Feb. 14, 1967 L. L. SMITH ETAL 3,303,773

ROOF RIDGE VENTILATOR

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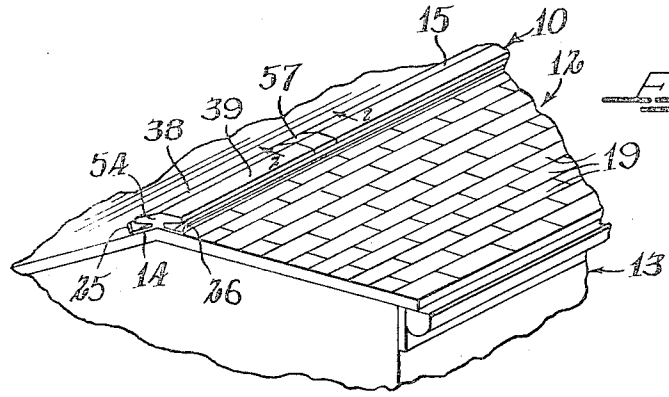


Fig. 1.

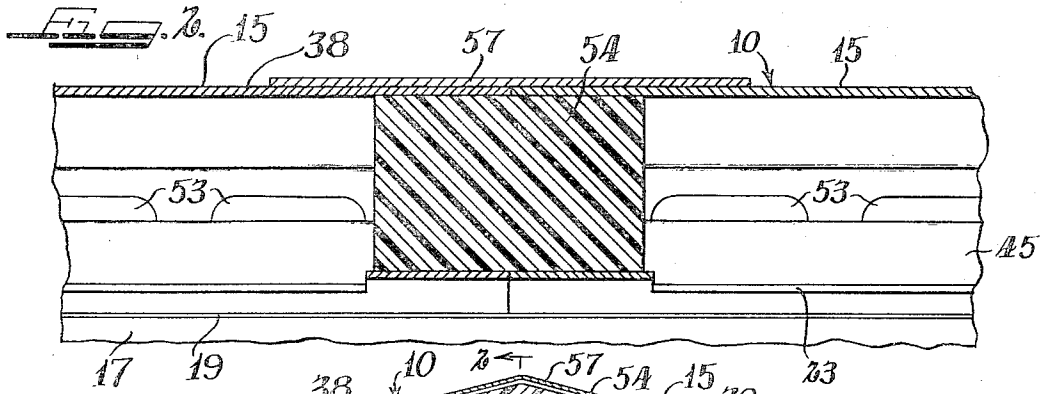


Fig. 2.

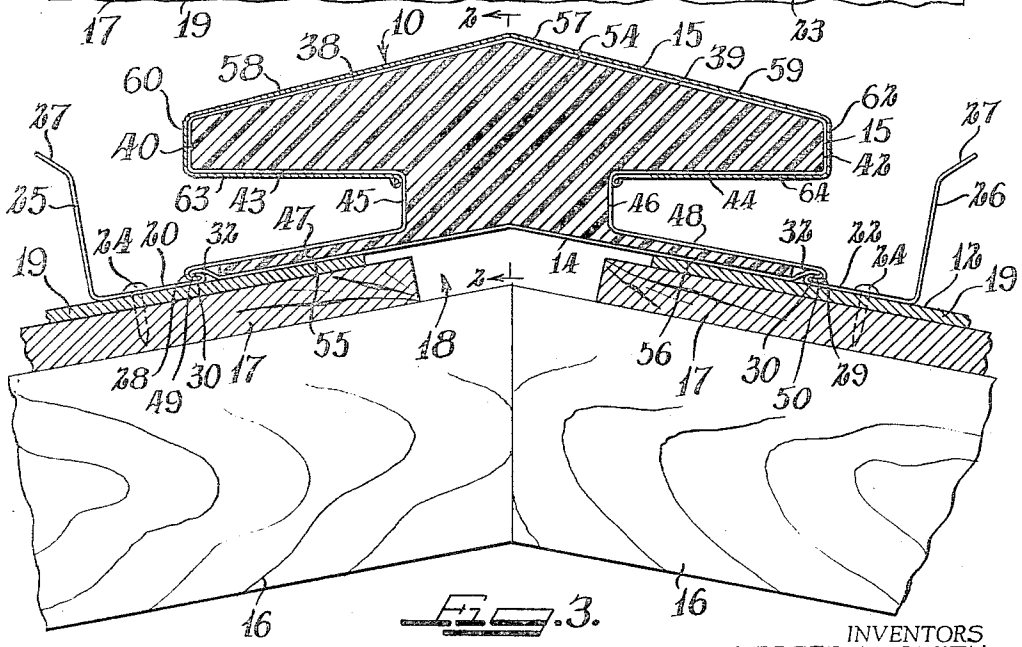


Fig. 3.

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Fig. 4.

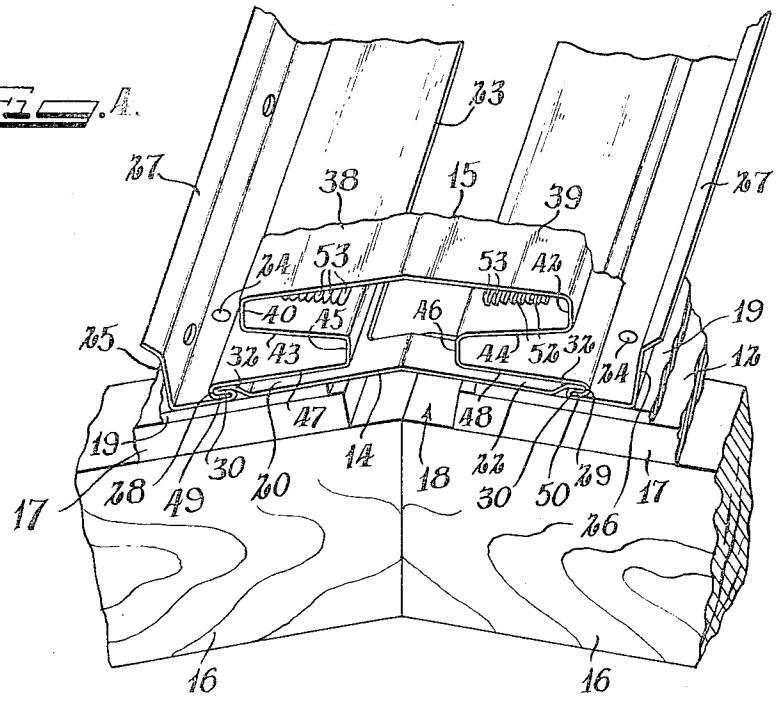
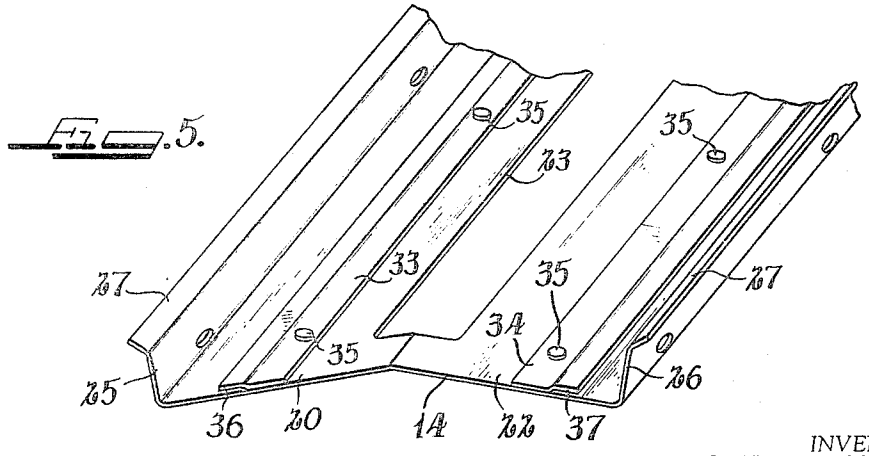


Fig. 5.



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ROOF RIDGE VENTILATOR

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9 Claims. (Cl. 98—42)

This invention relates to roof ridge ventilators, and more particularly to such ventilators which are made of a plurality of readily fabricated parts and adapted to both low cost production and ease and rapidity of installation.

One of the objects of this invention is to provide a roof ridge ventilator having a flashing plate adapted to be secured to a building roof and which serves as a mounting for retaining the rest of the ventilator in place.

As another object, this invention has within its purview the provision of a roof ridge ventilator including an anchor part which is readily and easily securable in place on a roof and which has thereon means to which the rest of the ventilator is quickly and easily attachable.

This invention additionally comprehends the provisions of a plural part ridge ventilator embodying parts which promote ease of manufacture, mounting and assembly, and which, when installed and assembled, have ventilating effectiveness comparable to a unitary structure.

Other objects and advantages of the invention will be apparent from the following description and the accompanying drawings in which similar characters of reference indicate similar parts throughout the several views.

FIG. 1 is a fragmentary perspective view showing an installation of a preferred embodiment of the roof ridge ventilator of this invention mounted on a roof, which view depicts an exemplary and typical installation embodying our invention;

FIG. 2 is a fragmentary longitudinal sectional view of a preferred embodiment of our roof ridge ventilator, wherein the section is taken substantially as indicated by lines 2—2 in FIGS. 1 and 3;

FIG. 3 is a fragmentary end elevational view of the ventilator shown in FIGS. 1 and 2, and illustrating the manner of application of the ventilator to a roof;

FIG. 4 is a fragmentary perspective view of the ventilator illustrated in FIGS. 1, 2 and 3; and

FIG. 5 is a fragmentary perspective view of a modified part of one element of the ventilator structure herein disclosed.

In the exemplary embodiments of this invention which are shown in the accompanying drawings for illustrative purposes, a roof ridge ventilator **10** is mounted on, and extends along the ridge of a roof **12** of a building **13**. Such ventilators are often, but not always, used in conjunction with soffit ventilators to provide for ventilation or circulation of air through the space in a building which is immediately below the roof. In order to provide for ease and speed of installation, thereby to minimize the installation labor cost, the ventilator **10** of this application is made in two parts, which parts are a flashing plate **14** and air vent part **15**. These two parts are adapted to quick and ready assembly after the flashing plate **14** is secured to the roof **12**.

As shown in FIGS. 3 and 4, a conventional roof has rafters **16** which extend laterally of the roof and are adjoined at the roof ridge. Roofing boards **17** extend longitudinally of the roof, across the rafters **16**, and at the ridge of the roof a space **18** is provided between the roofing boards which serves as an air passage to the space below the roof and which is covered by the roof ridge ventilator **10**. Shingles **19** are secured to the exterior surface of the roofing boards **17** and cover those boards from end to end of the roof and from the lateral edges of the roof to positions near the opening **18**.

In the disclosed structure, the flashing plate **14** has side portions **20** and **22** in obtuse angular relationship to one another and which conform to the angularity of the two sides of the roof **12**. This flashing plate, as shown in FIG. 4, has a series of open slots **23** therein, which slots extend longitudinally mid-region of the flashing plate on both sides of the roof ridge line and from positions near the ends thereof. Connecting webs desirably extend across the slots at positions conforming substantially to the spacing of rafters to afford reinforcement to the structure. This flashing plate **14** is secured to the top surface of the roof by fastening means, such as nails **24**, at spaced positions therealong, and so that the ridge line thereof coincides with that of the roof. In this position, the slots **23** in the flashing plate communicate with the space **18** between the roofing boards to provide for the flow of air through the ventilator from the space below the roof. At the opposite outer extremities of the flashing plate, flanges **25** and **26** extend upwardly therefrom to provide baffles which influence the flow of air to and from the ventilator. In the disclosed structure, the baffles are integral with the flashing plate and each baffle has an upper flange portion **27** which extends outwardly in obtuse angular relationship to the rest of the baffle and extends along the top margin thereof.

In order to provide for the releasable and rapid securement of the air vent part **15** of the ventilator to the flashing plate and to retain those parts of the ventilator in assembled relationship in an installation, flanges **28** and **29** are provided on opposite sides of the flashing plate, outwardly of the slots **23** and inwardly of the flanges **25** and **26**, which flanges **28** and **29** extend longitudinally of the flashing plate in substantially parallel relationship to one another. The flanges **28** and **29** have lower surfaces which are spaced from the upper surface of the flashing plate and are generally parallel thereto.

In the preferred embodiment of this invention which is shown in FIGS. 3 and 4, the flanges **28** and **29** are integrally formed in the flashing plate. In the form illustrated, portions **30** and **32** of the material of the flashing plate which extend longitudinally of the plate and are spaced between the slots **23** and the flanges **25** and **26** are folded together to provide a double thickness of the flashing plate material projecting transversely of the general planes of the flashing plate, and this double thickness of material is formed by bending to provide the oppositely and outwardly projecting flanges **28** and **29**.

In the form illustrated in FIG. 5, the structure of the flashing plate is modified by the securement of the formed strips **33** and **34** to the upper surfaces of opposite sides of the flashing plate by fastening means, such as rivets or spot welds **35** to provide outwardly and oppositely projecting flanges **36** and **37**. The strips **33** and **34** are formed so that the general planes of the flanges **36** and **37** are offset from the general planes of the rest of the strips, whereupon the flanges **36** and **37** are normally in spaced and opposed relationship to the upper surfaces of the flashing plate.

Both the flashing plate **14** and the air vent part **15** are made to be symmetrical with respect to a longitudinal central plane, which plane, when the ventilator is installed, coincides with the ridge line of the roof. In the disclosed structure, the air vent part **15** of the ventilator has top cover portions **38** and **39** in obtuse angular relationship to one another on the opposite sides of the aforementioned central plane. On opposite sides of the air vent part, side walls **40** and **42** are adjoined to the outer extremities of the top cover portions **38** and **39** respectively and extend downwardly therefrom. Panels **43** and **44** are adjoined to, and extend inwardly from the lower ends of the side

walls 40 and 42. The panels 43 and 44, on opposite sides of the air vent part 15, are in spaced and opposed relationship to the top cover portions 38 and 39 respectively. The lower side walls 45 and 46 are adjoined to and extend downwardly from the inner extremities of the panels 43 and 44. These lower side walls 45 and 46 are in spaced and opposed reationship to one another and define a throat for the passage of air through the ventilator. The top cover portions, panels and side walls constitute a top portion of the air vent part, while a base portion of the air vent part is provided by flashing elements 47 and 48 which are adjoining to and extend outwardly from the lower side walls 45 and 46 in obtuse angular relationship to one another. Along the outer extremities of the flashing elements 47 and 48, return bent flanges 49 and 50 are integrally formed thereon to interfit with the flanges 28 and 29 to form a releasable and weather tight connection between the air vent part and the flashing plate and to hold the air vent part in position on the flashing plate when installed.

Each of the panels 43 and 44 has vent openings 52 therein to provide for the passage of air to or from the ventilator, thereby affording communication for the flow of air between the inside and outside of the building. In the disclosed structure, the vent openings are arranged in rows extending laterally of the ventilator panels and such rows are adjacent one another longitudinally of the ventilator. Each of the vent openings 52 has a louver 53 extending thereover to provide protection from the passage of snow or rain into the ventilator from the outside. To be most effective for their intended purpose, the louvers are integrally formed from the material of the panels and on each side of the ventilator, the louvers extend upwardly and laterally outwardly of the ventilator.

As may be readily understood with respect to the structure of the ventilator as thus far described, the flashing plate 14 is first secured to a shingled roof, so that the slot 23 therein is aligned with the space 18 between roofing boards and so that the flashing plate is symmetrically disposed with respect to the ridge line of the roof. Each flashing plate may be flexed sufficiently to conform to the pitch of the roof upon which it is mounted, without altering the assembly or relationships of the parts of the ventilator. After the flashing plate is secured in place, the air vent part or parts of the ventilator are mounted thereon by either effecting engagement of the respective mounting flanges at end portions thereof, and then sliding the air vent part along the flashing plate until it is in a desired position, or by flexing the air vent parts sufficiently to spread the base portions to effect engagement between the respective mounting flanges.

When a plurality of lengths of flashing plates are required to extend the full length of a roof, adjacent flashing plates may be secured in position by abutting adjacent ends of the flashing plates and securing those abutted ends in position and to the roof by nails. When, however, a plurality of lengths of the air vent part are required to extend the full length of a roof, a plug 54 of a relatively flexible material, such as a suitable plastic, is fitted into the ends of adjacent air vent parts which are to be adjoined together in abutted relationship, as shown in FIGS. 2 and 3. The plug 54 conforms to the interior contour of the air vent ports and has side flanges 55 and 56 thereon which extend outwardly between the flashing elements 47 and 48 of the air vent part and the opposite sides of the flashing plate. Such plugs are also used to close the ends of a ventilator adjacent the ends of a building.

Then, to afford additional protection and assurance against leakage, a cap 57 is placed over the abutted ends of adjacent air vent parts and extends for a short distance on each side of the butt joint. This cap 57, as shown in FIG. 3, has top cover portions 58 and 59, side wall portions 60 and 62 and panel portions 63 and 64 which fit snugly over and engage the top cover portions 38 and 39, the side walls 40 and 42 and the panels 43 and 44 respectively of the air vent part. Such caps may be put onto the air vent parts of the ventilator from one end and slid on the ventilator until the desired position is reached.

From the foregoing description and by reference to the accompanying drawings, it may be understood that by the structure disclosed herein, we have provided a roof ridge ventilator which is adapted to fabrication in two parts and which is readily mountable on a roof by securing the flashing plate in position on the roof and then attaching thereto the air vent part. It may also be readily understood that the disclosure embodies weather tight joints and has parts constructed and arranged to afford adequate ventilation with good weather protection.

While we have illustrated a preferred embodiment of our invention, many modifications may be made without departing from the spirit of the invention, and we do not wish to be limited to the precise details of construction set forth, but desire to avail ourselves of all changes within the scope of the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. A roof ridge ventilator comprising, in combination, a flashing plate having integrally connected generally planar side portions in angular relationship to one another and having a segmented vent slot extending longitudinally of the mid-region thereof, retaining means extending longitudinally of the lateral mid-regions of the upper surfaces of said generally planar side portions of the flashing plate on opposite sides of the vent slot, an air vent part having top and base portions, said top portion having vent openings therein at positions providing weather protection, and said base portion including generally planar base flanges of a width to overlie portions of said flashing plate on opposite sides of said vent slot and projecting angularly away from one another, said base flanges having thereon return-bent marginal portions which co-act with said retaining means releasably to hold the air vent part in place on the flashing plate with said vent openings in communication with said vent slot.

2. A roof ridge ventilator as defined in claim 1 and wherein said retaining means is integrally formed in the lateral mid-region of each of the side portions of the flashing plate.

3. A roof ridge ventilator as defined in claim 1 and wherein said retaining means comprises formed strip-type elements having laterally displaced portions in planes offset from one another and secured to the lateral mid-regions of opposite side portions of the flashing plate.

4. A roof ridge ventilator as defined in claim 1 and wherein said retaining means includes lips projecting in opposite directions at positions spaced above the mid-regions of the side portions of the flashing plate, said means on the base portion of the air vent part including lips spaced below opposite sides of the base portion and projecting oppositely to those on the flashing plate, and said lips on the air vent part and the flashing plate releasably engaging in overlapping relationship.

5. A roof ridge ventilator for mounting on a roof having an open slot extending along the ridge thereof and comprising, in combination, a flashing plate having laterally adjoined and generally planar side portions in obtuse angular relationship to one another for securement to the roof on opposite sides of the ridge and slot and having openings in the mid-region thereof aligned with the open slot in the roof for the flow of air therethrough, a weather protected ventilating part having laterally opposed halves resiliently separable from predetermined relative positions and including generally planar bottom mounting flanges for mounting on the flashing plate in partially overlapping relationship thereto and with said ventilating part over said opening and in air-flow communication therewith, and interfitting means extending along the flashing plate at positions laterally outward of said openings and along the outer margins of the bottom mounting flanges on the ven-

tilating part providing weather-tight releasable connections between said flashing plate and said ventilating part and normally biased by the resilience of said ventilating part for retaining the ventilating part in place on the flashing plate.

6. A roof ridge ventilator as defined in claim 5 and wherein said interfitting means comprises portions of channel section which extend along opposite side regions of the ventilating part and flashing plate and have planar flange portions which engage and overlap one another.

7. A roof ridge ventilator as defined in claim 5, and wherein said interfitting means comprises flanges projecting laterally outwardly over portions of the upper surface of the lateral mid-regions of the side portions of said flashing plate on opposite sides of said opening, and flanges projecting laterally inwardly of opposite sides of said bottom mounting flanges of said ventilating part and resiliently biased to positions for engagement in overlapping relationship with said flanges on the flashing plate.

8. In a roof ridge ventilator, a flashing plate comprising a length of sheet material having connected generally planar side portions in obtuse angular relationship to one another, an opening extending longitudinally of the mid-region of the sheet material and partially in each side portion thereof for the passage of air, and means including flange elements laterally outward of the opening in each side portion and closely adjacent the general plane thereof for effecting attachment of a weather protected ventilating part to the flashing plate.

9. In a roof ridge ventilator, a top air vent part for use with a separate flashing plate and having top and base portions and a predetermined sectional shape which is symmetrical about a longitudinal central plane with segments on opposite sides of said central plane resiliently adjoined and biased to predetermined relative positions from which said base portions are movable away from one another against said resilient bias, said top portion of the air vent part having vent openings therein on opposite sides of said central plane at positions sheltered from falling rain and snow, and said base portion having opposed in-turned flanges extending longitudinally of opposite side margins thereof and urged to predetermined positions of separation by said bias for holding said top air vent part in place on the flashing plate.

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MEYER PERLIN, *Primary Examiner.*