Nov. 29, 1966 E. H. JOHNSON 3,287,870

WEATHERPROOF LOUVER

Filed April 8, 1964

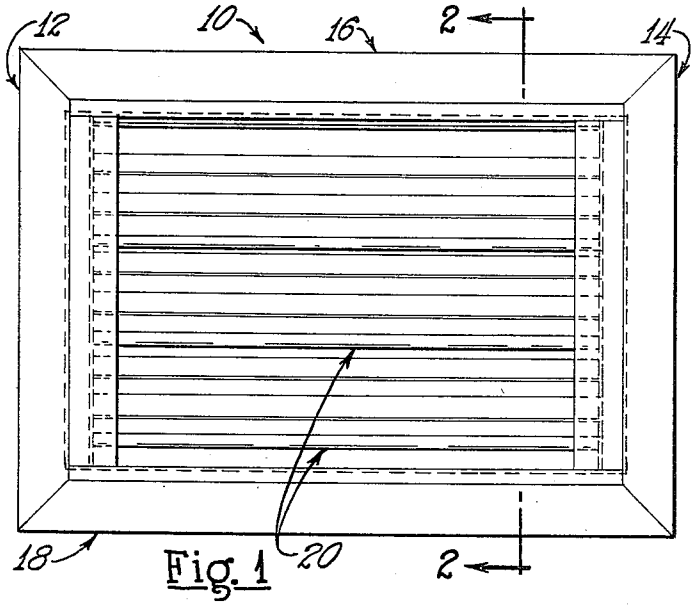


Fig. 1

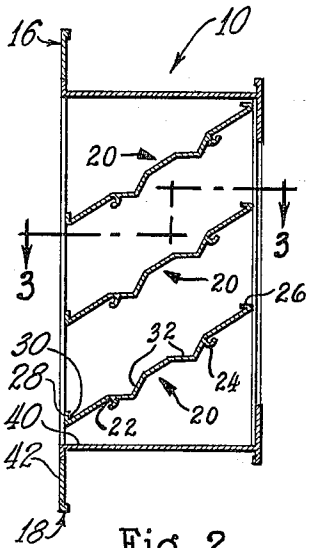


Fig. 2

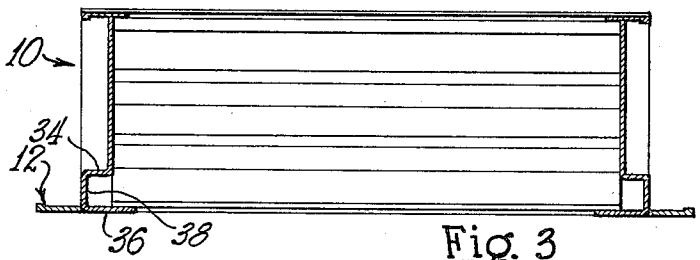


Fig. 3

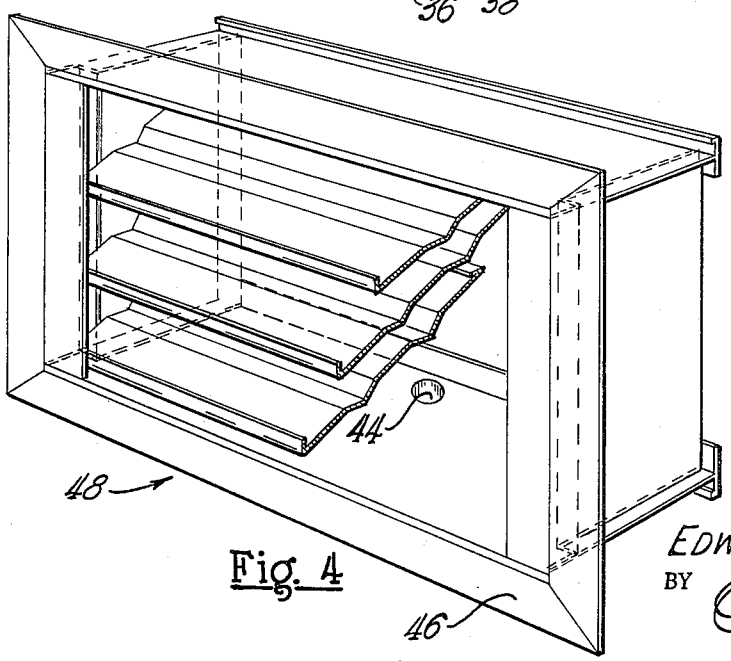


Fig. 4

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WEATHERPROOF LOUVER

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This invention relates to a louver and more particularly to a louver for an air intake or the like wherein one side of the louver is exposed to outside weather conditions.

A louver according to the invention is designed primarily to dispose of water from rain or wet snow, for example, which is deposited on the louver blades. For this purpose, each of the louver blades has a lip extending longitudinally of the lower edge, thereby forming an eavestrough-like channel which collects water flowing down the blades and directs it to vertical channels or downspouts located in the side frame members of the louver. The water can then be collected on the lower frame member from which it can either spill uniformly down the building below the louver or drain through a suitable drain opening in the lower frame member, which opening communicates with the interior of the building. The downspouts or vertical channels are formed integrally with the side frame members and are located outside the inner edges of the frame so as not to interfere with or restrict in any manner air flow through the louver. This construction also minimizes the overall cost of the louver since the channel is built into the side frame members and even serves the additional function of being a stiffener member therefor.

It is, therefore, a principal object of the invention to provide a louver with an improved water disposal system having the advantages outlined above.

Other objects and advantages of the invention will be apparent from the following detailed description of preferred embodiments thereof, reference being made to the accompanying drawing, in which:

FIG. 1 is a front view in elevation of a louver embodying the invention;

FIG. 2 is a view in vertical cross section taken along the line 2—2 of FIG. 1;

FIG. 3 is a view in horizontal cross section taken along the line 3—3 of FIG. 2; and

FIG. 4 is a view in perspective, with parts broken away and with parts in cross section, of a slightly modified louver embodying the invention.

Referring to the drawing, and more particularly to FIG. 1, a louver embodying the invention is indicated at **10** and includes side frame members **12** and **14**, upper and lower frame members **16** and **18**, and blades **20**. As shown particularly in FIG. 2, the blades **20** are extruded with grooves **22** formed in the lower surface by protrusions **24**. This makes it possible for the blades to be affixed to portions of the side frame members **12** and **14** by sheet metal screws extending therethrough and threaded into the ends of the grooves **22**. The blades **20** also have upper lips **26** at the upper edges, which lips prevent water from being blown upwardly on the blades by wind and over the upper edges into the building. At the lower longitudinal edges, the blades **20** have lower lips **28** forming eavestroughs or channels **30** which receive water flowing down the blades. Further, the blades **20** also have V-shaped or grooved portions **32** which stiffen the blades and also serve to slow down water flowing down the blades so as to minimize the possibility of the water splashing over the lower lips **28**.

The side frame members **12** and **14** are symmetrically opposite and each includes an offset portion **34** which, with a side frame member extension **36**, forms vertical channels or passages **38** in an outside edge portion of the side frame member. The extensions **36** extend inwardly beyond the ends of the blades **20** so that the water is not blown by the wind as it flows from the channels **30** to the channels **38**. These communicate with the channels **30** of the blades **20** and receive water from the channels **30**, with the water flowing down to a collecting surface **40** of the lower frame member **18**.

From the surface **40**, the water can flow over a lower flange **42** of the lower frame member **18** and uniformly down the wall of the building. The water also can be removed by a suitable drain opening **44** which can be located in a slightly modified frame member **46** of a louver **48**, as shown in FIG. 4. The opening **44** can communicate with the interior of the building and specifically with a suitable drain pipe located therein.

With the louver **10** in position, during inclement weather of rain or wet snow for example, water on the surfaces of the blades **20**, even in strong wind, will be prevented from flowing over the upper edges of the blades **20** by means of the lips **26**. When the wind velocity is lower, the water will flow down the blades, being slowed down by the V-shaped portions **32**. The water then is collected by the channels **30** and directed to the vertical side frame channels **38**. From here, the water is collected on the surface **40** of the lower frame member **18** where it flows uniformly down the side of the building or else is drained through the drain opening **44** of the modified lower frame member **46**.

Various modifications of the above described embodiments of the invention will be apparent to those skilled in the art, and it is to be understood that such modifications can be made without departing from the scope of the invention, if they are within the spirit and the tenor of the accompanying claims.

I claim:

1. A louver to be mounted in the wall of a building to pass outside air into the building while keeping water out, said louver comprising a pair of opposed side frame members each having a vertically-extending channel integral therewith in an outside edge portion thereof, a lower frame member having a water-collecting surface communicating with each of said vertically-extending channels, a plurality of louver blades sloping downwardly in a direction toward the outside edge portions of said side frame members, upper longitudinally-extending edges of said blades having water-retaining lips formed thereon, lower longitudinally-extending edges of said blades having lips thereon forming water-collecting channels at the lower edges of said blades, said water-collecting channels communicating at each end of each of said blades with said vertically-extending channels, said blades also having V-shaped portions extending longitudinally thereof to retard the flow of water transversely down said blades, and said blades also having means by which they can be affixed to said side frame members.

2. A louver according to claim **1** wherein said blades are extruded.

3. A louver according to claim **1** wherein said lower frame member has a drain opening therein for directing the water away from said lower frame member.

4. A louver to be mounted in the wall of a building to pass outside air into the building while keeping water out, said louver comprising a pair of opposed side frame members, a plurality of louver blades sloping downwardly in a direction toward the outside edge portions of said side frame members, upper longitudinally-extending edge portions of said blades having water-retaining lips formed thereon, lower longitudinally-extending edge portions of said blades having lips thereon forming water-collecting channels at the lower edge portions of said blades, means communicating with said water-collecting channels for removing and disposing of water collected thereby, said

blades also having grooved portions extending longitudinally thereof intermediate said water-retaining lips and said water-collecting channels to retard the flow of water transversely down said blades toward said water-collecting channels, and said blades also having means by which they can be affixed to said side frame members.

5. A louver according to claim 4 wherein said means for receiving and disposing of water collected by said water-collecting channels comprises vertically-extending water passages formed at the ends of said blades with said side frame members with said water-collecting channels communicating at the ends of said blades with said passages.

6. A louver according to claim 4 wherein said blades are extruded.

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