Aug. 5, 1952 G. J. REISCH 2,605,959

ELECTRIC FAN

Filed Nov. 2, 1951

Fig. 1.

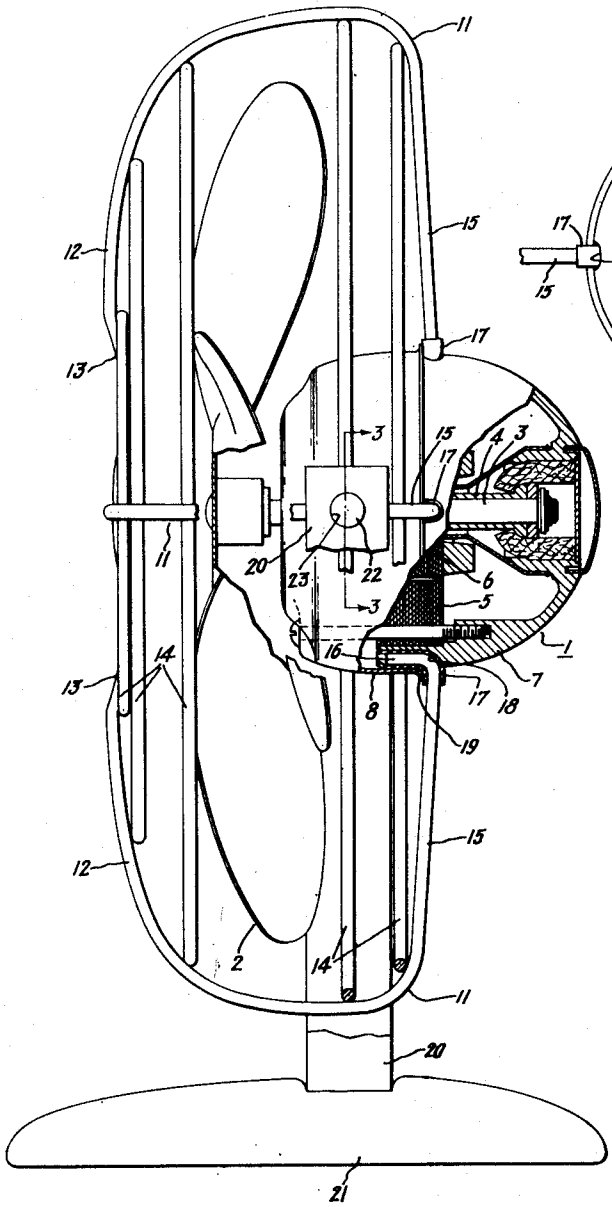


Fig. 2.

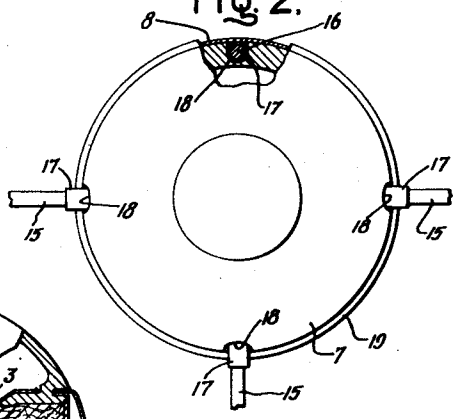
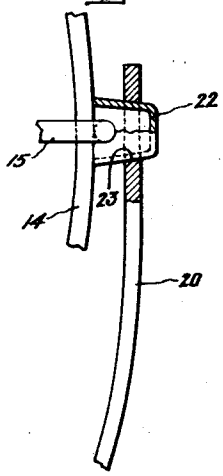


Fig. 3.



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ELECTRIC FAN

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3 Claims. (Cl. 230—259)

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The present invention relates to electric fans and has to do particularly with an improved structure wherein the fan motor and blade assembly are supported by the fan guard and it in turn is supported by a U-shaped bracket on a suitable base.

According to the invention the motor casing is split in a plane transverse to the axis of the motor to define a two part casing. These casing sections overlap and between them are positioned inturned ends of wires which form the fan guard, the wire ends having sleeves of resilient material around them to provide a means for metallically isolating the motor from the fan guard and base.

In the drawing Fig. 1 is a side view, partly in section and partly broken away, of an electric fan embodying the invention; Fig. 2 is an end view of a part of the structure shown in Fig. 1, and Fig. 3 is a view on a larger scale illustrating the way the fan guard is mounted on the base.

Referring to the drawing, 1 indicates the fan motor and 2 the fan blade assembly carried on the front end of the motor shaft 3 which in turn is supported in a bearing sleeve 4. The stator of the motor is indicated at 5 and the rotor at 6. The motor casing is split in a plane transverse to the axis of the shaft to define two sections or parts 7 and 8. Section 7 has a fairly thick wall and carries the motor field and sleeve bearing, the latter being formed integral with part 7. Section 8 has a thinner wall and is in the nature of a front cap or cover. It is of cup shape and telescopes over casing section 7 as shown in Fig. 1, having a tight telescoping fit therewith.

The fan guard comprises radially extending U-shaped loops 11, four being shown in the present instance, the front legs 12 of which are suitably fastened together at their inner ends as indicated at 13. Attached to loops 11 are wire guard rings 14. The loops 11 with the guard rings fastened thereto form a unitary fan guard. This fan guard supports the motor and fan blade assembly.

The present invention has to do particularly with the construction and arrangement for supporting the motor and fan blade assembly on the fan guard. For this purpose the rear legs 15 of loops 11 are provided with inturned ends 16 over which are positioned sleeves 17 of resilient material such as rubber, and the ends with the sleeves thereon are then clamped between the overlapping portions of the two casing sections 7 and 8. The casing sections are shaped to provide grooves or depressions 18 in which the ends are located. The elbows of ends 16 are nicely curved as shown in the drawing and sleeves 17 extend around the elbows. The inner edge of casing section 8 is curved outwardly as indicated at 19 and takes tightly against the outer ends of sleeves 17. Sleeves 17 serve to isolate the motor and fan blade assembly from metallic contact

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with the fan guard. At the same time the motor and fan blade assembly are firmly supported on the guard. The sleeves introduce resiliency into the supporting connection, reducing the transmission of vibrations from the motor and fan blade assembly to the guard.

The guard is supported in a U-shaped bracket 20 which in turn is fixed to and carried by a base 21, the connection between the guard and bracket comprising trunnions 22 fixed to the guard positioned in openings 23 in the ends of the arms of bracket 20.

The connection between the motor and fan blade assembly and the fan guard, in addition to providing a firm reliable vibration absorbing mounting, has the further marked advantage that it is easy to assemble, can be provided at low cost and comprises a minimum number of parts.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In an electric fan, a motor casing comprising rear and front sections, the adjacent edges of which telescope one within the other, walls defining circumferentially spaced axially extending grooves between the overlapping portions of such edges, and a wire guard having axially extending ends and sleeves of resilient material on such ends, the ends with the sleeves thereon being positioned in said grooves and clamped in position therein by said telescoping edges for supporting the motor on the guard.

2. In an electric fan, a motor casing comprising rear and front sections, the adjacent edges of which telescope one within the other, walls defining circumferentially spaced axially extending grooves between the overlapping portions of such edges, a wire guard having axially extending ends and sleeves of resilient material on such ends, the ends with the sleeves thereon being positioned in said grooves and clamped in position therein by said telescoping edges for supporting the motor on the guard, a U-shaped supporting bracket, and means connecting opposite sides of said wire guard to the arms of said bracket for supporting the wire guard and motor casing.

3. In an electric fan, a rear motor casing section open at its front, motor operating parts supported in said rear motor casing section, a front motor casing section in the form of a cap the edge wall of which telescopes over the front edge wall of the rear motor casing section, walls defining circumferentially spaced grooves between the overlapping portions of said casing sections, and a wire guard having angularly extending ends and sleeves of resilient material on such ends, said ends with the sleeves thereon being positioned in said grooves and clamped between said casing sections.

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No references cited.