March 18, 1952 E. F. BOWERS 2,589,529

ADJUSTABLE LOUVER VENTILATOR

Filed March 15, 1951 3 Sheets-Sheet 1

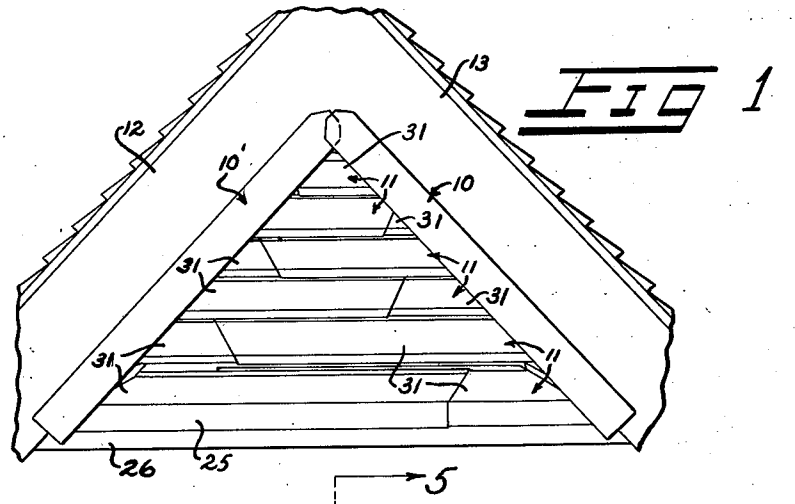


FIG 1

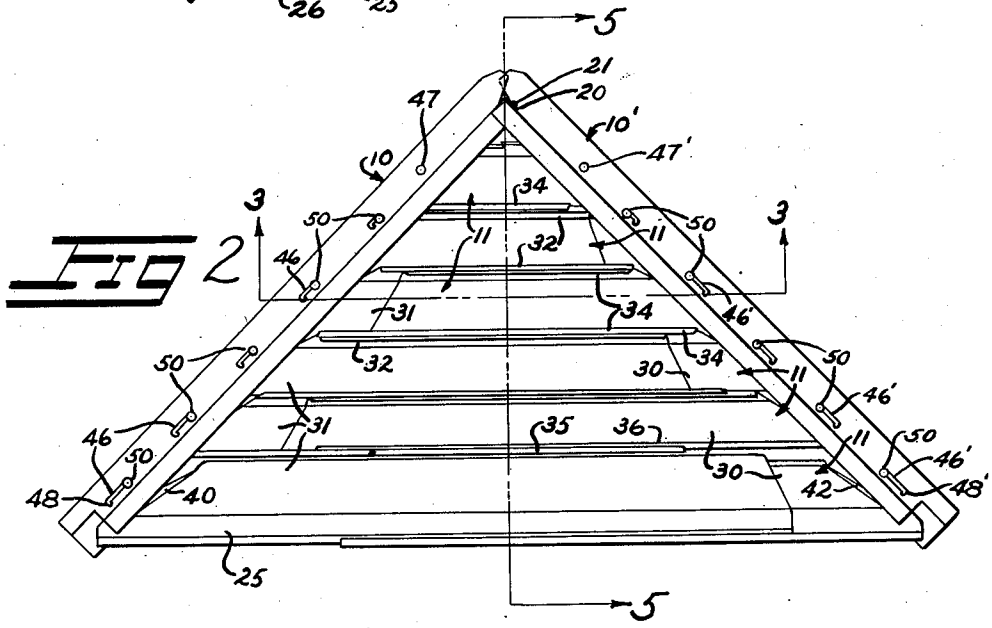


FIG 2

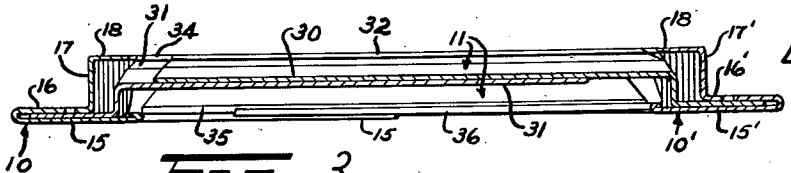


FIG 3

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March 18, 1952 E. F. BOWERS 2,589,529

ADJUSTABLE LOUVER VENTILATOR

Filed March 15, 1951 3 Sheets-Sheet 2

FIG 4

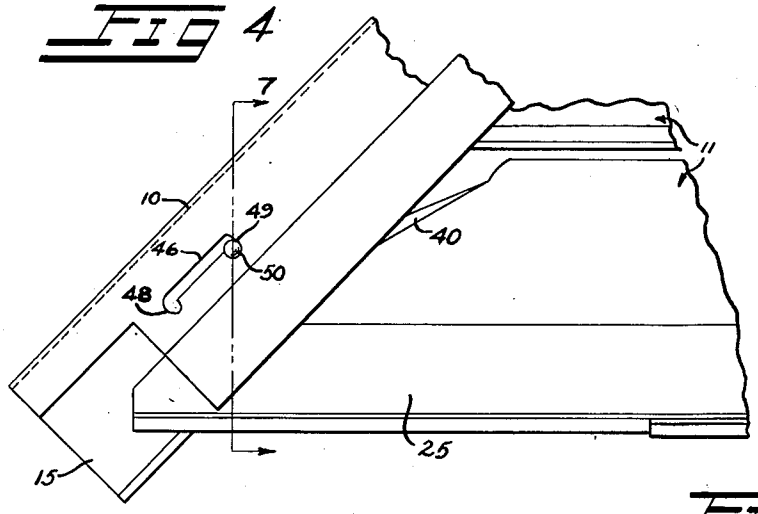


FIG 5

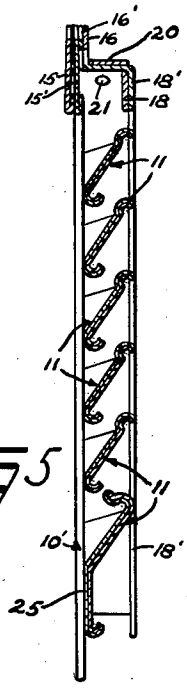


FIG 6

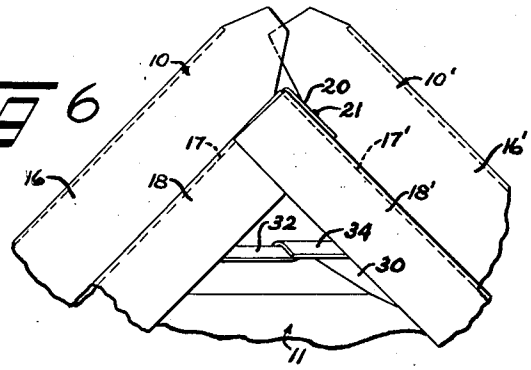


FIG 7

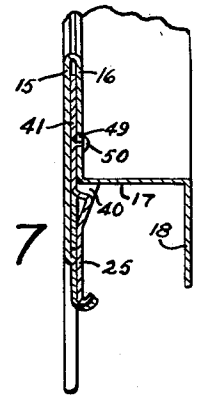
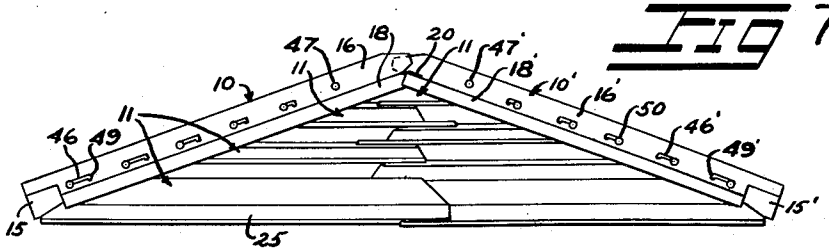


FIG 8



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March 18, 1952 E. F. BOWERS 2,589,529

ADJUSTABLE LOUVER VENTILATOR

Filed March 15, 1951 3 Sheets-Sheet 3

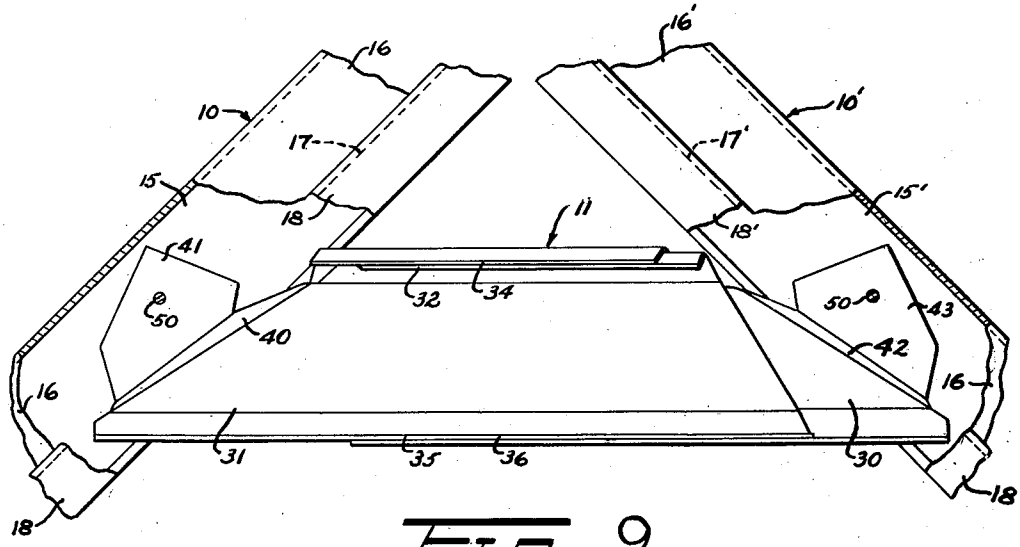


Fig 9

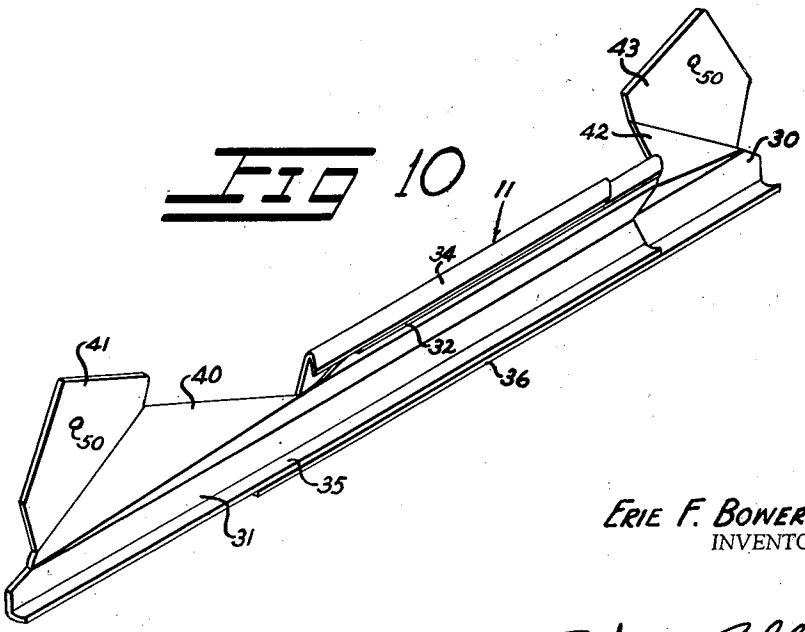


Fig 10

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UNITED STATES PATENT OFFICE

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ADJUSTABLE LOUVER VENTILATOR

Erie F. Bowers, Albemarle, N. C.

Application March 15, 1951, Serial No. 215,769

9 Claims. (Cl. 160—223)

1

This invention relates to an adjustable ventilator having a plurality of louvers and more especially to an inverted V-shaped ventilator adapted to be installed in a wall of a building and the like adjacent the apex or ridge portion of a gable roof.

It is an object of this invention to provide a ventilator having two side frames adjustably secured to each other thereby forming an inverted V and having means for changing the angle of pitch between the side frames. The side frames are connected by a plurality of transverse louvers and said louvers are telescopic to permit the same to be extended or contracted to vary the length of the same as the angle of pitch of the side frames is varied. These louvers are pivotally and slidably mounted in the side frames to permit the space between the louvers to be changed or varied upon the pitch of the side frames being varied accordingly.

It is another object of this invention to provide a ventilator comprising a V-shaped frame pivoted at its apex and having a plurality of sectional extensible and contractible louvers pivotally connected to said V-shaped frame and said louvers also being slidably mounted in said frame to permit the space between said louvers to be varied upon the angle of pitch of the frame being varied and said pivotal and slidable mounting comprising said frame having a plurality of bayonet slots therein and said louvers having pins adapted to fit in said bayonet slots to permit the louvers to be adjusted relative to each other and to said V-shaped frame.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds when taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of the improved adjustable ventilator showing the same installed at the apex of a roof;

Figure 2 is an enlarged rear elevation of the ventilator shown in Figure 1 but showing the same disassociated from the roof;

Figure 3 is a horizontal sectional view through the improved ventilator looking up along the line 3—3 in Figure 2;

Figure 4 is an enlarged fragmentary elevation of the lower left-hand portion of Figure 2 and illustrating the manner in which the louvers are slidably and pivotally mounted in the V-shaped frames;

Figure 5 is a vertical sectional view through the improved ventilator taken along the line 5—5 in Figure 2;

2

Figure 6 is an enlarged fragmentary elevation of the upper center or apex portion of the ventilator shown in Figure 2;

Figure 7 is a vertical sectional view taken along the line 7—7 in Figure 4;

Figure 8 is a rear elevation of the improved ventilator on a reduced scale and showing the same with the V-shaped frame extended to its maximum angle of pitch and showing the louvers adjusted accordingly;

Figure 9 is an enlarged fragmentary elevation of the upper central portion of Figure 2 with parts broken away and illustrating the manner in which the louver is pivotally and slidably mounted between the frame members;

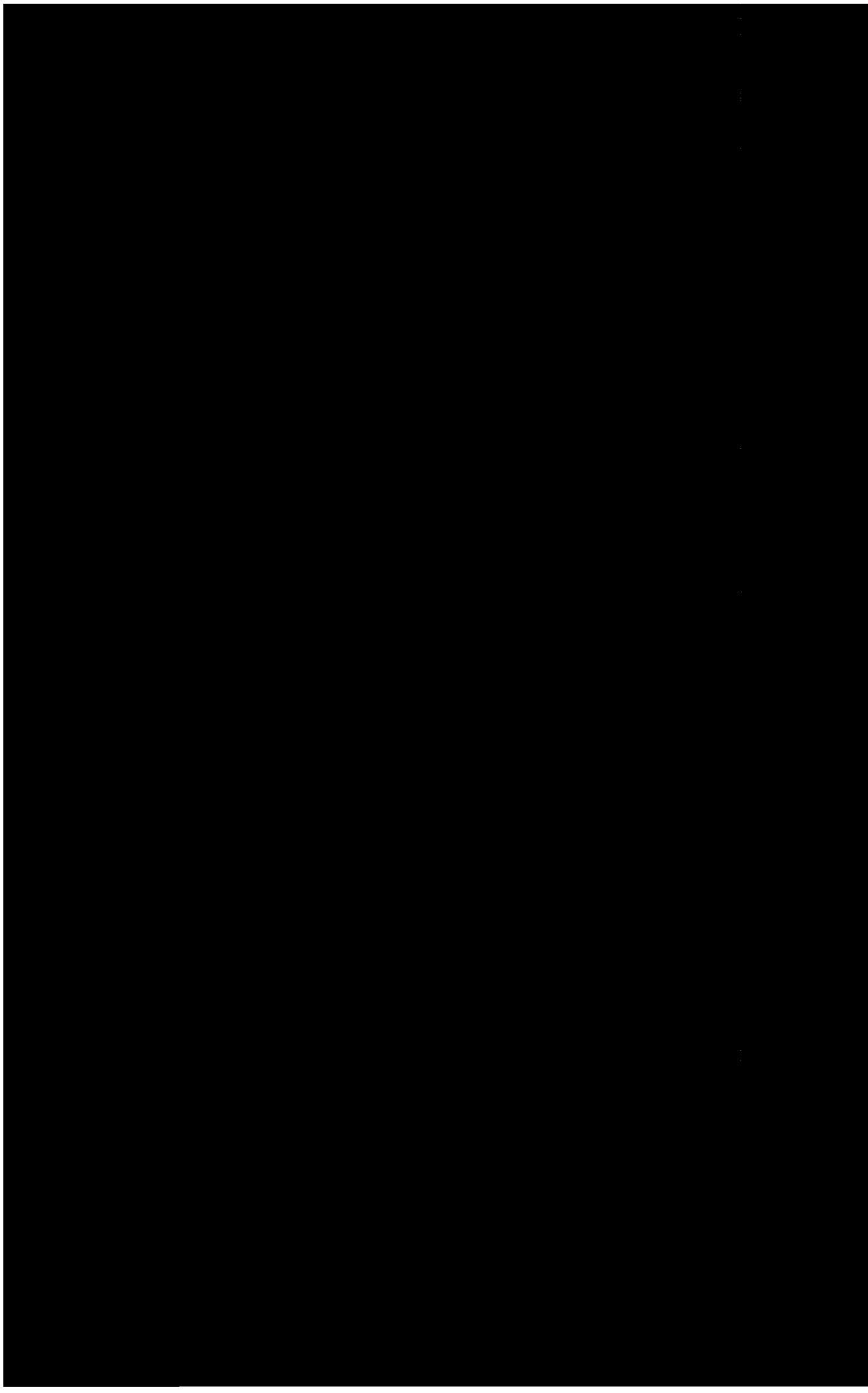
Figure 10 is an enlarged isometric view of one of the louvers showing the same removed from the ventilator.

Referring more specifically to the drawings the numerals 10 and 10' broadly indicate two side frame members of the improved ventilator which are pivotally secured to each other at their upper ends, in a manner to be described, to form an inverted V-shaped frame. This frame is adapted to have a plurality of louvers broadly designated at 11 connected therebetween. The ventilator thus formed is particularly adapted for installation in a wall of a roof or attic portion of a building adjacent the apex of the roof or the rafters supporting the roof such as rafters 12 and 13 as illustrated in Figure 1.

Since both of the side frame members 10 and 10' are identical, except being opposite hand, only the number 10 will be described and like parts of the member 10' will bear the same reference characters with the prime notation added.

The side frame member 10 is preferably formed from relatively thin metal such as sheet aluminum and the like and has a front portion 15 (Figure 3) and an integral rear portion 16 which is bent into parallel closely spaced relation to the front portion 15 and extends substantially half the width of the front portion and then extends at right angles thereto, as at 17, a rear portion 18 extending from the angular portion 17, is spaced in substantially parallel relation to the front portion 15.

It will be observed in Figure 3 that there is a slight space formed between the front portion 15 and the rear portion 16 of the side frame member 10 and this space is provided for reception of the opposed ends of the louvers 11 to be described. The side frame members 10 and 10' are so formed that the front portions 15, 15' will fit over the adjacent rafters 12 and 13 at the apex



gardless of the displacement between the louvers and the apex of the ventilator, to thus permit a smooth flow of ventilation and to provide a ventilator which has a pleasing appearance.

It will thus be observed that there is provided an adjustable ventilator having a V-shaped frame member connected by a plurality of extensible and contractible louvers and said louvers being connected to the V-shaped frame member in such a manner as to permit pivotal and slidable adjustment of the louvers within the frame member so that the louvers may be positioned substantially equi-distant apart regardless of the angle of pitch of the ventilator.

In the drawings and specification, there has been set forth a preferred embodiment of the invention and although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. An improvement in an adjustable ventilator of a type employed in the gable end of a building and having a pair of frame members pivotally interconnected at one end thereof and extending in diverging relation to each other and also having a plurality of telescopic louvers extending between the diverging frame members, said improvement comprising means pivotally and slidably connecting opposite ends of each of the telescopic louvers to the corresponding frame members and means for adjusting the displacement between adjacent louvers in accordance with a variation in displacement between the ends of the frame members remote from the ends which are interconnected.

2. An improvement in a ventilator of a type employed in the gable ends of a building, said ventilator having a pair of frame members being pivotally interconnected at one end thereof and extending in diverging relation to each other and between which a plurality of spaced louvers are disposed, said improvement comprising each of said frame members having a plurality of spaced longitudinally extending slots therein, means on opposite ends of each of the louvers slidably penetrating the corresponding slots in the frame members whereby the telescopic louvers facilitate adjustment of the frame members as to angularity with respect to each other and whereby the slots facilitate adjustment of the louvers as to their displacement between each other.

3. An improved ventilator of a type employed in the wall of a building at the apex of the roof comprising a substantially triangularly-shaped frame including a pair of frame members being pivotally interconnected at their upper ends and extending downwardly in diverging relation to each other, each of the downwardly diverging frame members having a plurality of longitudinally extending spaced slots therein and each of the slots being enlarged at opposed ends thereof, a plurality of telescopic louvers having tab portions on opposite ends thereof and said tab portions closing the slots on said corresponding frame members, a headed pin at opposite ends of each of said telescopic louvers and extending through the corresponding longitudinally extending slots in the frame members whereby, upon the frame members being disposed at a relatively acute angle with respect to each other, the headed pins on the telescopic louvers may be disposed in one of the enlarged ends of associated slots and, upon the frame members being disposed at a relatively obtuse angle relative to each other, the pins on opposite ends of the telescopic louvers may be disposed in the other enlarged ends of said slots to thus vary the displacement between adjacent louvers in accordance with the angularity of the frame members with respect to each other.

4. An improved ventilator comprising an inverted V-shaped frame including a pair of pivotally interconnected and downwardly diverging side frame members, each of the side frame members having a front wall and a rear wall disposed in closely spaced relation to each other, a plurality of telescopically constructed vertically spaced louvers disposed between said frame members, each end of each telescopically constructed louver having a relatively thin tab portion thereon disposed between the front and rear walls of the corresponding side frame members, each of the side frame members having a longitudinally extending slot therein coinciding with the corresponding tab portion of each corresponding louver and a headed pin projecting through and slidable in said slot and penetrating the corresponding tab portion of the louver to thus pivotally and slidably connect opposed ends of the louvers to the corresponding frame members whereby, upon relative movement between the lower ends of the side frame members, the louvers may be adjusted relative to each other to provide a substantially uniform displacement therebetween.

5. An improved ventilator comprising an inverted V-shaped frame including a pair of pivotally interconnected and downwardly diverging side frame members, each of the side frame members having a front wall and a rear wall disposed in closely spaced relation to each other, a plurality of telescopically constructed vertically spaced louvers disposed between said frame members, each end of each telescopically constructed louver having a relatively thin tab portion thereon disposed between the front and rear walls of the corresponding side frame members, each of the side frame members having a longitudinally extending slot therein coinciding with the corresponding tab portion of each corresponding louver, a headed pin projecting through said slot and slidably penetrating the corresponding tab portion of the louver to thus pivotally and slidably connect opposed ends of the louvers to the corresponding frame members and the slots in each of the side frame members being enlarged at opposite ends thereof whereby, upon said frame members being disposed at a relatively acute angle relative to each other, each of the headed pins may be disposed in one of the enlarged ends of each of the corresponding slots in the side frame members and whereby, upon the side frame members being disposed at a relatively less acute angle relative to each other, the pins may be disposed in the other of the enlarged ends of each of the corresponding slots in the side frame members to provide a substantially uniform displacement between adjacent louvers and whereby the enlarged ends of the slots will prevent unintentional displacement of the louvers relative to each other upon said louvers being adjusted to a desired position relative to the side frame members.

6. An improved ventilator for the gable ends of a building comprising an inverted V-shaped frame including a pair of side frame members, means pivotally interconnecting the upper ends

of the side frame members, each of the side frame members including a front wall which extends outwardly and which is bent upon itself to form a rear wall and which then extends inwardly at substantially right angles to the rear wall and again extends at right angles and wherein the last-named right-angular portions of the side frame members extend toward each other, a plurality of angularly disposed vertically spaced telescopic louvers disposed between the side frame members and being surmounted by the side frame members, each of the telescopic louvers having a tab portion on each end thereof, the rear wall of each of the side frame members having a plurality of longitudinally spaced and longitudinally extending slots of varying length therein, the opposite ends of each of the slots being enlarged substantially and headed pins severally slidably and pivotally penetrating said slots and the corresponding tab portion on each end of each louver to thereby facilitate relative adjustment between the louvers and between the side frame members.

7. An improved ventilator for the gable ends of a building comprising an inverted V-shaped frame including a pair of side members, means pivotally interconnecting the upper ends of the side frame members, each of the side frame members including a front wall which extends outwardly and which is bent upon itself to form a rear wall and which then extends inwardly at substantially right angles to the rear wall and again extends at right angles and wherein the last-named right-angular portions of the side frame members extend toward each other, a plurality of angularly disposed vertically spaced telescopic louvers disposed between the side frame members and being surmounted by the side frame members, each of the telescopic louvers having a tab portion on each end thereof, the rear wall of each of the frame members having a plurality of longitudinally spaced and longitudinally extending slots therein, said slots being of progressively greater length from the uppermost of the slots to the lowermost of the slots in each of the side frame members, the opposite ends of each of the slots being enlarged substantially and headed pins severally slidably and pivotally penetrating said slots and the corresponding tab portion on each end of each louver to thereby facilitate relative adjustment between the louvers and between the side frame members.

8. An improved ventilator for the gable ends of a building comprising an inverted V-shaped frame including a pair of side frame members, means pivotally interconnecting the upper ends of the side frame members, each of the side frame members including a front wall which extends outwardly and which is bent upon itself to form a rear wall and which then extends inwardly at substantially right angles to the rear wall and again extends at right angles and wherein the last-named right-angular portions of the side frame members extend toward each other, a plurality of angularly disposed vertically spaced telecopic louvers disposed between the side frame members and being surmounted by the side frame members, each of the telescopic louvers having a tab portion on each end thereof, the rear wall of each of the frame members having a plurality of longitudinally spaced and longitudinally extending slots therein, said slots being of progressively greater length from the uppermost of the slots to the lowermost of the slots in each of the side frame members and a headed pin slidably penetrating each of said slots and the corresponding tab portion on each end of each louver to thereby permit relative adjustment between the louvers and between the side frame members.

9. An improved adjustable ventilator comprising a V-shaped frame pivoted at the apex thereof and having a plurality of transverse telescopic louvers extending between the legs thereof and having the opposite ends thereof pivotally and slidably connected to the legs of said V-shaped frame, and said connection being a pin and slot connection to permit the displacement between said louvers to be adjusted relative to the divergence of the legs of said V-shaped frame.

ERIE F. BOWERS.

REFERENCES CITED

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

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Number	Name	Date
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