June 6, 1950 J. MELCHER ET AL 2,510,126

DEMOTHING DEVICE

Filed Oct. 4, 1948

FIG. 1.

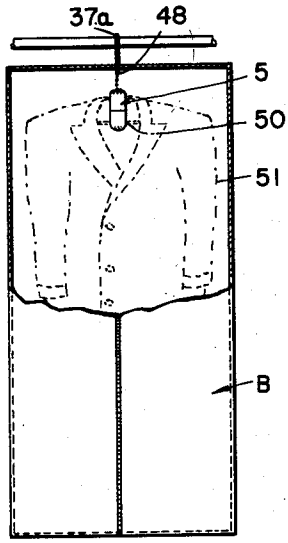


FIG. 2.

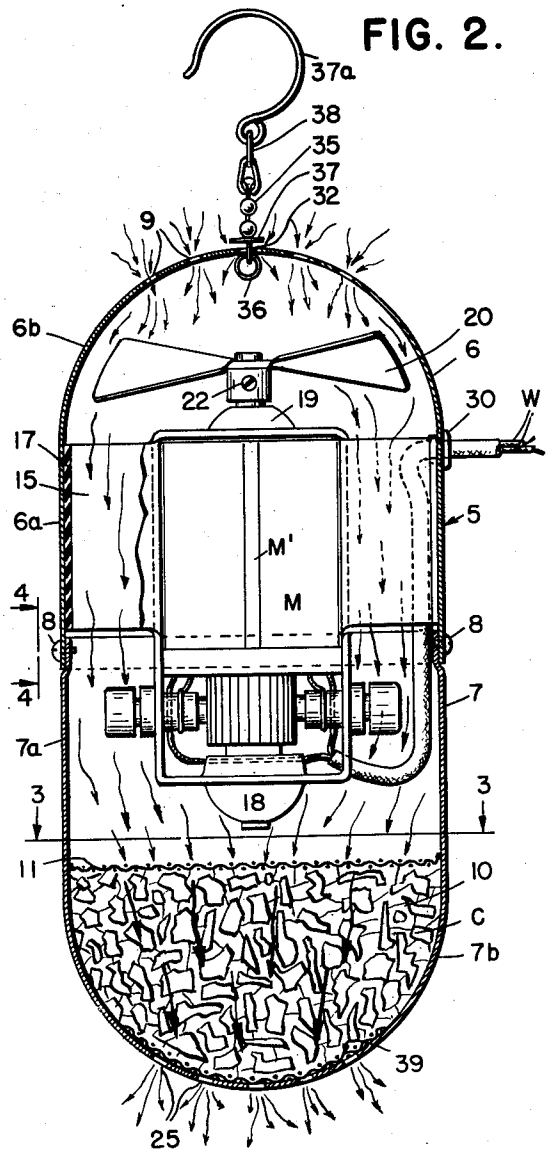


FIG. 3.

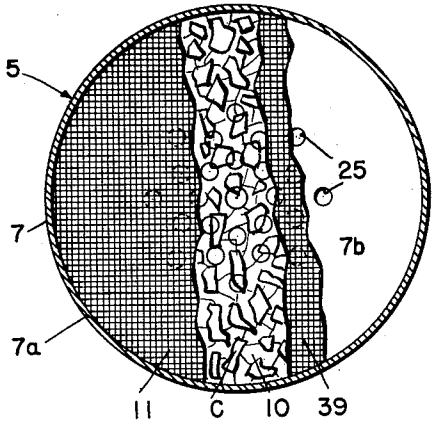


FIG. 5.

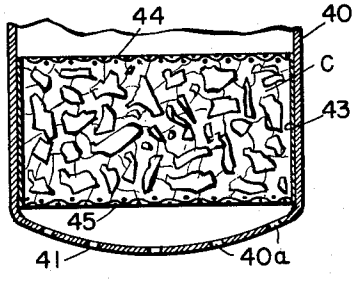
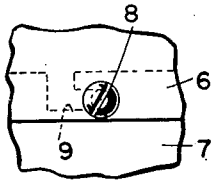


FIG. 4.



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DEMOTHING DEVICE

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6 Claims. (Cl. 21—126)

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This invention has to do with demothing devices and has as an object the provision of an extremely simple and economical demothing device which may be conveniently suspended among clothes in a clothes-bag, for instance, and which will operate to re-circulate air through a carried bed of demothing chemical and through the clothes until a sufficient quantity of the liberated gas is deposited on the clothes to effect sufficient demothing.

Another object is the provision of an improved demothing device in which the demothing chemical is carried within a removable cartridge for convenience of application and use.

Another object is to provide a device of this character embodying means for transferring the heat of the operating motor to the air stream passing through the device before the air encounters the chemical, thus maintaining the motor in cooled condition as well as improving the evaporation and liberation of gas from the chemical.

Another object is to provide a device of this character wherein the impeller is so mounted and positioned as to render it impossible for anyone to become injured thereby.

Still further objects and advantages will appear hereinafter.

So that our invention may be better understood, we show in the accompanying drawings, and will now describe, an embodiment thereof which we at present prefer, although we would like it understood that, within the broader scope of the appended claims, the invention may be carried out in other and modified specific embodiments.

In the drawings:

Fig. 1 is a front elevation of a clothes-bag with our device mounted therein, the bag being shown partly in section;

Fig. 2 is a medial sectional view with some parts being shown in elevation;

Fig. 3 is a section taken on line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary view taken on line 4—4 of Fig. 2; and

Fig. 5 is a sectional fragmentary view showing a modification.

Referring now to the drawings, we show at 5 a casing composed of an upper portion 6 and a lower portion 7 which are joined as by screws 8 fitting in bayonet slots 9 (Fig. 4).

The upper portion 6 has a cylindrical side 6*a* and a spherical top end portion 6*b* provided with air admitting perforations 9, constituting an air inlet.

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The lower portion 7 has a cylindrical side wall 7*a* and a spherical bottom portion 7*b* providing a chamber 10 adapted to contain a charge of a demothing chemical such as paradechlorobenzine crystals denoted by the letter C. Preferably a screen 11 is shaped to frictionally fit in the lower portion to prevent the crystals C from being displaced.

A motor mounting bracket or spider 15 is fixed to insulating pads 17 secured within the cylindrical part of the upper portion of the casing, and the bracket 15 supports a conventional electrical motor M whose rotor M' has bearings 18, 19 carried by the bracket.

A fan or impeller 20 is fixed on the upper end of the rotor M', as by a set screw 22, and has its vanes disposed so that upon clockwise rotation, air is drawn into the casing through the perforations 9, is forced downwardly through the restricted passageway between the motor and the inner surface of the casing, thence through the bed of crystals C, and outwardly through the perforations 25 forming the air outlet in the lower casing portion 7*b*.

The motor is conductively connected to an electrical source, not shown, by means of wires W which pass through a conduit 30 in the side wall of the upper portion of the casing.

To facilitate suspending the casing among clothes within an enclosure such as a clothes-bag B, we provide a hole 32 medially through the upper portion 6*b* of the casing and pass therethrough a ball chain 35 or other suitable hanger. The chain is retained in the hole by the lower enlarged ring 36 and the disk 37, while a hook 37*a* is connected to the top end of the chain as by a ring 38.

A second screen 39 is preferably placed over the perforations 25 inside the casing to prevent escape of any of the crystals through the perforations 25.

In Fig. 5, we show a modification wherein the parts are as before described except that the lower portion 40 of the casing may be made cylindrical throughout its length except for a shallow, somewhat spherical, bottom 40*a* having outlet perforations 41; and instead of placing the crystals C loosely in the casing, we enclose them within a cylindrical cartridge 43 of a size to snugly fit in the casing, and provide screened top and bottom walls 44, 45 for the cartridge. Thus, one may provide a fresh charge of crystals by simply removing an exhausted cartridge and inserting a fresh one.

In practicing the invention, the demothing device may be easily and conveniently suspended

within a clothes-bag B, as shown in Fig. 1, by means of the chain 35 and hook 37, from the support 48 from which clothes hangers 50 are suspended to hang clothes 51 in the bag. The wires W may be passed through a small opening (not shown) in the bag for connection to an electrical source. The impeller acts to re-circulate the air in the bag through the crystals until a strong enough deposit on the clothes of the gas liberated by the crystals is obtained to insure sufficient demothing. As the air passes over the motor, it picks up its heat and is thus warmed before it passes through the bed of crystals, increasing its efficiency.

We claim:

1. A demothing device comprising a closed hollow casing having perforations in its opposite ends and adapted to receive a charge of demothing chemical in one of its end portions exposed to air passing through the casing, a power driven impeller mounted in the casing for forcing air through the casing, and a hanger connected to the top end of the casing, the hanger having means for suspending it from a support.

2. A demothing device comprising a closed hollow casing having perforations in its opposite ends and adapted to receive a charge of demothing chemical in one of its end portions exposed to air passing through the casing, a power driven impeller mounted in the casing for forcing air through the casing, and a flexible hanger secured at one end to the top end of the casing and carrying a hook at its other end.

3. A demothing device comprising a closed casing having a cylindrical medial portion and having air passing perforations in its opposite ends, the lower portion of the casing providing a demothing chemical holding chamber exposed to air passing through the casing, an electric motor mounted axially in said cylindrical portion of the casing and defining with the adjacent inner surface of the casing a restricted annular air passageway, and a fan mounted atop and operatively connected with the motor to draw air into the casing through the perforations in the top end thereof and to force it downwardly through said passageway and chamber and outwardly through the perforations in the lower end of the casing.

4. A demothing device comprising a casing having a cylindrical side wall, a cupped demothing chemical receptacle having a cylindrical side wall detachably connected to the side wall of the casing and having a perforated bottom wall, the casing having an air inlet in its top end, an electrical motor, spider means mounting the motor axially of and in spaced relation to the side wall of the casing, an air impeller mounted atop the motor and operatively connected thereto, and means for suspending the casing from a supporting object.

5. A demothing device comprising, in combination with a closed clothes-bag, a closed casing having an air inlet in its top end, and an air outlet in its bottom end, the lower end portion of the casing providing a chamber exposed to said inlet and outlet and adapted to contain demothing chemical, a power driven impeller in the casing above the chamber to draw air through the inlet and force it through the chamber and outlet, and means suspending the casing in the top portion of the bag.

6. A demothing device comprising a casing having an air inlet in its top and an open bottom end, and carrying in its interior a power driven impeller, a receptacle detachably secured in closing relationship to the bottom end of the casing and having an air outlet in its bottom end, and a demothing chemical containing cartridge detachably mounted in the receptacle between said inlet and outlet, said cartridge having foraminous top and bottom walls.

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