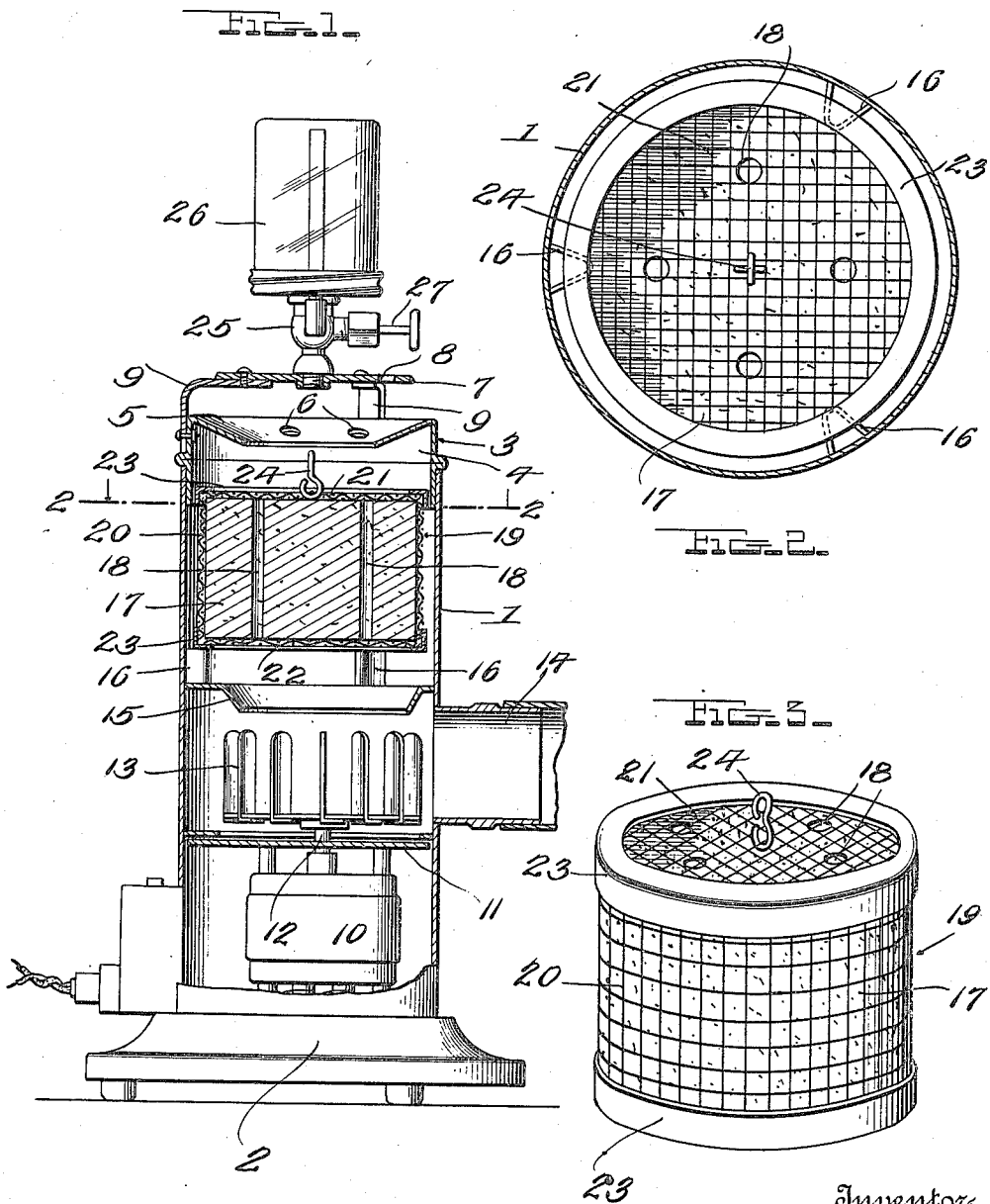


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FUME DISSEMINATOR.
APPLICATION FILED JUNE 9, 1916.

1,238,068.

Patented Aug. 21, 1917.



Witness

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UNITED STATES PATENT OFFICE.

VERN SLATER AND LEONIDAS D. WEST, OF DENVER, COLORADO, ASSIGNORS TO THE
ELECTRO-FUME COMPANY, OF DENVER, COLORADO, A CORPORATION OF COLORADO.

FUME-DISSEMINATOR.

1,238,068.

Specification of Letters Patent.

Patented Aug. 21, 1917.

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To all whom it may concern:

Be it known that we, VERN SLATER and LEONIDAS D. WEST, citizens of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Fume-Disseminators; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention which relates to improvements in devices for disseminating fumes from liquids such as deodorizers, disinfectors, medicines and the like, has for its principal object to provide a simple yet highly efficient absorbent member adapted to be saturated with the liquid from which the fumes are to be taken, said member being adapted for disposition in a casing through which a current of air is directed, whereby the fumes of the liquid with which it is saturated will be delivered with said air.

With the foregoing general object in view, the invention resides in certain novel features of construction and unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which constitute a part of this application and in which:

Figure 1 is a vertical section of the improved device;

Fig. 2 is a horizontal section on the plane of the line 2—2 of Fig. 1; and

Fig. 3 is a perspective of the absorbent block to be saturated with the liquid to be disseminated.

In specifically describing the structure shown in the drawing above briefly described, similar characters will be employed to designate corresponding parts throughout the several views and reference will be herein made to the numerous elements by their respective indices. To this end, the numeral 1 designates a cylindrical casing which is shown rising from a base 2, the upper end of said casing being partially closed by a top 3, which top includes a sheet metal ring 4 fitting into said upper end of the casing 1 and having its upper edge bent downwardly and inwardly to provide a frustocone shaped flange 5 which is perforated as

indicated at 6. A horizontally disposed disk 7 is spaced above the ring 4 and its flange 55 5, said disk being perforated as indicated at 8 and being supported by legs 9 which depend therefrom and are secured to the ring.

An electric motor 10 is supported by the base 2 within the lower end of the casing 1, 60 the upper end of said motor carrying a partition 11 which substantially fills the cross sectional area of said casing, sufficient space being left, however, to permit air to pass downwardly around the edge of said partition 65 to cool the motor 10. The vertical shaft 12 of motor 10 carries any desired type of fan 13 which is adapted to discharge air from the interior of the casing 1 through an outlet nipple 14 disposed between the ends 70 thereof, and in thus discharging air other currents of air will necessarily flow into the casing through the top 3 to occupy the partial vacuum caused therein. Thus, it will be observed that air will be constantly drawn 75 into and discharged from the casing 1, this air being directed to the eye of the fan 13 by means of an annular partition 15 suitably above said fan, this partition being suitably constructed for performing its function. 80

A plurality of brackets or abutments 16 80 are secured to the inner side of the casing 1 immediately above the partition 15 and serve to support an absorbent cylindrical block 17 which will be saturated with the 85 liquid from which fumes are to be taken. It is of course obvious that although the abutments 16 are shown, one continuous abutment or ledge might well be employed for supporting block 17. In either case, the latter 90 will substantially fill the casing 1 between the top 3 and partition 15 and will be formed with a plurality of vertical passages 18 through which the air must be drawn before being discharged through the nipple 14, 95 whereupon this air will become impregnated with the fumes from the liquid used.

The block 17 is preferably constructed of a porous mineral known as tripoli since this has been found by actual experience to produce 100 better results than other porous members, but in some forms of the invention this material may be obviously varied. The mineral from which block 17 is constructed is extremely fragile and in order to shield the 105 same against breakage, an openwork hous-

ing 19 is provided therefor, said housing comprising a band 20 of suitable mesh woven wire which circumscribes said block, a top 21 and bottom 22 of the same material, 5 and angle metal rings 23 whose horizontal and vertical flanges receive therein the meeting portions of the band 20 and the top and bottom 21 and 22, the wire members being soldered or otherwise secured to said 10 flanges. By constructing the housing 19 in this manner, the block 17 will be effectively guarded against breakage and it cannot be mutilated by contact with the abutments 16 since the lowermost ring 23 rests on said 15 abutments. In order to remove the block 17, a suitable handle 24 is preferably connected with the center of the housing top 21.

The block 17 may be saturated by removing the same from the casing 1 and immersing it in the liquid to be used. This liquid 20 may be poured upon the block, or a constant supply device may be provided for dripping the liquid upon the block when the latter is in use. Such a device is indicated 25 in Fig. 1 in the form of a valved passage member 25 which depends from any suitable type of reservoir 26, the lower end of said passage member being threaded through a central opening in the disk 7. The supply 30 of this liquid may be controlled by the valve 27 as will be readily understood and may if desired be cut off entirely.

The improved device constructed substantially as shown and described will be 35 well adapted for a number of uses and is particularly applicable for the purpose of avoiding close and oppressive odors in rooms wherein a number of persons assemble. In such places, although not so perceptible to 40 the occupant, the air is quite unpleasant to a new arrival from the fresh air, but this difficulty may obviously be overcome to great advantage by employing a suitable deodorizer or perfume in the block 17. The 45 apparatus is equally well adapted for disinfecting sick rooms and others and may well be used in such places for supplying a quantity of medicated air. The foregoing are 50 merely an illustration of the many uses and it will be obvious that regardless of the manner in which the device is employed, it will be highly efficient and will fulfil long felt needs.

In conclusion, we will state that although 55 we have shown and described a number of specific details of construction for the attainment of probably the best results, numerous changes may be made within the scope of the invention as claimed without 60 sacrificing the main advantages thereof.

We claim:

1. A vertical continuous casing, closed at its bottom and providing for a top chamber, a bottom chamber and an intermediate 65 suction chamber, with an air inlet for said

top chamber and an exhaust for said suction chamber, in combination with a mass of porous material, freely absorptive as to an impregnating agent, said mass being suitably contained within and substantially 70 filling said top chamber, between said air inlet and suction chamber, air passages being provided for the flow of impregnated air into said suction chamber; a rotary fan blower horizontally disposed in said suction 75 chamber, with its vanes operating in horizontal alinement with said exhaust and its eye directly beneath and facing said absorptive mass; and a motor in said bottom chamber operatively connected to said 80 blower, the elements being arranged, combined and functioning, substantially as set forth.

2. The combination of a vertical continuous casing having a closed bottom and an 85 air inlet at the top; a motor in the bottom of said casing; a partition above said motor; an exhaust outlet for said casing immediately above said partition; a horizontally disposed rotary fan blower, connected 90 to said motor, located above said partition with its vanes operating in horizontal alinement with said exhaust outlet and its eye facing upwardly; a second partition element immediately above said exhaust and 95 said fan blower and apertured to provide a discharge opening directed to the eye of said fan blower, said partitions providing a restricted suction chamber, incasing said fan blower, intermediate of the ends of the 100 casing; and a mass of porous material, freely absorptive as to an impregnating agent, said mass being suitably contained within and substantially filling said casing, between said air inlet and suction chamber, 105 air passages being provided for the flow of incoming air through and around said mass and into said suction chamber through the opening in said upper partition, the several elements being alined, combined and functioning, substantially as set forth. 110

3. A fume disseminator comprising an upright cylindrical casing having in its upper end one or more air inlets and having 115 near its lower end an air outlet, a fan in the lower end of said casing for drawing air into the same and discharging it through said outlet, and a plurality of abutments secured to the wall of the casing and projecting inwardly therefrom in a vertical 120 plane spaced above the fan; in combination with a cylindrical block of absorbent frangible material disposed in said casing and spaced a slight distance from the wall thereof, said block having formed vertically 125 therethrough a plurality of air passages, a band of woven wire circumscribing said block in contact with the curved wall thereof, wire mesh end protectors contacting with the upper and lower ends of said block, and 130

upper and lower angle metal rings right-
angular in cross section and having their
upright and horizontal flanges secured re-
spectively to the edges of the band and end
5 protectors, the lower angle metal ring rest-
ing on the aforesaid abutments to support
the block.

In testimony whereof we have hereunto

set our hands in presence of two subscribing
witnesses.

VERN SLATER.
LEONIDAS D. WEST.

Witnesses:

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L. O. HILTON.