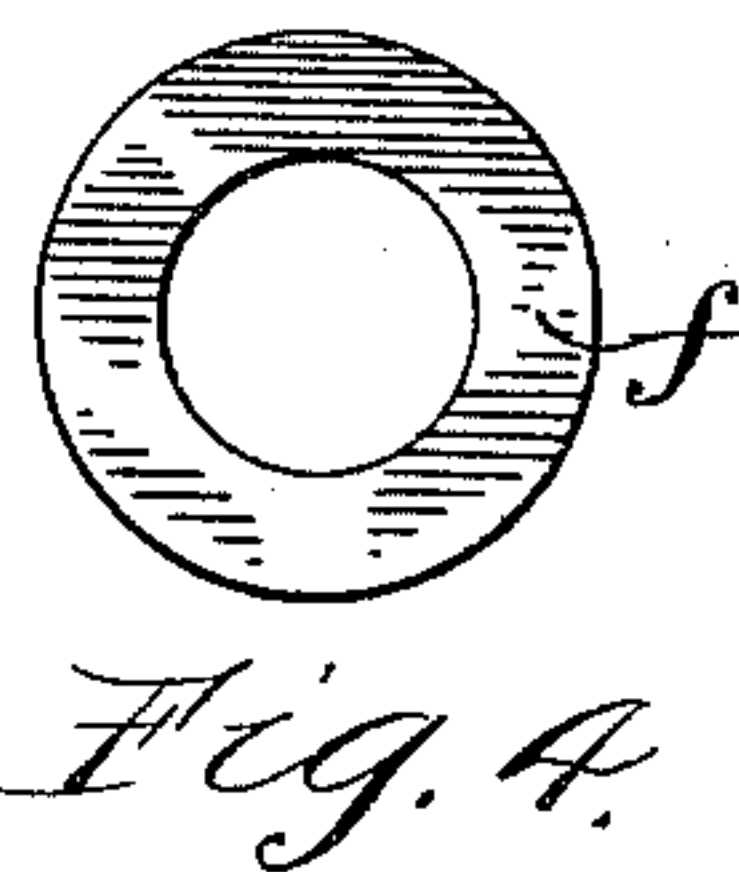
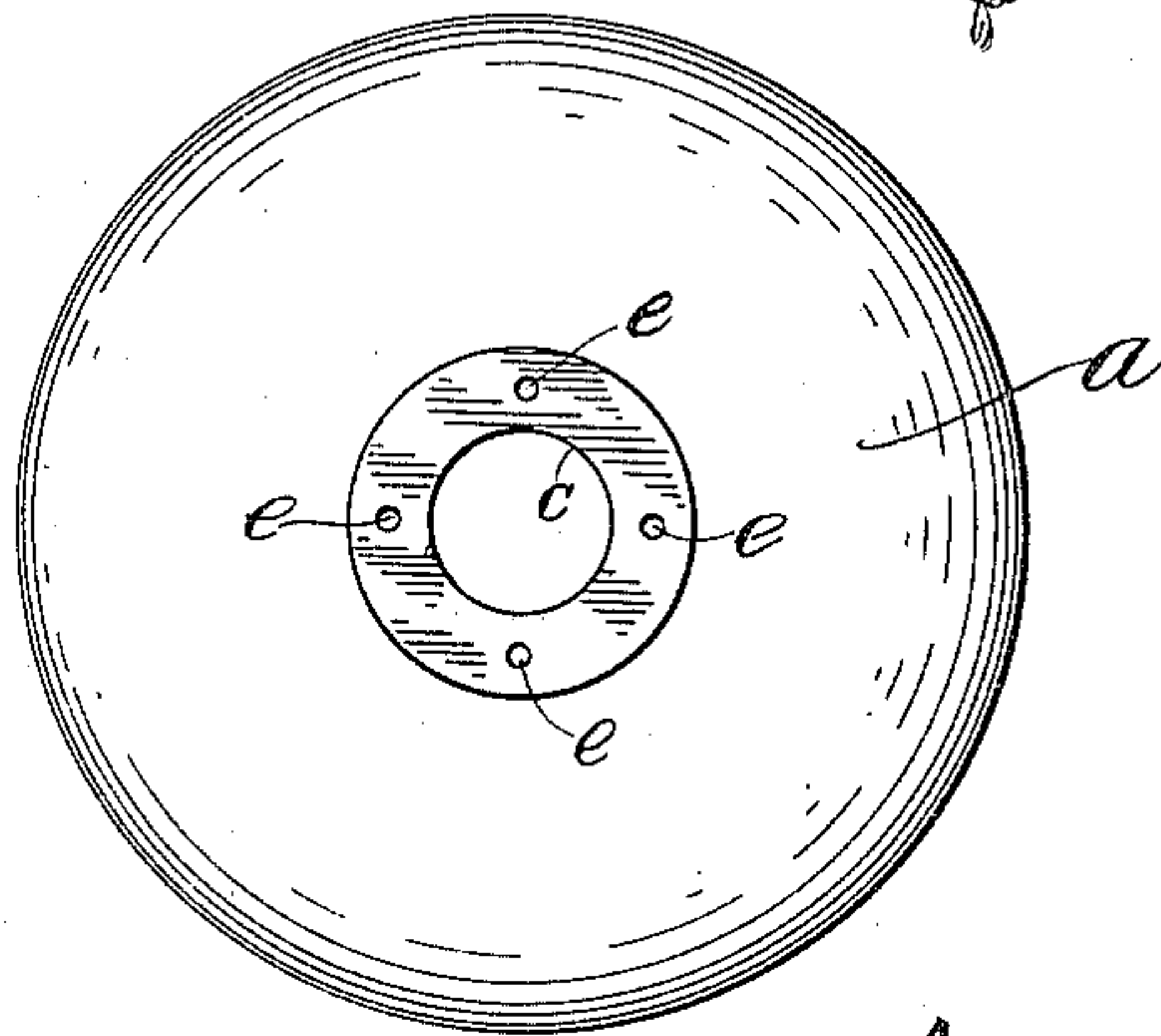
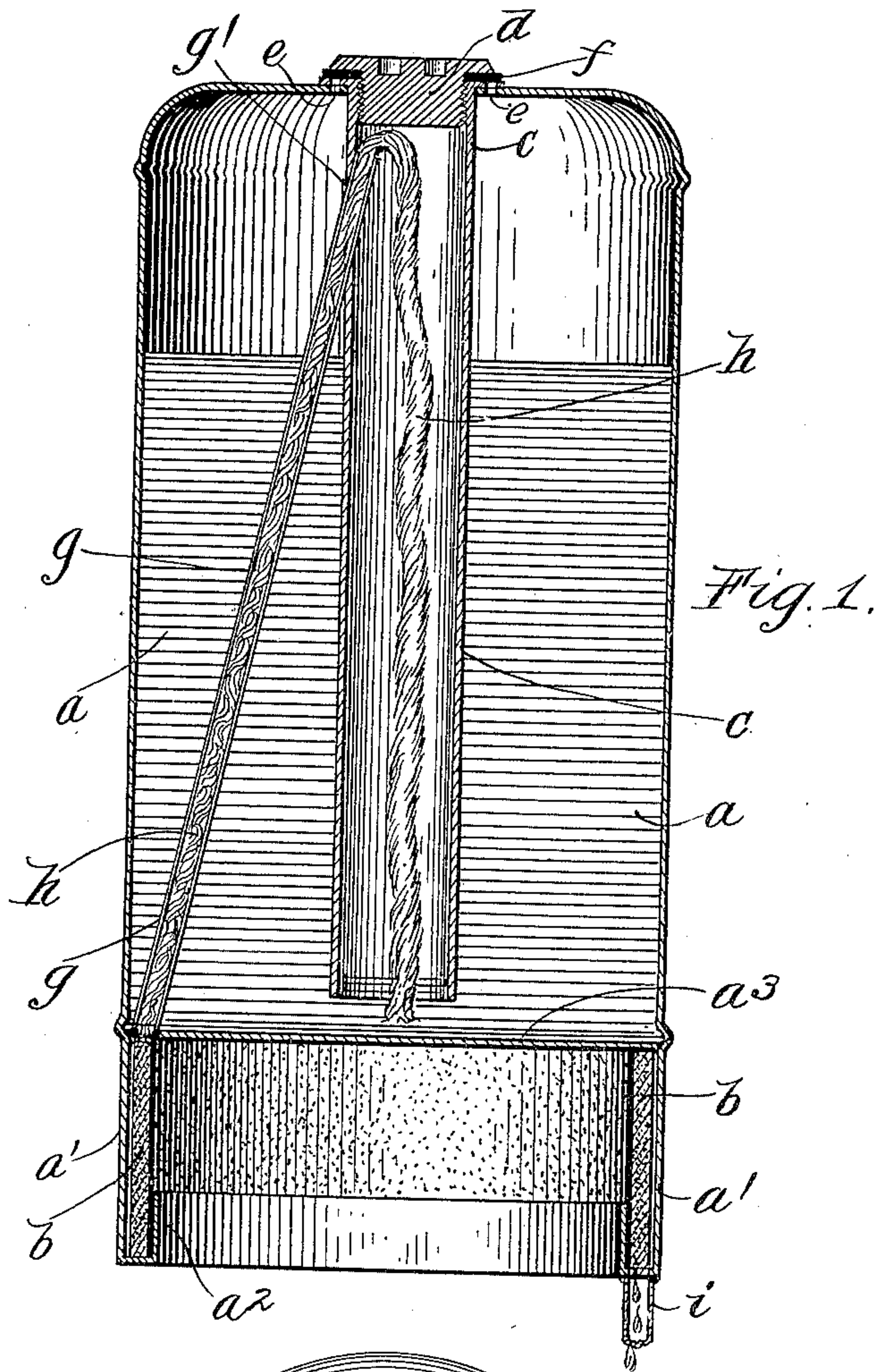


(No Model.)

J. EVETTS.
DISINFECTING APPARATUS.

No. 604,562.

Patented May 24, 1898.



Witnesses:
Albert H. Adams.
George Hibben

Fig. 2.

Inventor:
James Evetts.
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UNITED STATES PATENT OFFICE.

JAMES EVETTS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE RED CROSS
HYGIENIC COMPANY, OF SAME PLACE.

DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 604,562, dated May 24, 1898.

Application filed April 24, 1897. Serial No. 633,668. (No model.)

To all whom it may concern:

Be it known that I, JAMES EVETTS, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Disinfecting Apparatus, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a disinfecting apparatus, and has for its object to provide an improved form of apparatus in which a constant and unvarying flow of the liquid disinfectant to the point of application is maintained.

In disinfecting apparatus at present in use an objection has been that the liquid flows out very rapidly at first and as the level of the liquid becomes lower in the chamber the flow becomes less and less, so that if a wick is employed which will absorb the required quantity of liquid disinfectant in a given time, when the chamber is, say, one-quarter full, when the chamber is refilled the liquid will flow much faster and considerable waste will thereby ensue. The disinfecting apparatus of my invention is designed to overcome this difficulty, and may be generally described as consisting of a main chamber or reservoir for the liquid disinfectant and an auxiliary chamber communicating with and preferably within said main reservoir in which the liquid is kept down to a certain fixed level by atmospheric pressure, whether the main reservoir be full or nearly empty. The wick leading from said auxiliary chamber is thus supplied with liquid at a uniform rate from the time when the reservoir is filled until it is empty.

I will describe my invention more in detail by reference to the accompanying drawings, in which—

Figure 1 is a sectional elevation of the disinfecting apparatus of my invention. Fig. 2 is a top view thereof. Figs. 3 and 4 are detail views of portions of the device.

Similar reference-letters are used to designate similar parts throughout the several figures.

The chamber or reservoir *a* is provided with

an extension *a'*, which is adapted to protect the evaporating medium *b*, of absorbent material, which is supported by a trough *a*², formed by the upturned end of the extension *a'*. A tube *c* is secured, preferably by soldering, to the top of the chamber *a*, through which it passes and extends down within the chamber to within, say, half an inch of the bottom, thus constituting an auxiliary or supplemental chamber within the reservoir *a*. The upper end of the tube is threaded to engage the threads upon the cap *d*, which normally closes the opening in the upper end of the tube. Holes *e e* are provided in the top of the chamber *a*, which are closed by the washer *f* when the cap is screwed down. A small tube *g* is joined at *g'* to the tube *c* and leads downward, ending at the bottom *a*³ of the chamber *a*, just above the body of absorbent material *b*. A wick *h* extends from the top of the absorbent material up through this tube to its junction with the auxiliary chamber *c*, from whence it falls through said auxiliary chamber to the bottom of the reservoir *a*.

When it is desired to fill the reservoir, the cap *d* is unscrewed, whereupon the liquid disinfectant may be poured into the tube *c* and will rise within the chamber or reservoir *a*, egress for the air within said reservoir being provided by the holes *e e*. The cap *d* is now replaced, washer *f* closing holes *e e*, leaving the chamber air-tight.

The wick *h* draws the liquid down through the tube *g* to the evaporating medium *b*, through which it percolates, and from whence it is disseminated in vapor for the disinfection of the apartment, the excess liquid being collected by the trough *a*² and carried off by the drip-spout *i*, which is preferably situated at a point at or nearly diametrically opposite to the point at which the absorbent material receives its supply of disinfectant from the wick *h*. The drip-spout may communicate with the water-closet, urinal, or similar place requiring disinfection.

Liquid will be drawn from chamber *c* by the wick *h*; but none will enter the chamber *c* from the main reservoir *a* until the liquid in chamber *c* is nearly all drawn out, for there is no opening in reservoir *a* at which the air may enter. Air may enter chamber *c*,

however, through the tube *g*, which is not tightly filled by the wick.

It will be seen that after the liquid in chamber *c* has been exhausted a little is admitted from reservoir *a*, but cannot rise more than a very short distance in the tube or chamber *c* on account of the atmospheric pressure therein. A constant height of liquid in chamber *c* is thus maintained, thereby keeping the flow of liquid through the wick constant.

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

1. In a disinfecting apparatus, the combination of a normally-sealed reservoir adapted to contain liquid disinfectant, an auxiliary chamber located within and communicating with said reservoir, a wick-tube leading from below the reservoir and into the upper portion of the chamber and extraneous thereof, a wick arranged in such tube and leading to the lower end of the chamber, the said chamber being closed at its upper end but open at its lower end below the level of liquid in the reservoir whereby air passes through the tube and into the auxiliary chamber only as the liquid is withdrawn by the wick so that the liquid therein remains at a practically constant level which is near the bottom of the chamber and of the reservoir regardless of the level of the liquid in the reservoir, thereby assuring a uniform feed by the wick.

2. In a disinfecting apparatus, the combination with a reservoir adapted to contain liquid disinfectant, of an auxiliary chamber to which access of air is permitted, and located within the reservoir, an avenue of communication between said reservoir and said auxiliary chamber, a wick adapted to withdraw the liquid from said auxiliary chamber to the point of application, said reservoir having holes for the admission of air to said reservoir, and means for normally maintaining said holes sealed against the passage of air, whereby the atmospheric pressure causes the liquid in said auxiliary chamber to remain at a practically constant level, regardless of the height of the liquid within the reservoir, substantially as described.

3. In a disinfecting apparatus, the combination with the reservoir *a*, of an auxiliary chamber *c*, within said reservoir and in communication therewith at the bottom, access of air being permitted to said auxiliary chamber *c*, a wick *h* adapted to withdraw liquid from said chamber *c* to the point of application, said reservoir having holes *e e* for the admission of air, and a cap *d* normally sealing said holes against the passage of air, substantially as described.

4. In a disinfecting apparatus, the combination with the reservoir *a*, of the chamber *c* communicating therewith and with the external air, wick *h*, said reservoir having holes *e e* for the admission of air, cap *d* normally cov-

ering the chamber *c*, and a washer *f* carried upon said cap and normally sealing said holes *e e*, substantially as described.

5. In a disinfecting apparatus, the combination of a normally-closed reservoir adapted to contain liquid disinfectant, an auxiliary chamber located within the reservoir and communicating substantially at the bottom with the reservoir, and a wick extending from below the reservoir and into the auxiliary chamber for withdrawing the disinfectant, substantially as described.

6. In a disinfecting apparatus, the combination of a normally-closed reservoir adapted to contain liquid disinfectant, an auxiliary chamber located within the reservoir and to which air has access and whose lower end communicates with the reservoir near the bottom thereof, and a wick extending into the auxiliary chamber to its lower end and leading from a point extraneous of such chamber for withdrawing the disinfectant from the reservoir, substantially as described.

7. In a disinfecting apparatus, the combination of a normally-closed reservoir adapted to contain liquid disinfectant, an auxiliary chamber open only at its lower end and depending into the liquid, a wick-tube leading outside the chamber from its upper portion and a wick extending from the lower end of the chamber upward through the chamber and thence through the wick-tube.

8. In a disinfecting apparatus, the combination of a reservoir adapted to contain liquid disinfectant, an auxiliary chamber located therein and communicating substantially at its lower end with the reservoir, a tube leading from near the top of the chamber downward and a wick in the chamber and tube for withdrawing the disinfectant from the reservoir.

9. In a disinfecting apparatus, the combination of a reservoir adapted to contain liquid disinfectant, an auxiliary chamber depending therein and having communication through its lower end, an exposing-surface located adjacent to the reservoir, a tube extending from near the top of the auxiliary chamber and passing downwardly through the reservoir to the exposing-surface and a wick in the auxiliary chamber and tube for conducting the disinfectant.

10. In a disinfecting apparatus, the combination of a reservoir to contain liquid disinfectant, an auxiliary chamber communicating therewith substantially at its lower end and a wick leading from the lower end of the chamber upward therethrough and thence downward extraneous of the chamber and below the bottom of the reservoir.

In witness whereof I hereunto subscribe my name this 21st day of April, A. D. 1896.

JAMES EVETTS.

Witnesses:

MAX BEHRENDT,
SAMUEL E. HIBBEN.