

(No Model.)

3 Sheets—Sheet 1.

L. W. COCK.
FUMIGATOR.

No. 586,759.

Patented July 20, 1897.

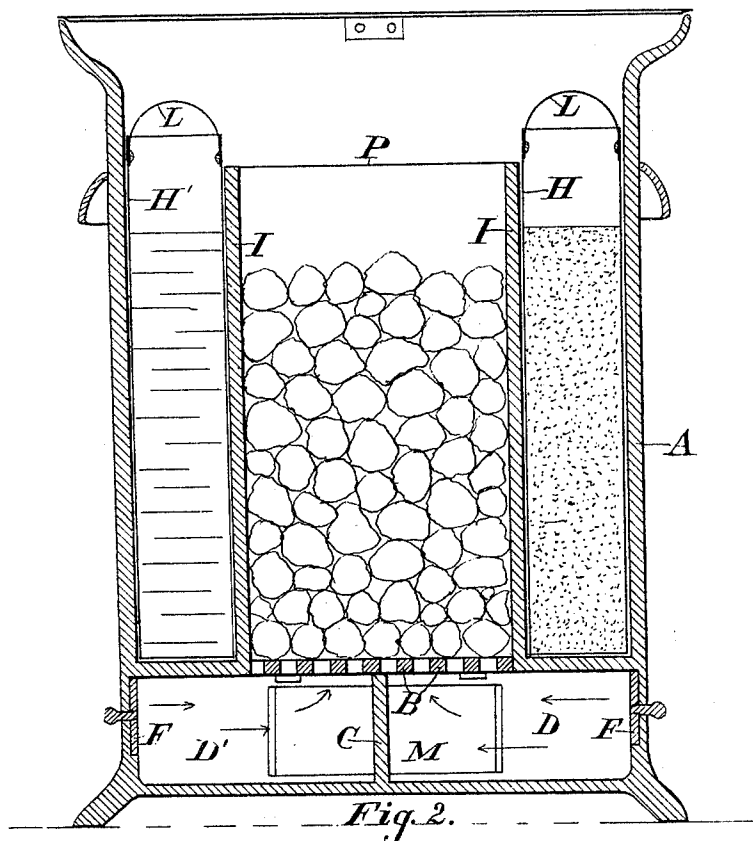


Fig. 2.

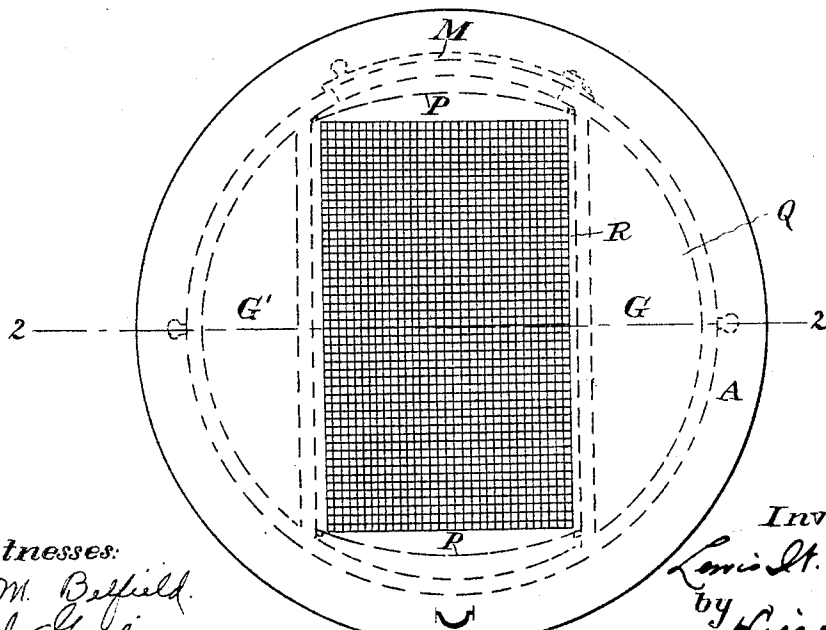


Fig. 1.

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Inventor:
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by Hie Hie
Attys.

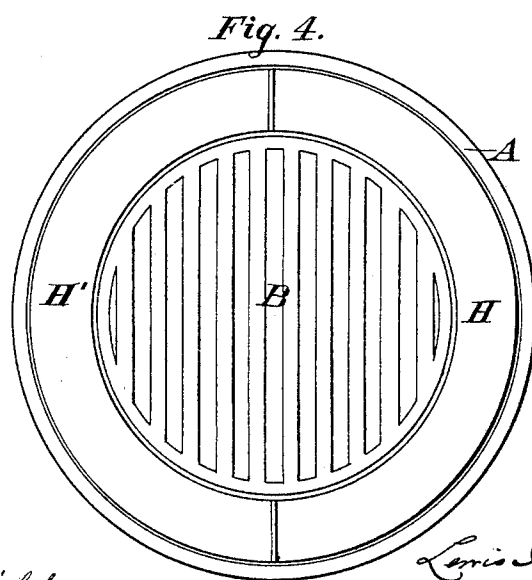
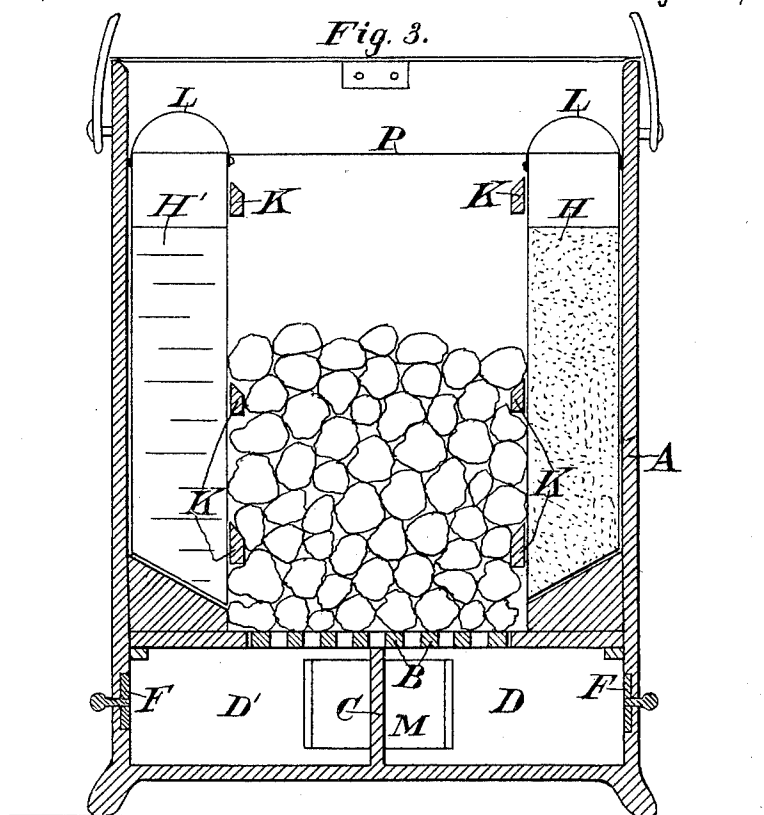
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Patented July 20, 1897.



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by N. A. Hill

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3 Sheets—Sheet 3.

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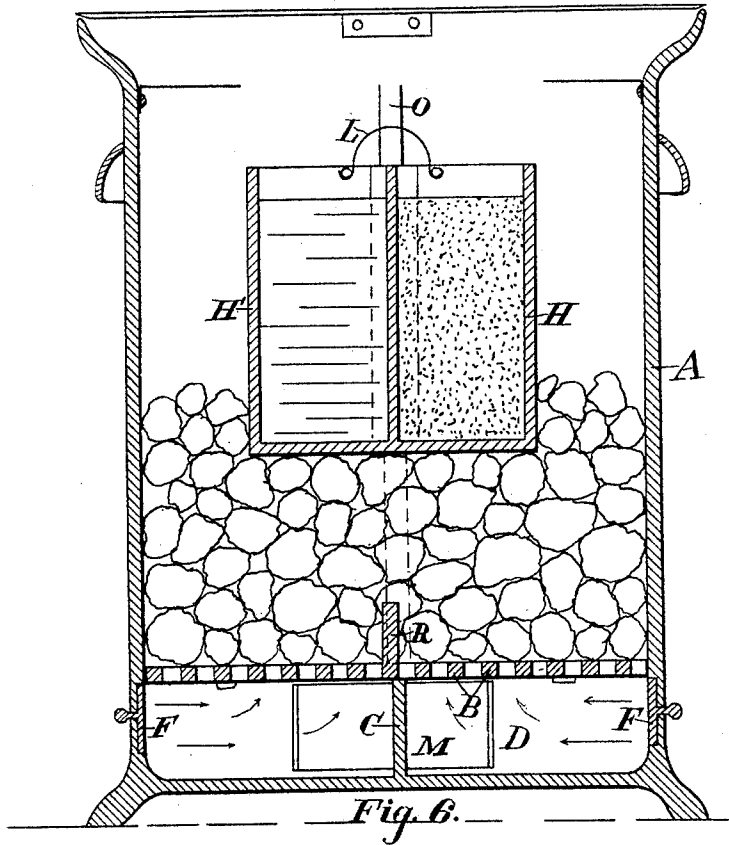


Fig. 6.

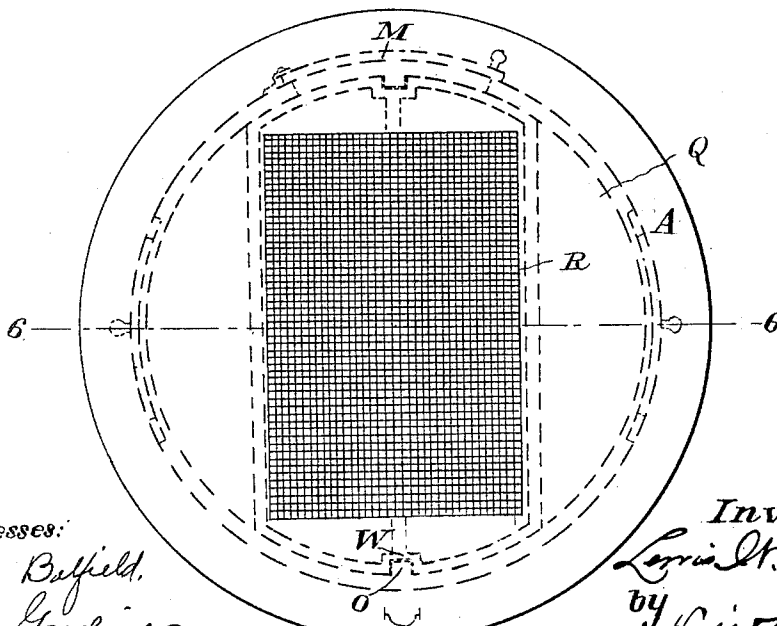


Fig. 5.

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UNITED STATES PATENT OFFICE.

LEWIS W. COCK, OF SAN MARCOS, TEXAS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE ACME FUMIGATOR COMPANY, OF CHICAGO, ILLINOIS.

FUMIGATOR.

SPECIFICATION forming part of Letters Patent No. 586,759, dated July 20, 1897.

Application filed February 16, 1895. Serial No. 538,676. (No model.)

To all whom it may concern:

Be it known that I, LEWIS W. COCK, a citizen of the United States of America, residing at San Marcos, county of Hays, and State of Texas, have invented certain new and useful Improvements in Fumigators, of which the following is a specification.

Referring to the accompanying drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a top plan of one form of my improved fumigator. Fig. 2 is a vertical section of the same on line 2 2 of Fig. 1. Fig. 3 is a modification of the same general form. Fig. 4 is a form with top removed in which the vessels for the fumigating agent or agents entirely surround the combustion-chamber. Fig. 5 is a modified form in which the vessel or vessels for the fumigating agents rest upon the fire and settle with the same, and Fig. 6 is a vertical section of the same in line 6 6 of Fig. 5.

In the process of disinfecting apartments or articles either one of two general methods has usually been employed, first, by means of an antiseptic fluid sprayed or sprinkled about or evaporated from suspended saturated cloths or from open vessels, the ordinary heat of the room only being employed to release the vapors; second, by means of the combustion of a fumigating substance or compound—such, for example, as sulfur. This has usually been accomplished by discharging the compound directly into the fire or into a bed of hot coals and in some cases by means of what is known as a “sulfur candle.”

My invention consists in the peculiar construction of a fumigator by means of which, without danger from fire, the vapors may be rapidly generated from an antiseptic fluid or the fumes rapidly liberated from a fumigating compound, or, as in the preferred way, both may be combined in the simplest, cheapest, safest, and most effective manner.

My invention also consists in so constructing a fumigator that the fire in the combustion-chamber may be caused to burn more

rapidly in one part than in another, whereby the proportions of vapors and fumes may be governed at will.

In the drawings, A is the shell of a preferably circular fumigator.

B is a grate dividing said shell into an upper combustion-chamber and a lower draft-space.

C is a partition dividing the draft-space into two or more independent compartments D D’.

F F are ordinary draft-slides of any preferred form for controlling the admission of air through openings to the compartments of the draft-space.

G G’ are vessel-like compartments, as shown in Fig. 2, formed by the walls I I’, which thus form part of the wall of the combustion-chamber.

As shown in Fig. 3, G G’ are spaces caused by the bars or slats K K, and separate vessels H H’ are then used, the said vessels forming a part of the wall of the combustion-chamber and the bars K retaining them in position. In most cases I prefer to use the removable vessels for convenience in handling.

In the form shown in Fig. 4 the vessels entirely encircle the combustion-chamber, and thus form the wall of the same. This form is very desirable, as it prevents the fire from coming to the outer wall or shell, and thus prevents the overheating of the outer wall. An air-space may be constructed between a lining P, Fig. 1, which at its lower end connects with the draft-space below, and the outer wall, if preferred, for a similar cooling effect. The draft-space also removes the danger from such a source from the bottom.

In the form shown in Figs. 5 and 6 the vessels are arranged to rest upon the combustible material, and as it is consumed they settle with it, thus always being in close contact with the same. I use the term “vessels” as to this form, though by it I wish to be understood as also meaning a single vessel divided into two or more compartments, as shown in the drawings. Any preferred means may be

employed to cause the vessels to retain their relative positions—such, for example, as that shown in Fig. 6, in which a groove W is formed in the vessel and a tongue O in the shell.

5 A top Q is preferred, which is provided with a central contracted opening R, as shown, and may be hinged to the body, if preferred.

A bail L is preferably provided for the vessels and also one for the whole device, if desired, being simply for convenience in handling. One or more doors M are also provided for the purpose of allowing access to the draft-space to remove ashes, &c.

The preferred mode of operation is as follows, referring to Figs. 3 or 4: One vessel, as H', is charged with any preferred antiseptic liquid, which to obtain the best results should be of such a nature as to give off the antiseptic properties in the vapor, and the other vessel, as H, is charged with any preferred fumigating compound—as, for example, sulfur. In the preferred form both vessels are adapted to hold liquid, but good results may be obtained by constructing a series of small openings or holes through the inner or fire wall of the vessel intended for the fumigating compound. The combustion-chamber is then properly charged and the material ignited. The drafts F are arranged to cause the air to pass under the material as preferred. For example, if it is desired to have the vapor predominate, the draft-chamber on that side is opened, while that upon the other side is closed, or partially so, and vice versa. The attendant then retiring closes the apartment as closely as possible. As the vapors and fumes arise they are each obliged to seek the central opening R to escape, and are thus mingled together. The fumigator, being safe, is preferably left until the combustion has ceased, which will of course depend upon the charge used. No attention is required after the device is put in operation, and its results are complete without danger from fire.

It is obvious that either antiseptic fluids or fumigating compounds may be used without the other, if desired, but the best results are usually obtained from their combined use.

50 It is also obvious that the vessels may be divided into several compartments, if preferred, and the draft-compartments also to correspond. In such cases two or more kinds of either the antiseptic fluids or of the compounds may be used.

Having thus described my invention, what

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

1. In a fumigator, the combination of a shell, a grate in the lower part thereof, for the support of combustible material, one or more vessels within the shell alongside of the combustion-chamber, from the top to the bottom of the same, so as to be interposed between such chamber and the shell, the shell having a space above said vessel or vessels into which the fumes produced may enter, and having a contracted outlet from such space for the commingled fumes, substantially as and for the purpose specified.

2. In a fumigator, the combination of a shell, a grate in the lower part thereof for the support of combustible material, and removable vessels within the shell, extending from the upper part thereof downward to or near the grate, the space above the latter, between the vessels being the combustion-chamber, the shell having a space above the chamber and above the vessels into which all fumes produced enter, and having a contracted outlet from such space, for the commingled fumes, substantially as and for the purpose shown.

3. In a fumigator, the combination of a shell, a grate in the lower part thereof above which is a combustion-chamber and below which is a draft-chamber divided into independent compartments, means for controlling the admission of air to each of said compartments, and several receptacles within the shell at the sides of the combustion-chamber, the shell having a fumes-receiving space above the receptacles that has a contracted fumes-outlet, substantially as and for the purpose set forth.

4. In a fumigator, the combination of a shell, a grate in the lower part thereof, above which is a combustion-chamber and below which is a draft-chamber divided into independent compartments, means for controlling the admission of air to each compartment, and several receptacles arranged to rest in contact with combustible material upon the grate, the shell having a fumes-receiving space above the receptacles that has a contracted, fumes-outlet, substantially as and for the purpose described.

LEWIS W. COCK.

Witnesses:

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A. M. BELFIELD.