March 26, 1963 R. O. PEASE 3,082,677

ROOF VENTILATOR

Filed March 16, 1960 2 Sheets-Sheet 1

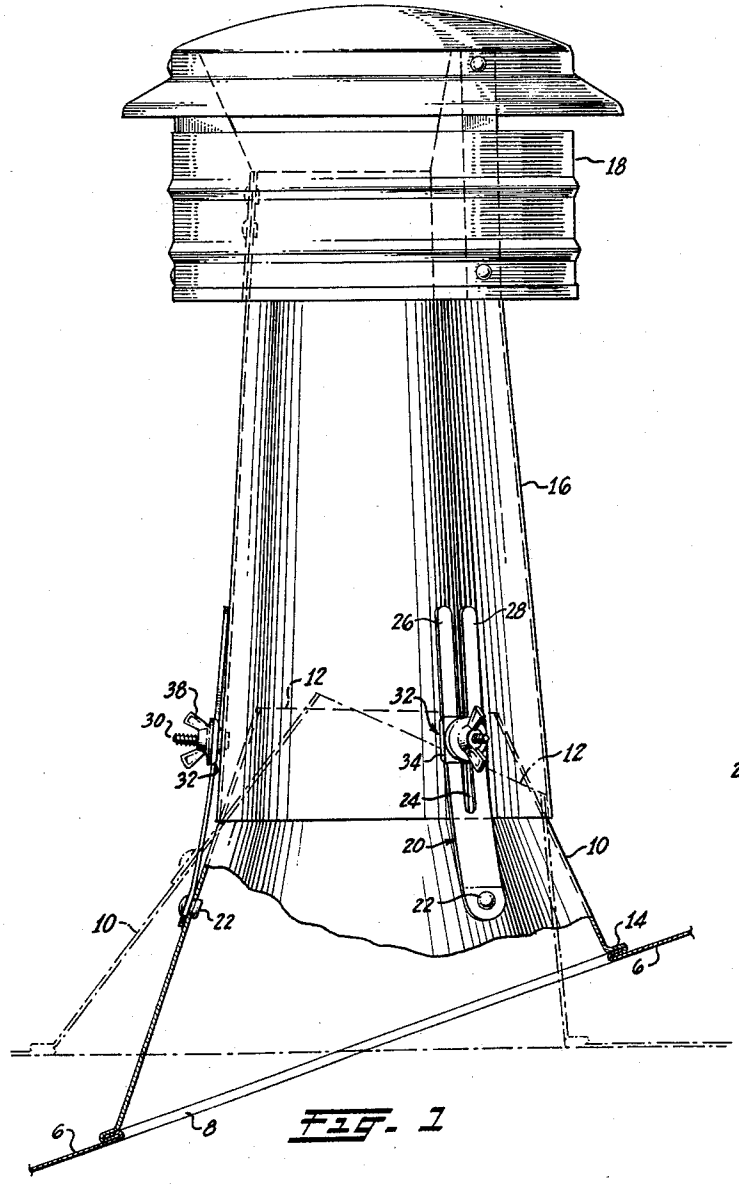


FIG. 1

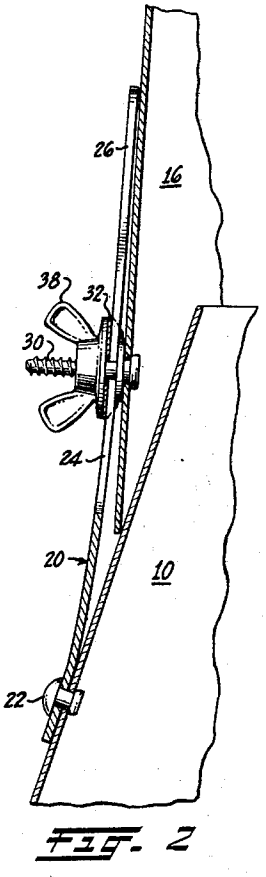


FIG. 2

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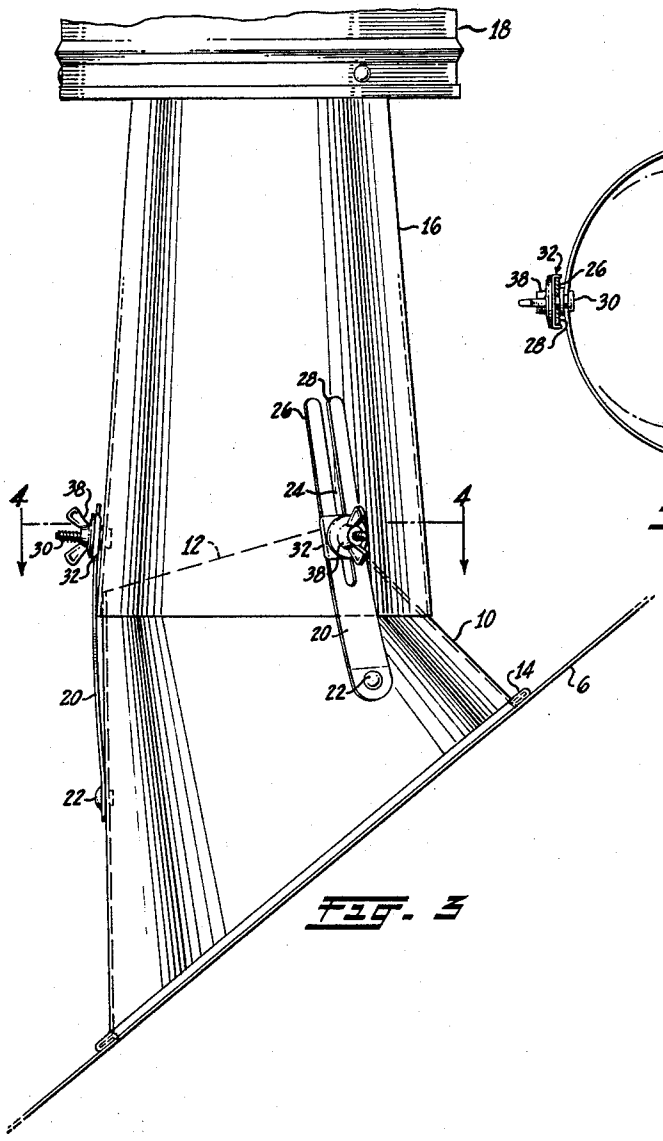


FIG. 3

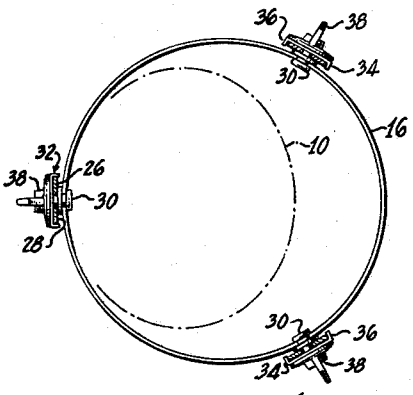


FIG. 4

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3,082,677

ROOF VENTILATOR

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1 Claim. (Cl. 98—46)

This invention relates to a roof vent structure and more particularly to an adjustable roof vent which can be used on roofs having various pitches.

As is well known, roofs are commonly made with different pitches, ranging from roofs which are flat to those having a high pitch. When a pipe passes through such a roof, it is necessary to employ some form of sealing. It is impractical to provide flashing and pipe combinations to fit every angle which might be encountered and it is highly undesirable to employ a structure requiring cementing or similar sealing means.

It is an object of the present invention to provide a roof vent structure which is adapted for placement on roofs of various angles and which will provide a substantially gas-tight vent and which will not permit water to enter the building.

Another object of this invention is to provide an adjustable vent assembly which can be easily adjusted to any desired angle and locked in place without the use of tools.

Other objects will be apparent from the balance of the specification which follows.

In the drawings forming a part of this application:

FIGURE 1 is a side elevation view, partly in section of a vent structure made in accordance with the present invention;

FIGURE 2 is an enlarged sectional view showing in detail the locking assembly;

FIGURE 3 is a partial view of the structure shown in FIGURE 1 showing its use on a steep roof;

FIGURE 4 is a section on the lines 4—4 of FIGURE 3.

Referring now to the drawings of reference characters, there is shown a base plate or flashing **6** having a substantial circular opening **8** therein. Fastened to the base plate **6** is a sleeve **10** which is in the form of an oblique truncated circular cone. The top edge **12** of the truncated cone is substantially normal to the axis of the cone while the bottom edge which is joined to the flashing **6** forms an acute angle therewith. The sleeve **10** may be fastened to the flashing **6** by any convenient means such as welding or soldering, but is preferably fastened by a rolled seam **14** as is conventional in the sheet metal art.

An upper pipe **16** is provided which may be cylindrical, but which is preferably tapered slightly as is shown. The pipe **16** fits over the sleeve **10** as is shown and will form a substantially gas-tight seal therewith through a wide range of angles extending from that shown in dash lines in FIGURE 1 to that shown in FIGURE 3. In all positions the joint will be water tight. Although a section through a circular cone forms a perfect circle only when the section is taken on a plane normal to the axis of the cone, a condition which would only be met when the pipe **16** axis coincides with that of the cone, pipe **16** has sufficient flexibility that it can easily distort to the slightly elliptical shape necessary to conform to the sleeve **10** through a wide angular range.

The pipe **16** is preferably surmounted by a vent cap **18** which can be of any desired configuration and attached in conventional manner.

In order to provide a positive locking means whereby the pipe **16** can be locked to the sleeve **10** in any desired position, a plurality, preferably three, of locking members are provided. These take the form of metal straps **20**, each of which is fastened by a single bolt or rivet as at **22** to the sleeve **10**; since the straps are fastened only at a single point, they can pivot around this point. The upper portion of the strap **20** is bifurcated as at **24** forming two tongues **26** and **28**. The pipe **16** is provided with corresponding threaded members **30** extending therefrom a short distance from the bottom of the pipe **16**. The shaft of each of the threaded members **30** extends through the opening **24**. Mounted over the threaded member **30** is a clip **32** having flanges **34** and **36** extending on each side of the tongues **26** and **28**. A winged nut **38** is then employed to clamp the assembly together.

In assembling the device, it is only necessary to loosen the three wing nuts **38** and adjust the pipe **16** to the desired angle. The three wing nuts **38** are then turned down and will hold the pipe in a fixed position. Nevertheless, the assembly can be readily taken apart for cleaning, repair, or reuse at any time.

I claim:

A roof ventilator structure comprising a flashing having an opening therein, a sleeve having the shape of an oblique truncated circular cone secured to said flashing, a tapered flexible pipe over the upper portion of said sleeve and extending upwardly therefrom and being tiltable over a substantial angle while maintaining a water shedding connection with said sleeve, said pipe being free to slip over said sleeve in a plurality of positions and being restrained only by the increased diameter of the sleeve as the pipe is pushed downwardly thereon, and means for anchoring said pipe to a desired angle with respect to said sleeve, said means comprising a plurality of upwardly extending straps connected to said sleeve, said straps being pivotally connected to said sleeve at points below the contact line of the sleeve and the pipe, said straps being bifurcated at their upper ends of form two tongues, a plurality of corresponding outstanding threaded members attached to said pipe, one of said threaded members extending between each pair of tongues, and a wing nut on said threaded member whereby said tongues can be clamped against the pipe.

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