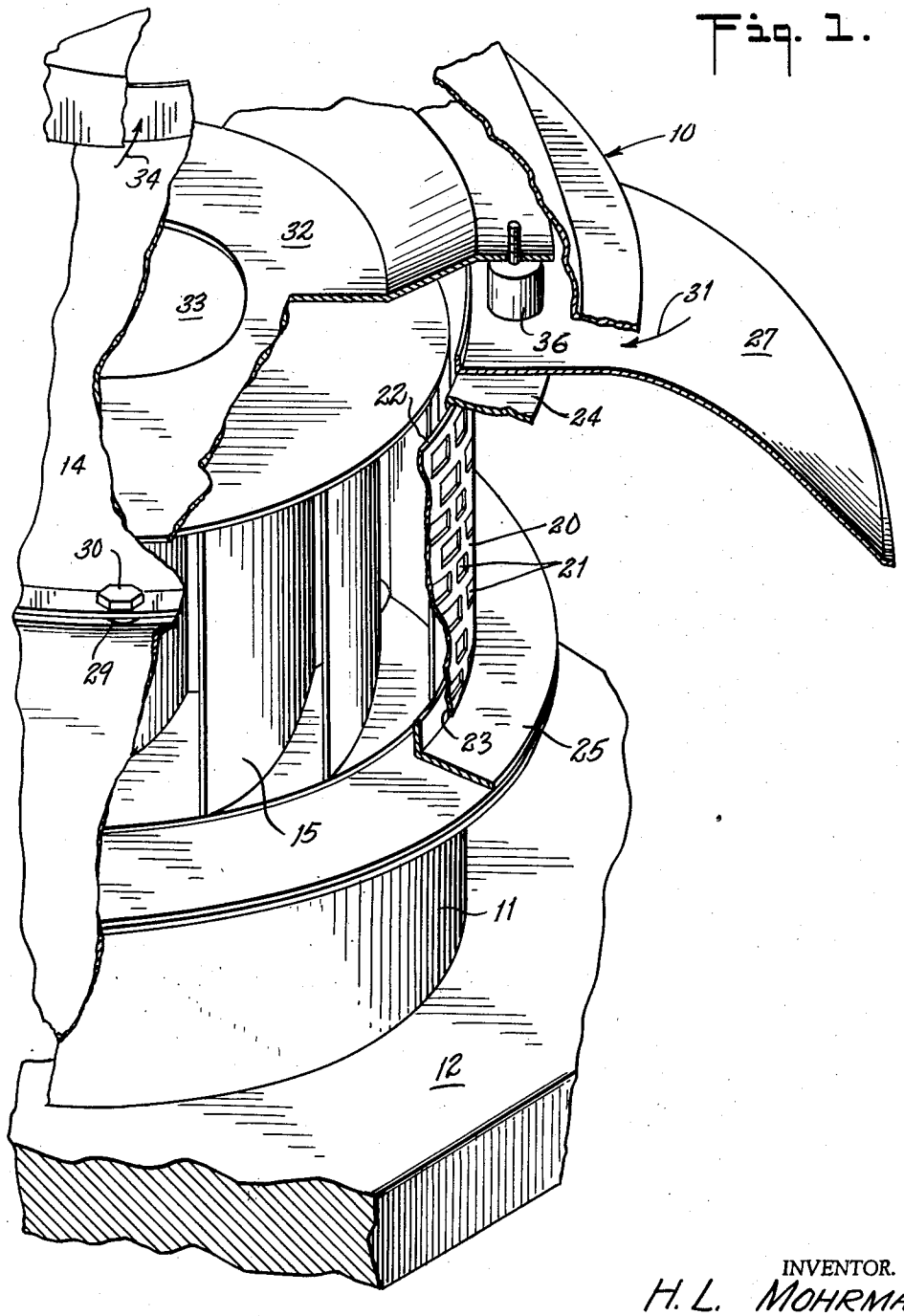
Nov. 17, 1959 H. L. MOHRMAN 2,912,916

VENTILATOR DEVICES

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Fig. 1.



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Fig. 2.

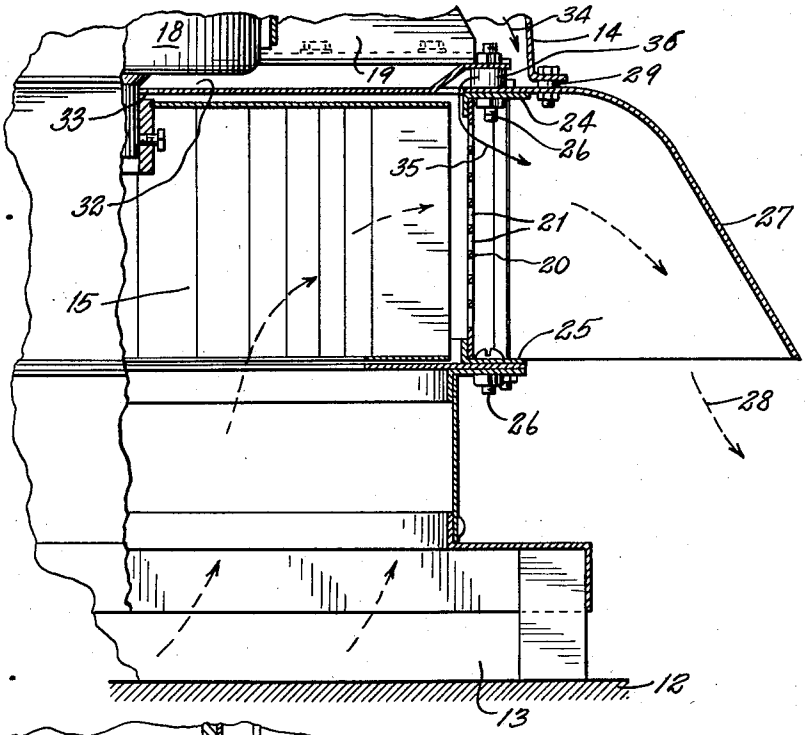
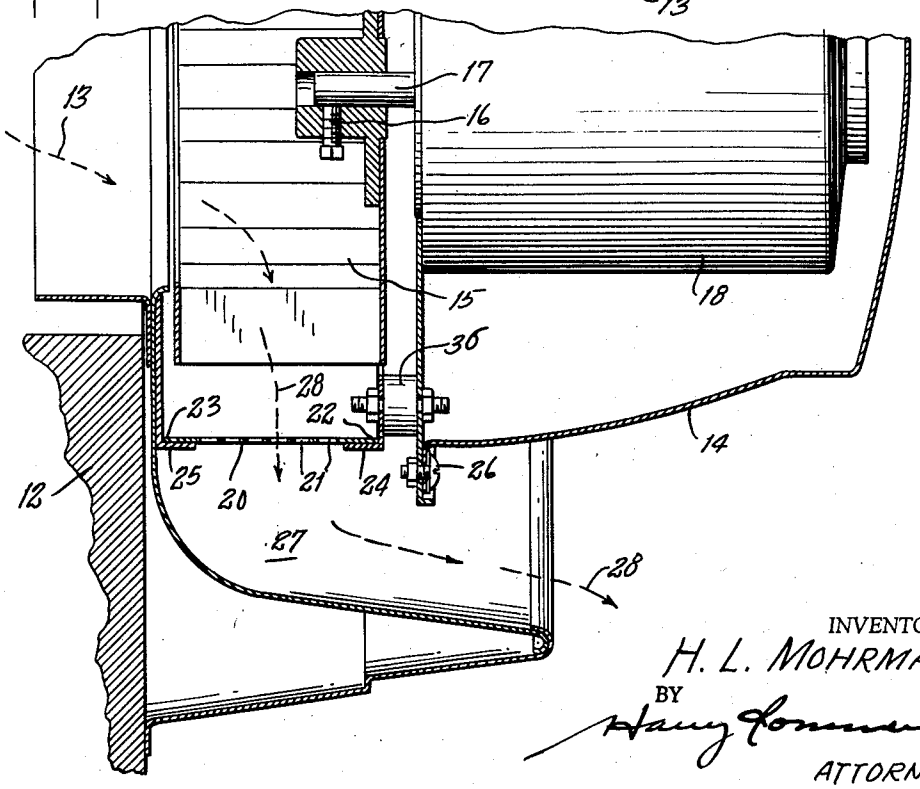


Fig. 3.



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United States Patent Office 2,912,916
Patented Nov. 17, 1959

2,912,916

VENTILATOR DEVICES

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Application December 26, 1958, Serial No. 783,017

7 Claims. (Cl. 98—43)

This invention relates to ventilator devices adapted to be secured to roofs or side walls of building structures in registry with exhaust openings therein. The invention is designed to provide a simple, highly practical and efficient structure of the character described which may be readily secured to the exhaust opening and wherein the entire load of the upper portion of the ventilator is supported in a novel arrangement incorporating novel means for assembly of the parts and maintaining them in the desired predetermined relationship for efficient operation and to safeguard them from contamination and damage in use.

The drawings show representative forms illustrative of the invention for effectuating the foregoing and other objects of the invention, as will become apparent from the drawings, wherein:

Fig. 1 is a fragmentary, perspective view of a device embodying the invention,

Fig. 2 is a vertical elevational, fragmentary sectional view thereof, and

Fig. 3 is a vertical, elevational, fragmentary sectional view of another form of said device.

In the drawings, wherein similar reference characters indicate like parts throughout the several views, the ventilator device **10** is shown to comprise a hollow support base or shell **11** adapted to be secured to a structure such as the object **12** (which, in Fig. 1 may be the roof **12** of a building, in Fig. 3, the side wall of a building) in registry with an exhaust opening therein.

Motor housing **14** is, pursuant to the invention, secured to the hollow support base **11** in aligned, spaced relation, the exhaust fan **15** being disposed intermediate the motor housing and shell **11** and depending, as by means **16**, from shaft **17**, which may be the armature shaft of motor **18** (Fig. 2) or a motor driven shaft. The motor **18** (Fig. 2) may be secured to suitable bracket means **19** which in turn may be secured directly to the motor housing or indirectly as at **30** to a member **27** which in turn is secured to motor housing **14**. An apertured structural member, such as perforated band **20** is disposed intermediate the motor housing **14** and the shell **11** and means are provided, engaging the band, motor housing and shell, proportioned to encompass the fan in spaced marginal relation, connecting the band **20** to the motor housing and shell and maintaining the housing and shell spaced and in alignment with the housing **14**, motor **18** and fan **15** solely supported by band **20**. The band **20** is preferably made of metal or other slightly yieldable material, provided with perforations **21** disposed equidistantly throughout the entire area thereof; it may be of wire mesh or expanded metal, band **20** as shown in the drawing being representative of the forms

mentioned. By the arrangement described, the parts may be assembled in a convenient and essentially fool-proof manner, the band **20**, being the sole connecting means for the upper and lower parts of the ventilator, yielding slightly under conditions of stress and strain incident to torque and other operative conditions encountered in use, while positively connecting said parts at all times. As the preforations **21** are provided throughout the band, the air **13** to be exhausted will readily flow therethrough as indicated by the dotted arrows **28** (Figs. 2 and 3). At the same time, the band **20** assures against return flow or entry of extraneous matter.

The motor housing and shell are connected to the marginal portions **22**, **23** of the band **20**, essentially, and except for said marginal portions, the entire area of the band is provided with perforations **21** and has the flexing characteristics and other characteristics and properties above mentioned. The means which so marginally engage the band, motor housing and shell, may comprise a pair of rings or brackets **24**, **25** which are preferably L-shaped in section (Fig. 1), one leg of each ring being telescopically secured to said band **20** and the other leg to the motor housing **14** or support shell **11** respectively, by bolts **26**, by welding or other means.

A deflector dome **27** is secured to the motor housing **14** as at **29** in overlying relation to the perforated band **20** so as to deflect air exhausted therefrom outwardly of said device (arrow **28**); if desired the connection of members **14** and **27** may be by bolt and spacer means **30**, **29** so that air may flow therebetween as noted at **31** in Fig. 1, passing as at **35** thence outwardly of the device. If desired, a separator plate **32** may be secured to the motor housing **14** and provided with a medial aperture **33** through which shaft **17** may freely pass (Fig. 2).

The operation of the device of the invention will be apparent to those skilled in this art from the disclosure herein and examples given and the application of the invention to other forms of exhaust devices will thus be apparent and within the scope and purview of the invention as recited in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A ventilator device comprising a hollow support extending from a structure, a motor, a housing for said motor, an exhaust fan operable by said motor and disposed between it and said support, a metal structural member enclosing said fan and supporting said housing from said hollow support, said structural member being provided with perforations for a substantial portion of its area, to facilitate the exhausting of said air therethrough, while preventing the entrance of extraneous matter through said portion into the interior of said structural member, and thereby into said device, and means securing said structural member to the hollow support.

2. A ventilator device as set forth in claim 1, wherein an air deflector dome is secured to the motor housing and the structural member, and overlies said structural member in spaced relationship thereto, so as to deflect air exhausted therefrom outwardly of said device.

3. A ventilator device as set forth in claim 1, wherein said perforations are spaced equidistantly over the entire area of said structural member.

4. A ventilator device as set forth in claim 1, wherein there is a separator plate intermediate the fan and motor housing and provided with an aperture through which the motor shaft extends.

5. A ventilator device as set forth in claim 1, wherein there is a pair of rings connected, respectively, to the opposite margins of the structural member, and means connecting one of said rings to the hollow support and the other ring to the motor housing.

6. A ventilator device as set forth in claim 5, wherein each of said pair of rings comprises a flanged member.

7. A ventilator device as set forth in claim 5, wherein each ring is L-shaped in cross-section, one leg of each of said rings is telescopically secured to the apertured structural member, and the other legs of said rings are secured to the motor housing and hollow support, respectively.

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