Oct. 28, 1947. J. L. BOORSTIN 2,429,919

GARMENT HANGER

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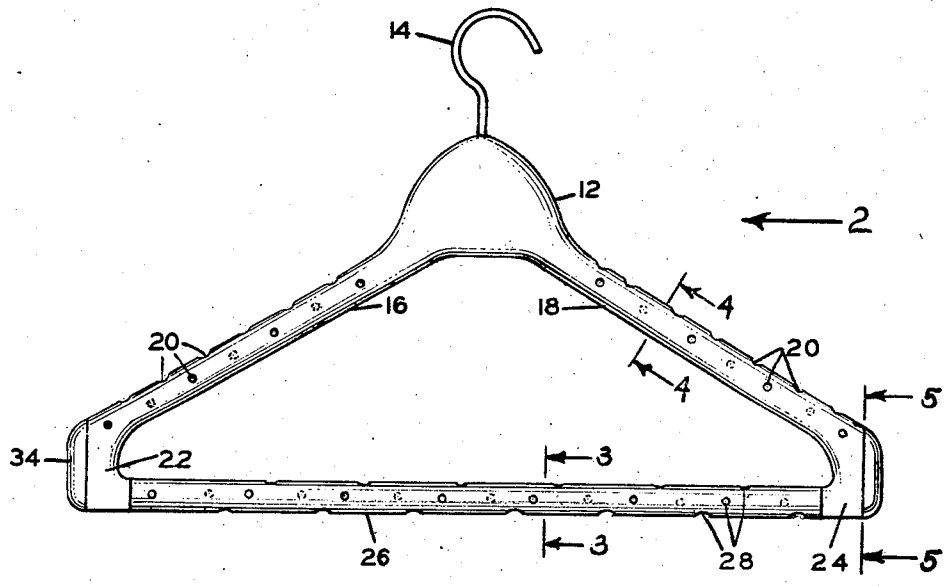


FIG. 1.

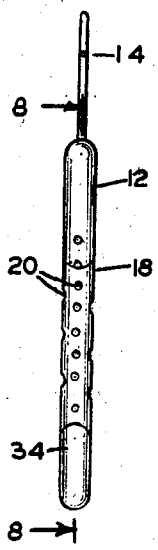


FIG 2.

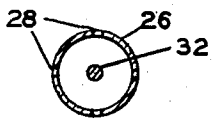


FIG. 3.

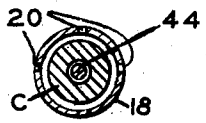


FIG 4.

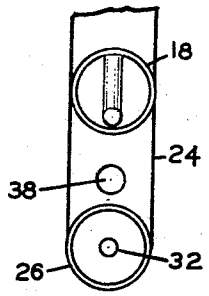


FIG. 5.

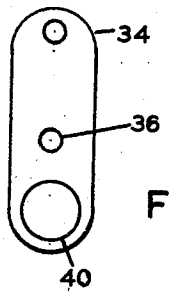


FIG 7.

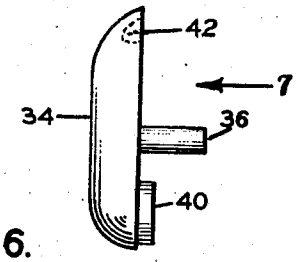


FIG 6.

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GARMENT HANGER

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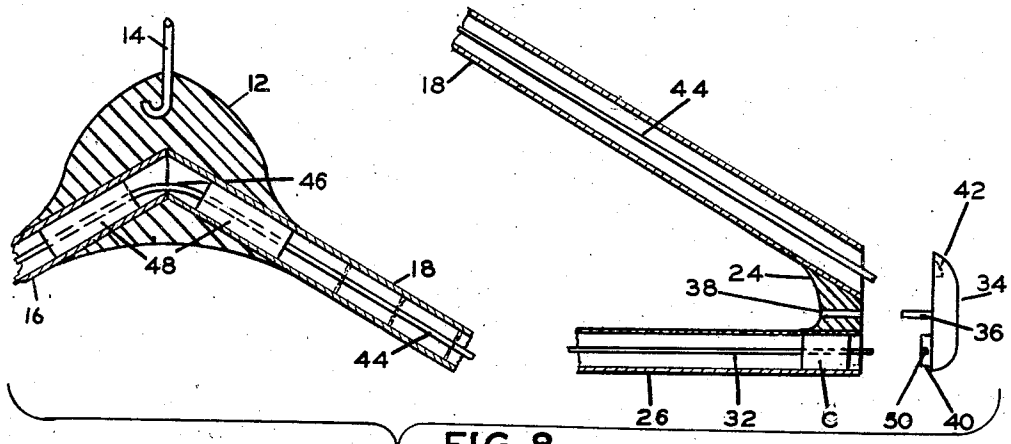


FIG.8.

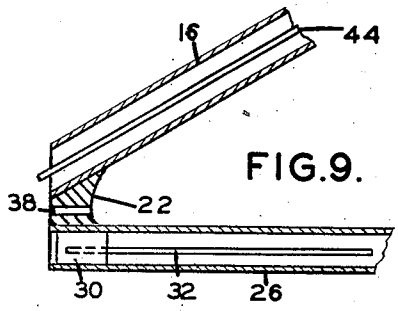


FIG.9.

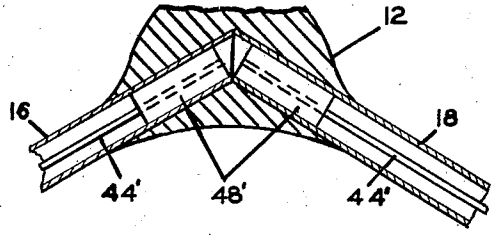


FIG. 10.

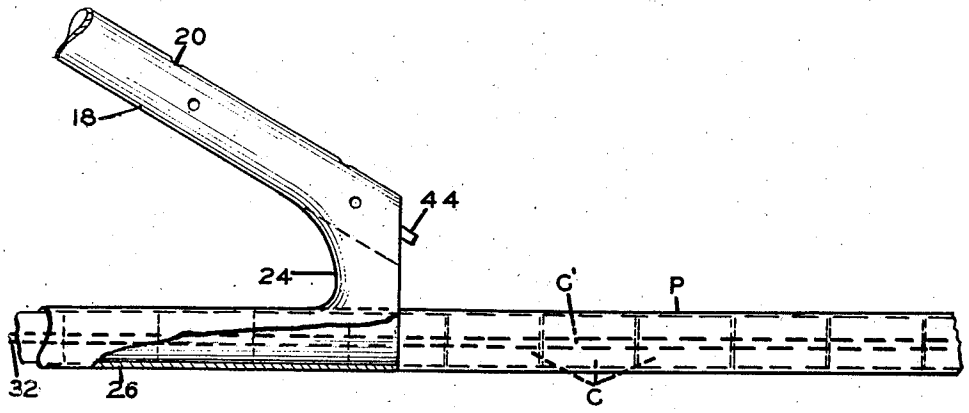


FIG.11.

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GARMENT HANGER

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Application June 22, 1945, Serial No. 600,934

6 Claims. (Cl. 223—86)

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My invention relates to garment hangers. It relates more particularly to hangers for repelling moths and other insects from garments. An object of the invention is to provide a device of this character in which perforated tubes for containing the repellent material are embodied in and constitute a part of the hanger. Another object is to provide a construction in which the tubes may be readily loaded and reloaded with cartridges of the repellent material without a person coming into direct contact with such material and suffering unpleasant or harmful results therefrom. Another object is to provide a device in which the gas coming from the repellent material will be well distributed through the fabric of garments which are supported by the hanger.

The novel features which I believe to be characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to organization and operation together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings in which,

Fig. 1 is an elevational view of the hanger.

Fig. 2 is an end view looking in the direction of the arrow 2 in Fig. 1.

Fig. 3 is a view in section on the line 3—3 of Fig. 1.

Fig. 4 is a view in section on the line 4—4 of Fig. 1.

Fig. 5 is a view in vertical section on the line 5—5 of Fig. 1 on an enlarged scale.

Fig. 6 is an elevational view of a cap member.

Fig. 7 is a view of said member looking in the direction of the arrow 7 in Fig. 6.

Fig. 8 (sheet 2) is a view showing portions of a hanger partly broken away and mostly in section showing the right hand portion of the hanger with the cap member pulled out.

Fig. 9 is a similar view showing the left hand portion of the hanger.

Fig. 10 is a fragmentary sectional view of a slightly modified form.

Fig. 11 is a fragmentary view showing one of the tubes being loaded with an assembly of cartridges.

Referring to the accompanying drawings, the numeral 12 designates the head of a hanger preferably of plastic material and in which is imbedded a hook 14. Tubular arms 16 and 18 extend downwardly from the head. These tubes are provided with a series of perforations 20

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which are helically arranged except for the fact that there are no perforations in the under side of the tubes. The lower ends of the arms 16 and 18 carry enlargements 22 and 24 respectively. A horizontal tube 26 extends between and is supported from said enlargements. This tube is provided with a series of perforations 28 which wind helically around the wall of the tube.

As shown in Fig. 9, the left hand of the tube 26 contains a plug 30 in which one end of a wire 32 is centrally secured. Almost identical cap members 34 are provided for application and removal at the ends of the tube 26. A stem 36 extends out from the inner surface of the cap for sliding into holes 38 in the enlargements 22 and 24. A short plug 40 extends out from said surface for sliding into the ends of the tube 26. This surface is provided with a hole 42 for a purpose which will presently appear. The caps 34 also provide closures for the lower ends of the tubes 16 and 18.

The tubes 16 and 18 as shown in Figs. 8 and 9 contain an axially positioned wire 44 which has a bend 46 to take it through the head 12 and through plugs 48 near adjacent ends of the two tubes. The outer ends of this wire project slightly beyond the tubes while the hole 42 in the cap 34 is for the purpose of receiving said projecting end when the caps are applied.

In the slight modification shown in Fig. 10, the plugs 48' are placed close to each other and the wire 44' is made in two pieces, the inner ends of which are secured in the plugs. This construction avoids the bend in the wire shown at 46 in Fig. 8. It will be noted from Fig. 8 that the end of the wire 32 projects a little beyond the right hand end of the tube 26. Therefore the cap for this end of the tube has the short plug 40 formed with a hole 50 for receiving the end of the wire 32 when the cap is applied.

The operation and advantages of this invention will be readily understood from the foregoing description in connection with the drawings. The repellent material is made in the form of cartridges C having central apertures, C'. The cartridges are preferably molded or otherwise shaped from paradichlorobenzine which has extremely efficient characteristics for repelling insects. The charges of cartridges for loading and reloading the perforated tubes are kept wrapped in a protective covering P (shown in Fig. 11) until they are inserted in the tubes. For this purpose, the caps 34 are removed from both ends of the device. One end of the protective covering is removed to expose the end cartridge and

the hole C' is slid on the projecting end of the wire. The assembly of cartridges is then slid out of the covering into the tube so that the assembly will be strung on the wire. It is obvious that this operation prevents the hands or any part of the handler from contact with the repellent material. It is obvious from the construction as shown in the drawings that the tube 26 is filled at the right. The tube 18 is also filled from the right but the tube 16 must be filled at the left. When the caps are in place, the wires inside of the cartridges serve to strengthen the perforated tubes so that they do not need to be made of as thick material as would otherwise be the case. Furthermore, supporting a wire centrally in the length of a tube provides for circulation of air entirely around the apertured cartridges as they become smaller from evolution of gas.

While paradichlorobenzine has been referred to as the insect repelling agent, it may become necessary to use other repelling agents, which may be suitably developed.

I claim:

1. The combination of a perforated tube, a wire fixed at one end of said tube centrally in the length thereof upon which to string a plurality of apertured cartridges of insect repellent material, and a removable closure for the other end of said tube.

2. In a garment hanger, the combination of a head member, perforated tubular arms extending downwardly from said head member, a wire in said arms, means securely fastening the wire at the upper ends of the arms with the lower ends of the wire projecting out from the lower ends of the arms, a horizontal perforated tube supported between the lower ends of said tubular arms, a wire in said tube, means securely fastening one end of said wire in said tube with the other end of the wire projecting out from an end of the tube, and removable closures for said lower ends and one end of said horizontal tube to permit insertion of apertured cartridges of insect repellent material in all of said perforated tubes on said wires.

3. The method of filling a perforated tube with apertured cartridges of insect repellent material which consists in assembling a plurality of the cartridges end to end, placing a protective covering around said assembly, placing an end of the assembly adjacent to an open end of the tube, sliding the assembly out of the covering into the tube, and supporting the cartridges through their apertures centrally in the length of the tube.

4. In a garment hanger, the combination of a head member, arms extending down from said member, a perforated tube supported by said arms, a single wire in said tube, and means for supporting said wire centrally in the length of the tube, said wire adapted to receive apertured cartridges.

5. In a garment hanger, the combination of a head member, arms extending down from said member, a perforated tube supported by said arms, a single wire in said tube, means securing one end of said wire in said tube with the other end of the wire projecting out from an end of the tube, and a removable closure for said tube end, said wire adapted to receive apertured cartridges.

6. In a garment hanger, the combination of a head member, perforated tubular arms extending down from said member, a single wire in each of said arms, means securing said wires centrally in the upper ends of the arms with the lower ends of the wires projecting out from the lower ends of the arms, and removable closures for said lower ends, said wires adapted to receive apertured cartridges.

JACOB LOUIS BOORSTIN.

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The following references are of record in the file of this patent:

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