Feb. 17, 1953 R. L. LEIGH 2,628,551

ROOF VENTILATOR

Filed July 24, 1950 2 SHEETS—SHEET 1

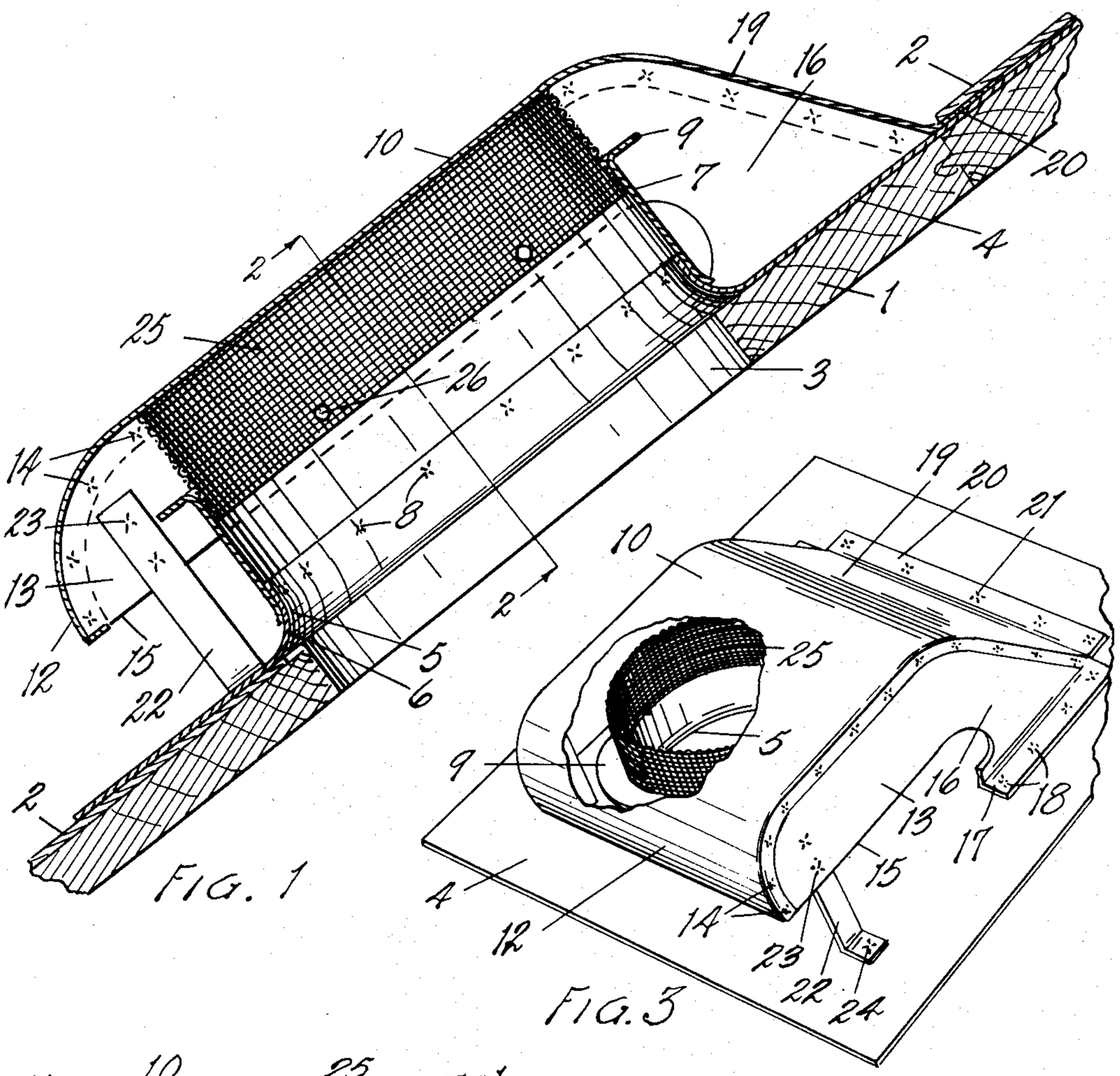

FIG. 1

FIG. 3

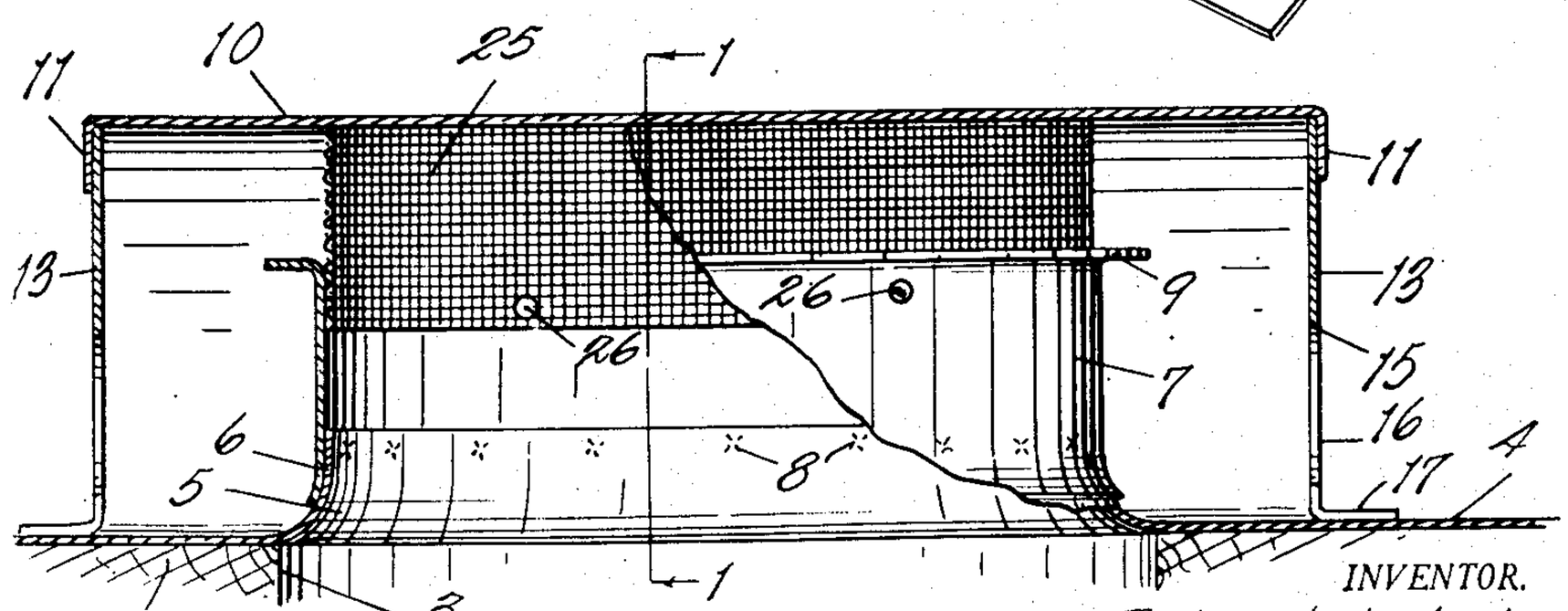

FIG. 2

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ROOF VENTILATOR

Filed July 24, 1950 2 SHEETS--SHEET 2

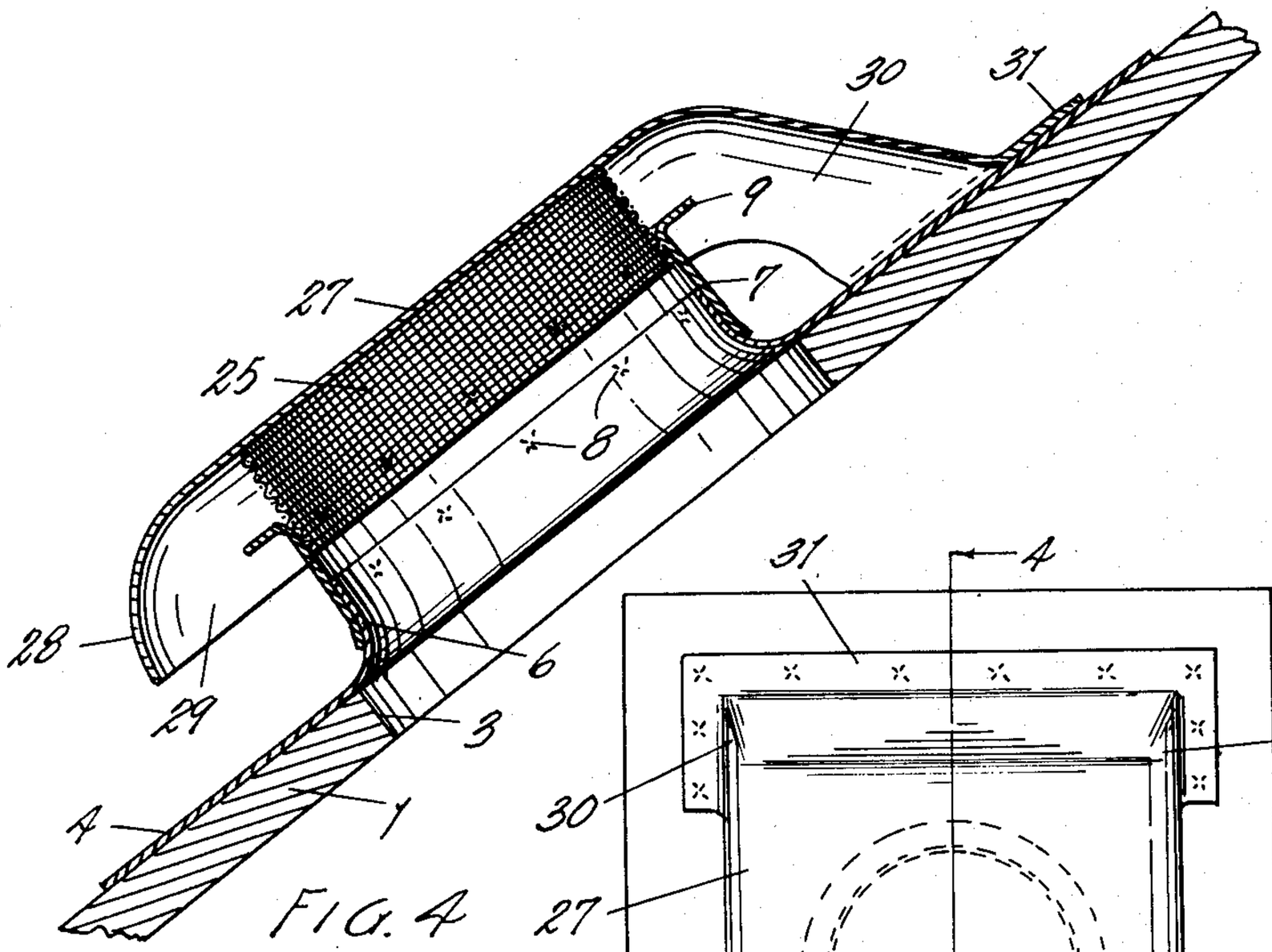

FIG. 4

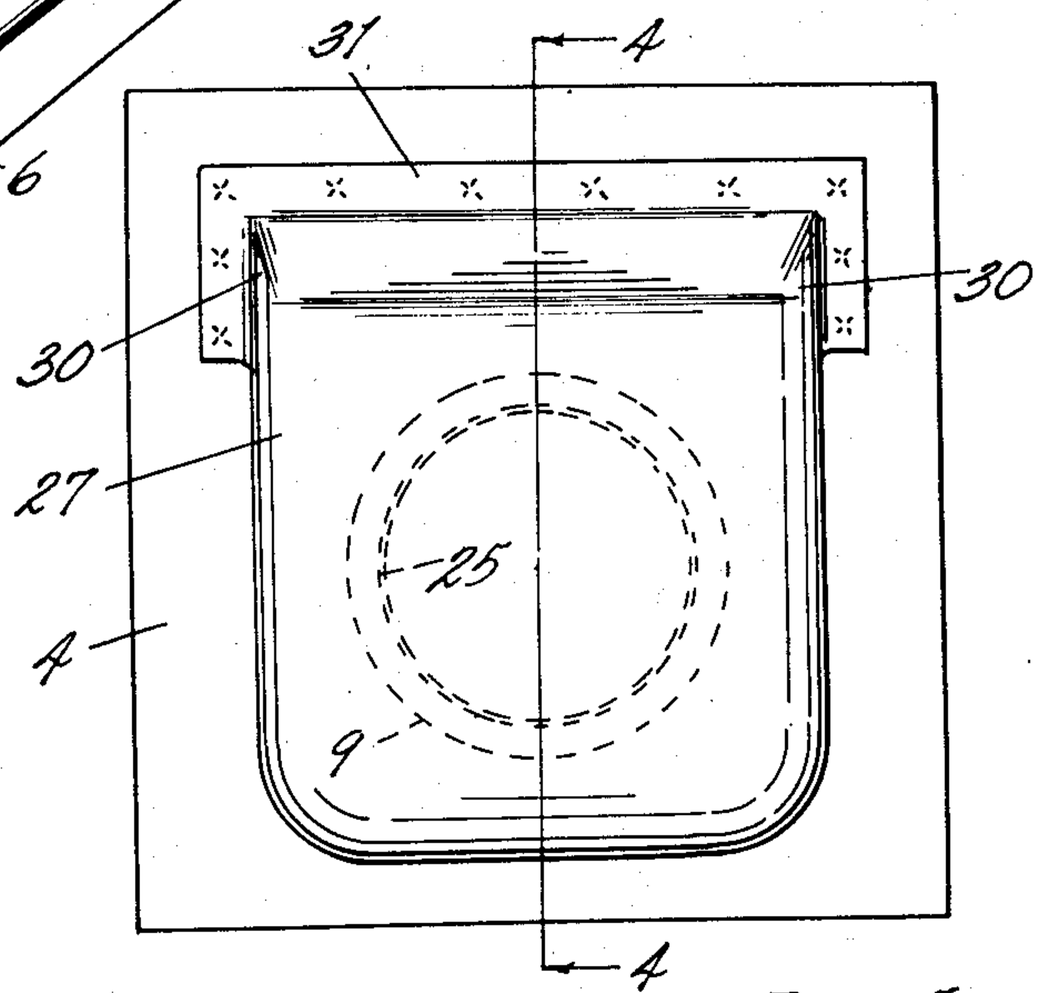

FIG. 5

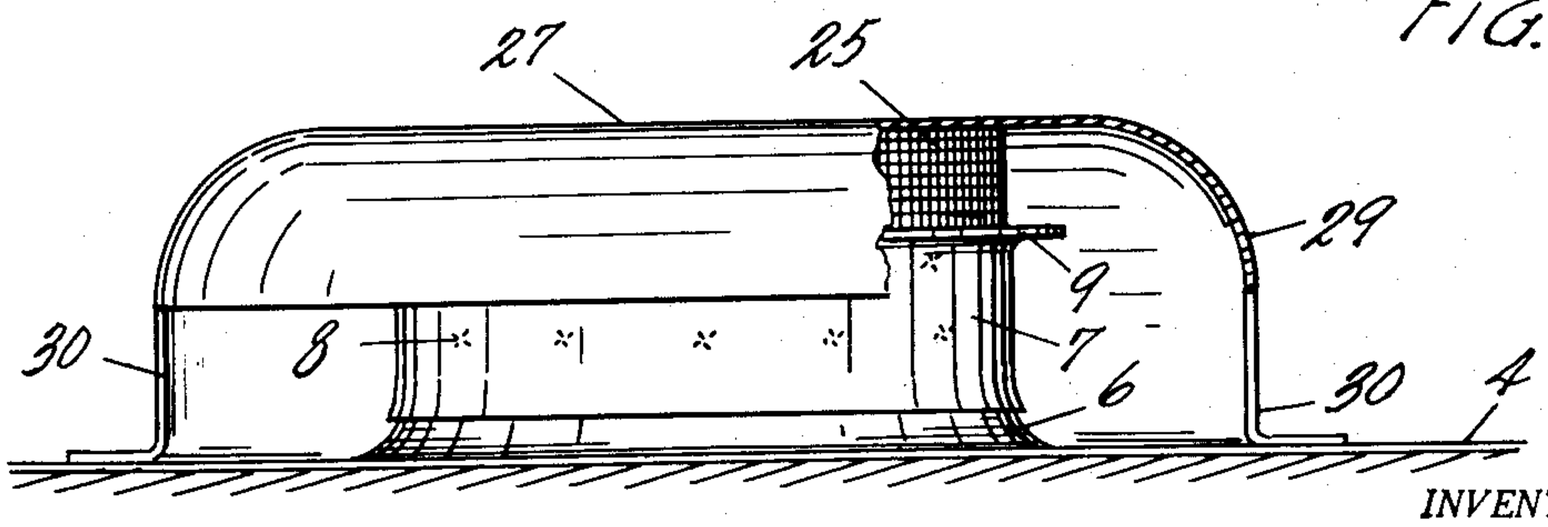

FIG. 6

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ROOF VENTILATOR

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Application July 24, 1950, Serial No. 175,548

14 Claims. (Cl. 98—42)

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This invention relates to improvements in a roof ventilator.

The main objects of this invention are:

First, to provide a roof ventilator which is highly efficient and at the same time is effective in preventing the entrance of water and snow to the space ventilated through the vent of the ventilator and largely eliminating indrafts.

Second, to provide a roof ventilator in which the wind from different directions tends to cause a suction or siphoning effect in the ventilator vent rather than to induce an inward current.

Third, to provide a roof ventilator which is of large ventilating capacity in proportion to its size.

Fourth, to provide a roof ventilator having these advantages which is economical in its parts and assembly and is watertight.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a vertical longitudinal section on a line corresponding to line 1—1 of Fig. 2 showing the ventilator in installed position.

Fig. 2 is a transverse section on a line corresponding to line 2—2 of Fig. 1.

Fig. 3 is a top perspective view with portions broken away.

Fig. 4 is a fragmentary longitudinal section of a modified form or embodiment of my invention taken on a line corresponding to line 4—4 of Fig. 5.

Fig. 5 is a plan view of the modified form shown in Fig. 4.

Fig. 6 is a fragmentary view partially in transverse section of said modified form.

In the accompanying drawing 1 represents roof boards and 2 shingles. The roof is provided with an opening 3 over which the ventilator is installed. The embodiment of my invention illustrated in Figs. 1, 2 and 3 comprises a plate-like base member 4 constituting a flashing and having a vent opening 5 therein surrounded by an annular upstanding flange 6, this flange being drawn from the base member. The vent opening 5 is located so that portions of the base member project in all directions therefrom. The annular baffle 7 is sleeved upon or embraces the flange 6 and is integrally connected thereto desirably by spot welds as indicated at 8. This baffle preferably has an outturned annular flange 9 at its upper end.

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In the embodiment illustrated in Figs. 1 to 3, inclusive, I provide a hood consisting of the top 10 having downturned side flanges 11. The front end of the top is curved downwardly at 12 and extends below the plane of the top of the baffle. Hood side members 13 are disposed on the inner sides of the flanges 11 and fixedly secured thereto desirably by welds as indicated at 14. The lower edge portions 15 of these hood side members are substantially spaced from the base but extend below the top of the baffle member. These side members have downward extending rear portions 16 which constitute supporting brackets terminating in outturned flanges 17 welded to the base member at 18. The top 10 extends downwardly at 19 and terminates in a flange 20 which is welded to the base plate at 21. Struts or supporting brackets 22 are secured to the inner sides of the sides 13 of the hood and to the base plate as indicated at 23 and 24.

An annular screen 25 is disposed within the baffle member to close the space between the baffle and the hood. The main purpose of this screen is to prevent insects entering the ventilated space through the ventilator. The screen is desirably secured by the fastenings or spot welding at 26 and being arranged within the baffle is effectively supported. With this arrangement wind or drafts of air from the front or sides and to a very considerable extent from the rear or from various angular relations tend to promote a suction or draft through the vent as it flows over the baffle.

In the modification shown in Figs. 4, 5 and 6 the hood 27 is a one-piece stamping and it is provided with a downturned front 28, depending sides 29 and bracket portions 30 and rear flanges 31 which are attached to the base plate substantially as in the embodiment illustrated in Figs. 1 to 3. The advantage of the embodiment shown in Figs. 4 to 6, inclusive, is that there are fewer parts to assemble but the die equipment and material is presently somewhat more expensive than that required for the embodiment shown in Figs. 1 to 3, inclusive. It will be observed that it is not necessary to have watertight joints between the hood and the base plate as water entering around the baffle is effectively excluded by the baffle. The outturned flange 9 on the baffle prevents water being carried into the baffle even under severe weather conditions.

The embodiments of my invention illustrated are highly efficient in that they are effective in inducing draft currents through the vent under various conditions of wind direction and other

weather conditions and backdrafts or inflow currents are very unlikely to occur.

I have illustrated and described my invention in two highly practical embodiments thereof. I have not attempted to illustrate or describe other embodiments or adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

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

1. A roof ventilator comprising a plate-like base member having a vent opening spaced from its edges and an integrally formed upwardly projecting continuous annular flange surrounding the opening, an annular baffle member embracing and integrally associated with said flange, a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downwardly curved front end spaced from the baffle member and a downwardly and rearwardly inclined rear end terminating in an attaching flange fixedly secured to said base member, said top member having downturned flanges on its side edges, side members disposed within and fixedly secured to the side flanges on said top member, the side members being laterally spaced from the baffle and the lower edges of the portions of the side members at the sides of the baffle being spaced from the base member, the side members having attaching extensions at their rear ends provided with flanges secured to the base member, the base member extending beyond the hood at the sides, rear and front thereof, and supporting brackets for said hood carried by said base members and secured to the hood side members adjacent their front ends.

2. A roof ventilator comprising a plate-like base member having a vent opening spaced from its edges and an integrally formed upwardly projecting continuous annular flange surrounding the opening, an annular baffle member embracing and integrally associated with said flange, a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downwardly curved front end spaced from the baffle member and a downwardly and rearwardly inclined rear end terminating in an attaching flange fixedly secured to said base member, said top member having downturned flanges on its side edges, side members disposed within and fixedly secured to the side flanges on said top member, the side members being laterally spaced from the baffle and the lower edges of the portions of the side members at the sides of the baffle being spaced from the base member, the base member extending beyond the hood at the sides, rear and front thereof.

3. A roof ventilator comprising a plate-like base member having a vent opening spaced from its edges and an integrally formed upwardly projecting continuous annular flange surrounding the opening, an annular baffle member embracing and integrally associated with said flange and provided with an outturned rim of substantial width at its upper end, and a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downwardly curved front end spaced from the baffle member and a downwardly and rearwardly inclined rear end terminating in an attaching flange fixedly secured to said base member, said top member having downturned flanges on its side edges, side members disposed within and fixedly secured to the side flanges on said top member, the side members being laterally spaced from the baffle and the lower edges of the portions of the side members at the sides of the baffle being spaced from the base member, the base member extending beyond the hood at the sides, rear and front thereof.

4. A roof ventilator comprising a base member constituting a flashing and having a vent opening spaced from its edges and an upwardly projecting continuous annular flange surrounding the opening, an annular baffle member mounted on said flange and provided with an integral outturned rim of substantial width at its upper end, and a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downturned front end spaced from the baffle member and a downwardly and rearwardly inclined rear end secured to said base member in spaced relation to said baffle, said top member having downturned flanges on its side edges, side members laterally spaced from the baffle and disposed within and fixedly secured to the side flanges of said top member, the lower edges of the portions of the side members at the sides of the baffle being spaced from the base member, the side members being secured to the base members at their rear ends, and supporting brackets for said hood carried by said base members and secured to the hood side members adjacent their front ends.

5. A roof ventilator comprising a base member constituting a flashing and having a vent opening spaced from its edges and an upwardly projecting flange surrounding the opening, a baffle member mounted on said flange, and a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downturned front end laterally spaced from the baffle member and a downwardly and rearwardly inclined rear end secured to said base member in spaced relation to said baffle, said top member having downturned flanges on its side edges, side members laterally spaced from the baffle and disposed within and fixedly secured to the side flanges of said top member, the lower edges of the portions of the side members at the sides of the baffle being vertically spaced from the base member to provide side openings to the hood, said top downturned front end being vertically spaced from the base member to provide a front opening to the hood.

6. A roof ventilator comprising a base member constituting a flashing and having a vent opening spaced from its edges and an upwardly projecting flange surrounding the opening, a baffle member mounted on said flange, a hood comprising a top disposed in overhanging spaced relation to said baffle member and having a downturned front end spaced from the baffle member and a downwardly and rearwardly inclined rear end secured to said base member in spaced relation to said baffle, said top member having downturned flanges on its side edges, side members laterally spaced from the baffle and disposed within and fixedly secured to the side flanges of said top member, the lower edges of the portions of the side members at the sides of the baffle being vertically spaced from the base member to provide side openings to the hood, said top downturned front end being vertically spaced from the base member to provide a front opening to the hood, and a screen for the space between the baffle member and the hood top.

7. A roof ventilator comprising a plate-like

base member constituting a flashing and having a vent opening spaced from its edges and an integral upwardly projecting flange surrounding the opening, a baffle member closely embracing and fixedly secured to said flange and provided at its upper end with an annular outturned deflector rim, a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member, the side walls having integral downwardly extending bracket portions at their rear ends secured to the base member and to the downwardly extending rear wall and constituting bracing elements therefor, the top of the hood being vertically spaced upwardly from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base member in approximately the plane of the roof on which the ventilator is installed, the front edges of the said side wall bracket members being at the rear of the baffle member facilitating such flow of air, and a screen arranged within and projecting from said baffle member to screen the space between the rim and the baffle member and the top of the hood.

8. A roof ventilator comprising a plate-like base member constituting a flashing and having a vent opening spaced from its edges and an integral upwardly projecting flange surrounding the opening, a baffle member closely embracing and fixedly secured to said flange, and a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member, the side walls having integral downwardly extending bracket portions at their rear ends secured to the base member and to the downwardly extending rear wall and constituting bracing elements therefor, the top of the hood being vertically spaced upwardly from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base member in approximately the plane of the roof on which the ventilator is installed, the front edges of the said side wall bracket members being at the rear of the baffle member facilitating such flow of air.

9. A roof ventilator comprising a plate-like base member constituting a flashing and having a vent opening spaced from its edges, an annular baffle member surrounding said opening and provided at its upper end with an annular outturned deflector rim, and a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member, the side walls having integral downwardly extending bracket portions at their rear ends secured to the base member and to the downwardly extending rear wall and constituting bracing elements therefor, the top of the hood being vertically spaced upwardly from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base in approximately the plane of the roof on which the ventilator is installed.

10. A roof ventilator comprising a plate-like base member constituting a flashing and having a vent opening spaced from its edges, an annular baffle member surrounding said opening, and a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member, the side walls having integral downwardly extending bracket portions at their rear ends secured to the base member and to the downwardly extending rear wall and constituting bracing elements therefor, the top of the hood being vertically spaced upwardly from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base in approximately the plane of the roof on which the ventilator is installed.

11. A roof ventilator comprising a plate-like base member constituting a flashing and having a vent opening spaced from its edges, an annular baffle member surrounding said opening and provided at its upper end with an annular outturned deflector rim, and a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member, the top of the hood being vertically spaced from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base in approximately the plane of the roof on which the ventilator is installed.

12. A roof ventilator comprising a plate-like base member constituting a flashing and having a vent opening spaced from its edges, an annular baffle member surrounding said opening, and a hood disposed in overhanging relation to said baffle member and comprising a top and front, side and rear walls, the rear wall being extended downwardly to and secured to the base member. the top of the hood being vertically spaced from the baffle member and its front, rear and side walls being laterally spaced from the baffle member, the lower edges of the front and side walls being vertically spaced from the base member permitting direct flow of streams of air between the front and side walls and the base in approximately the plane of the roof on which the ventilator is installed.

13. A roof ventilator comprising a flat base member constituting a flashing and having a vent opening spaced inwardly from its edges, an annular baffle member surrounding said opening and constituting an integral part of said base member in sealed relation thereto, and a hood comprising a top portion disposed in vertically spaced overhanging relation to said baffle member and having depending front, rear and side portions laterally spaced from the baffle member, the lower edges of the front and side portions being below the upper end of the baffle member and vertically spaced above said base member providing air circulating space for the flow of air under the hood and around and across the top of the baffle member in substantially the plane of the roof on which the ventilator is installed, the

rear portion of the hood being extended to and secured to said base member.

14. A roof ventilator comprising a flat plate-like base member constituting a flashing and having a vent opening spaced from its edges and an integral upwardly projecting flange surrounding the opening, a baffle member closely embracing and secured to said flange and provided at its upper end with an annular outturned deflector rim, and a hood overhanging said baffle member with its top vertically spaced therefrom and having depending front, rear and side walls laterally spaced from said baffle member with their lower edges in a plane below said rim, the front and side walls being vertically spaced from said base member providing front, rear and side openings between the base member and said front and side walls for the direct circulation of air therethrough and around said baffle member.

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