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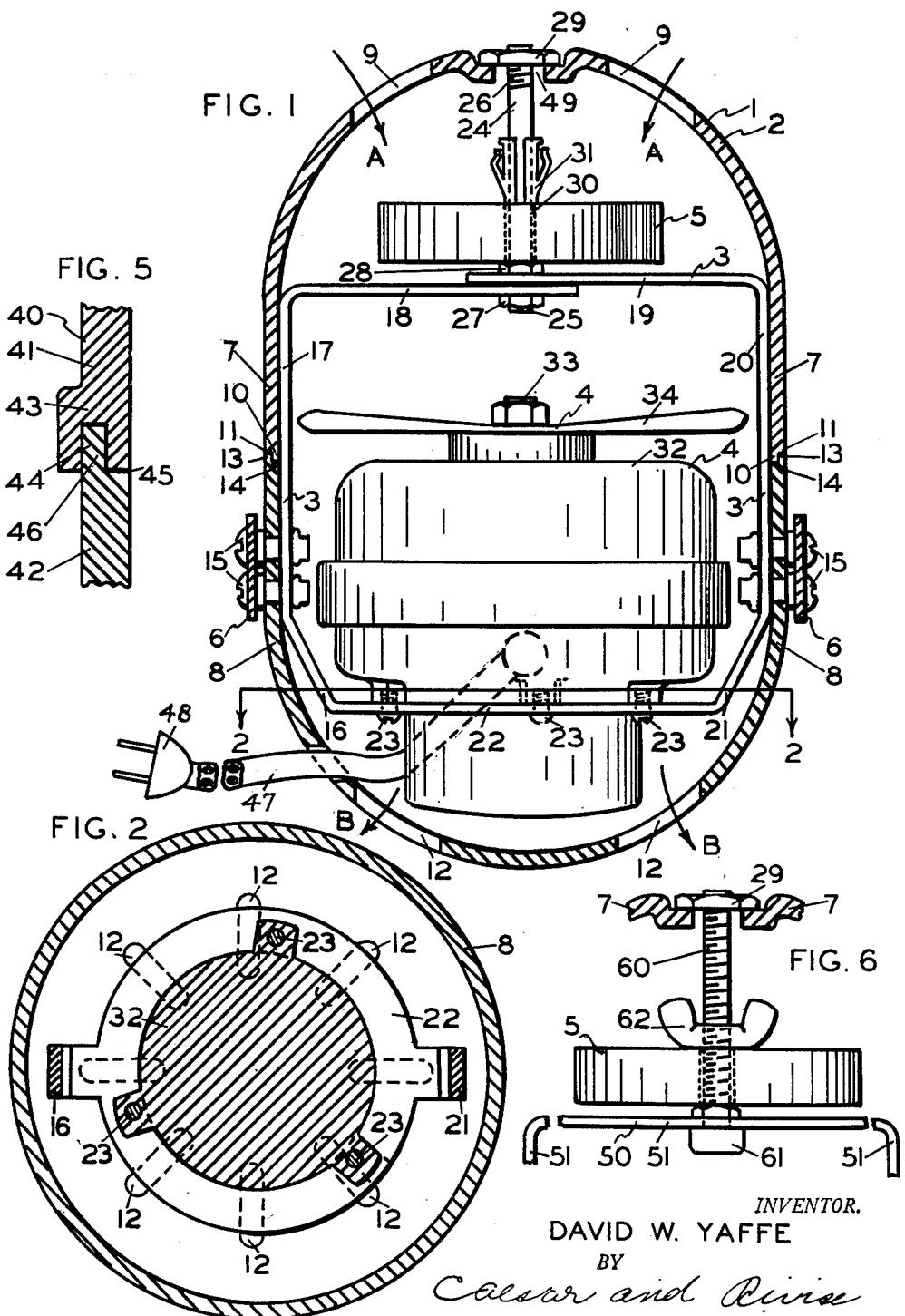
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2,629,149

DEODORIZING DEVICE

Filed Oct. 22, 1949

2 SHEETS—SHEET 1



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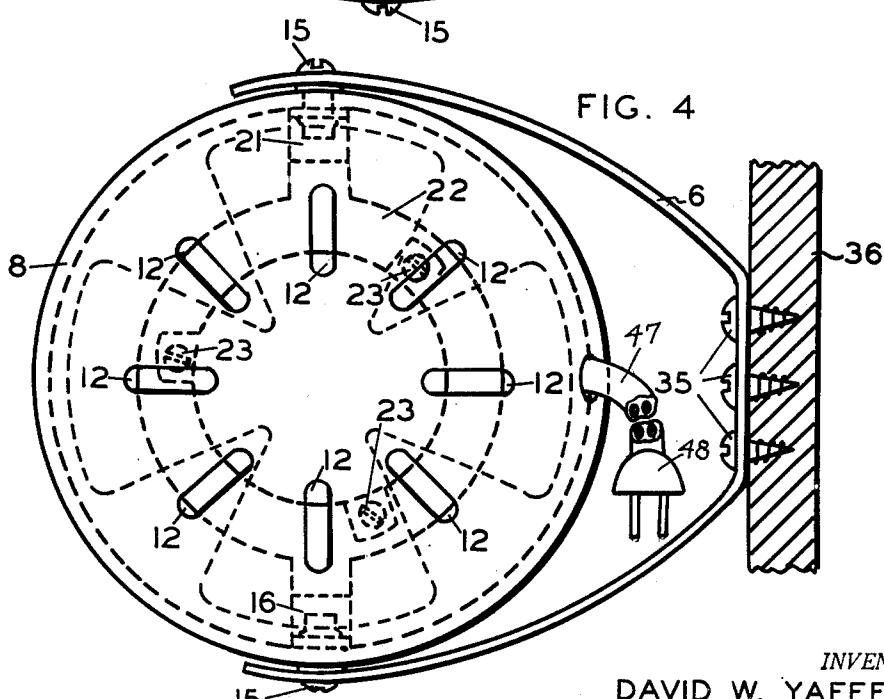
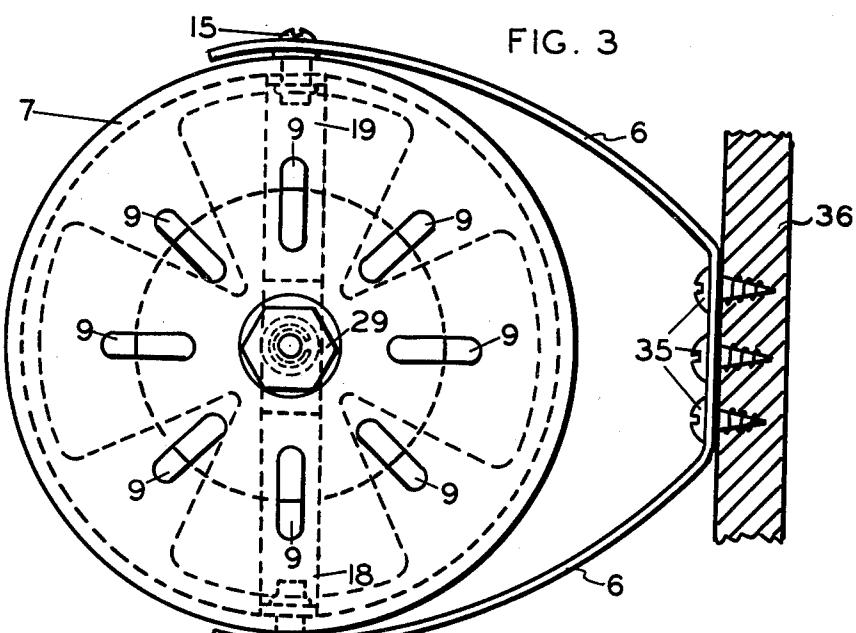
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2 SHEETS—SHEET 2



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DEODORIZING DEVICE

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7 Claims. (Cl. 21—108)

1

This invention relates to air freshening, sweetening, neutralizing, perfuming, sterilizing, moth-proofing, or otherwise treating devices commonly known as "deodorizing" devices.

More particularly stated, this invention relates to deodorizing devices of the air circulating type. In this type the air to be "deodorized"—that is, freshened, sweetened, neutralized, perfumed, sterilized, moth-proofed, or otherwise treated—is mechanically circulated in the room being deodorized.

It is the object of this invention to provide a deodorizing device of the air circulating type which will be comparatively simple in structure, cheap to manufacture, easy to install, and easy to service.

I achieve the foregoing, as well as other objects, by placing in a container having air circulating apertures a unit consisting of a "sealed-in-oil" motor to which is operatively connected an air propeller near which is positioned the composition for freshening, sweetening, neutralizing, perfuming, sterilizing, moth-proofing, or otherwise treating the air. Said composition for treating the air is herein broadly designated as a "deodorizing composition."

For the purpose of describing my invention with the particularity required by law I have shown in the drawings which form a part hereof and will now describe several embodiments of my novel concept.

In said drawings

Fig. 1 is a side view of my novel deodorizing unit with the casing and wall attaching bracket in section in order to show otherwise hidden parts.

Fig. 2 is a section in the line 2—2 of Fig. 1.

Fig. 3 is a top view of the unit shown in Fig. 1.

Fig. 4 is a bottom view of the unit shown in Fig. 1.

Fig. 5 is an enlarged vertical section, taken similarly to Fig. 1, of a fragment of a modification of the casing shown in said figure. The fragment shown is at the junction point of the two casing sections.

Fig. 6 is a side view of a modification of the deodorizing element carrying bracket and deodorizing element receiving shaft shown in Fig. 1.

Referring more particularly to the drawings, wherein similar reference numerals denote similar parts, reference numeral 1 designates my deodorizing device as a unit.

The deodorizing device 1 consists of an outer casing 2, a motor and fan and deodorizing element carrying bracket 3 carried by said casing 2, a motor and fan unit 4 and a deodorizing element 5 carried by said bracket 3, and a wall attaching bracket 6 attached to said casing 2.

The casing 2 consists of two sections 7 and 8. It may be made of any suitable material. In the

2

embodiment here shown said casing 2 is made of cellulose acetate plastic.

The casing section 7 has formed therein the louvers 9 and the circular opening 49. The casing section 7 terminates in an annular lip 10 bounded by a shoulder 11.

The casing section 8 has formed therein the louvers 12 and terminates in an annular lip 13 bounded by a shoulder 14. The casing section 8 has formed therein a plurality of suitable apertures through which extend the rivets 15 which simultaneously attach both the motor and fan and deodorizing element carrying bracket 3 and the wall attaching bracket 6 to said casing section 8.

The motor and fan and deodorizing element carrying bracket 3 consists of the arms 16, 17, 18, 19, 20 and 21 which combine to form a substantially inverse U-shaped member and a ring 22 carried by the arms 16 and 21. The ring 22 has formed therein suitable apertures through which extend the screws 23 which anchor the motor 32 of said motor and air propeller unit 4 to said ring 22. The arms 18 and 19 have formed therein suitable registering apertures through which extends the deodorizing element receiving shaft 24.

The deodorizing element receiving shaft 24 is threaded at both its lower and upper ends 25 and 26 respectively. The lower end 25 of said deodorizing element receiving shaft 24 has mounted thereon the spaced nuts 27 and 28 which serve to unite the arms 18 and 19, attach the deodorizing element receiving shaft 24 to said arms, and to space the deodorizing element 5 from said arms 18 and 19. The upper end 26 of said deodorizing element receiving shaft 24 has mounted thereon the nut 29 which serves to press the casing section 7 toward and into contact with the casing section 8. The deodorizing element receiving shaft 24 extends through a suitable aperture 30 in the center of the deodorizing element 5 and has positioned thereon above said element the washer clip or spring collar 31 which retains the deodorizing element 5 upon said deodorizing element receiving shaft 24.

The motor and air propelling unit 4 consists of a "sealed-in-oil" motor 32 which has attached thereto a suitable shaft 33 to which is attached the fan or air propeller 34. It also has attached thereto a suitable conducting wire 47 terminating in a plug 48 for connection to a source of power.

The deodorizing element 5 consists of a porous block containing a composition which will freshen, sweeten, neutralize, perfume, sterilize, moth-proof, or otherwise treat the air. The porous block here shown is made of ceramic material. It may be made of any other material having the necessary porosity and which will not

be adversely affected by and will not adversely affect the deodorizing composition.

The deodorizing composition is introduced into the porous block in any suitable manner. I have done so by placing the block in a solution containing the deodorizing composition and also by forcing the composition into the block by pressure. In both cases the porous block became substantially saturated with the deodorizing composition.

The air to be deodorized enters the unit through the louvers 9 as indicated by the arrows A and leaves the unit through the louvers 12 as indicated by the arrows B.

The casing 40 shown in Fig. 5 differs from the casing 2 shown in Figs. 1 to 4 only in the fact that the upper casing section 41 has an annular channel 44 formed at its lower edge 43 which receives the annular lip 46 bordering the shoulder 45 of the casing section 42.

The motor and fan and deodorizing element carrying bracket 59 shown in Fig. 6 differ from that shown in Figs. 1 to 4 only in the fact that a continuous arm 51 has been substituted for the two arms 18 and 19.

The deodorizing element receiving shaft 60 shown in Fig. 6 differs from that shown in Figs. 1 to 4 in the following particulars:

(1) It terminates in a head 61 at its lower end and is threaded for its entire length.

(2) A wing nut 62 has been substituted for the washer clip or spring collar 31.

My novel deodorizing unit may be mounted at any desired point in a chamber by suitable means such as the screws 35 which extend through suitable apertures in the wall attaching bracket 6 into the wall 36 or any other object in said chamber which has been picked as the supporting member for said deodorizing unit.

Having described my invention what I claim as new and useful is:

1. A deodorizing unit consisting of a base member; a sealed-in-oil-motor carried by said base member; an air propeller operatively connected to said sealed-in-oil-motor for propulsion thereby; a casing formed of an upper and a lower section, each having louvers formed therein with the upper section having a shaft receiving opening formed therein, encompassing said base member, sealed-in-oil-motor and air propeller; means attaching said lower casing section to said base member; a shaft carried by said base member, positioned in front of said air propeller and extending through said shaft opening formed in said upper casing section; a porous element adapted to be impregnated with a deodorant carried by said shaft and positioned within said casing; and means positioned on said shaft on the outside of and contacting said upper casing section for holding said casing section upon said shaft.

2. A deodorizing unit consisting of a base member; a sealed-in-oil-motor carried by said base member; an air propeller operatively connected to said sealed-in-oil-motor for propulsion thereby; a casing formed of an upper and a lower section, each having louvers formed therein with the upper section having a shaft receiving opening formed therein, encompassing said base member, sealed-in-oil-motor and air propeller; means attaching said lower casing section to said base member; a shaft carried by said base member, positioned in front of said air pro-

peller and extending through said shaft opening formed in said upper casing section; a porous element adapted to be impregnated with a deodorant carried by said shaft and positioned within said casing; and means positioned on said shaft on the outside of and contacting said upper casing section for holding said casing section upon said shaft.

3. A deodorizing unit comprising an elongated casing having openings at its opposite ends, a motor and air propeller operatively connected thereto and disposed within said casing, a porous element adapted to be impregnated with a deodorant disposed in said casing in front of said propeller, and bracket means within and carried by said casing supporting both the motor and the porous element, said bracket means including a pair of opposed members, screw means securing said members to said motor, said members including overlapping leg portions with registering apertures, a shaft extending through said registering apertures and said porous element and means terminally and removably securing said shaft to said leg portions and said casing.

4. The combination of claim 3 and a washer clip engaging said shaft and bearing on one surface of said porous element.

5. The combination of claim 3 wherein said shaft is threaded throughout its length and an internally threaded nut adjustably receiving said shaft and bearing on one surface of said porous element.

6. A deodorizing unit comprising an elongated casing having openings at its opposite ends, a motor and air propeller operatively connected thereto and disposed within said casing, a porous element adapted to be impregnated with a deodorant disposed in said casing in front of said propeller, and bracket means within and carried by said casing supporting both the motor and the porous deodorant element, said bracket means including a substantially U-shaped member having legs bearing against the inner surface of said casing, the free ends of said legs being inturned, screw means securing the free ends of said legs to said motor, an aperture provided in the web portion of said U-shaped member, a shaft extending through said aperture and said porous element and means terminally securing said shaft to said web portion and said casing.

7. The combination of claim 6 and means adjustably retained on said shaft and bearing on one surface of said porous element.

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