

Dec. 13, 1955

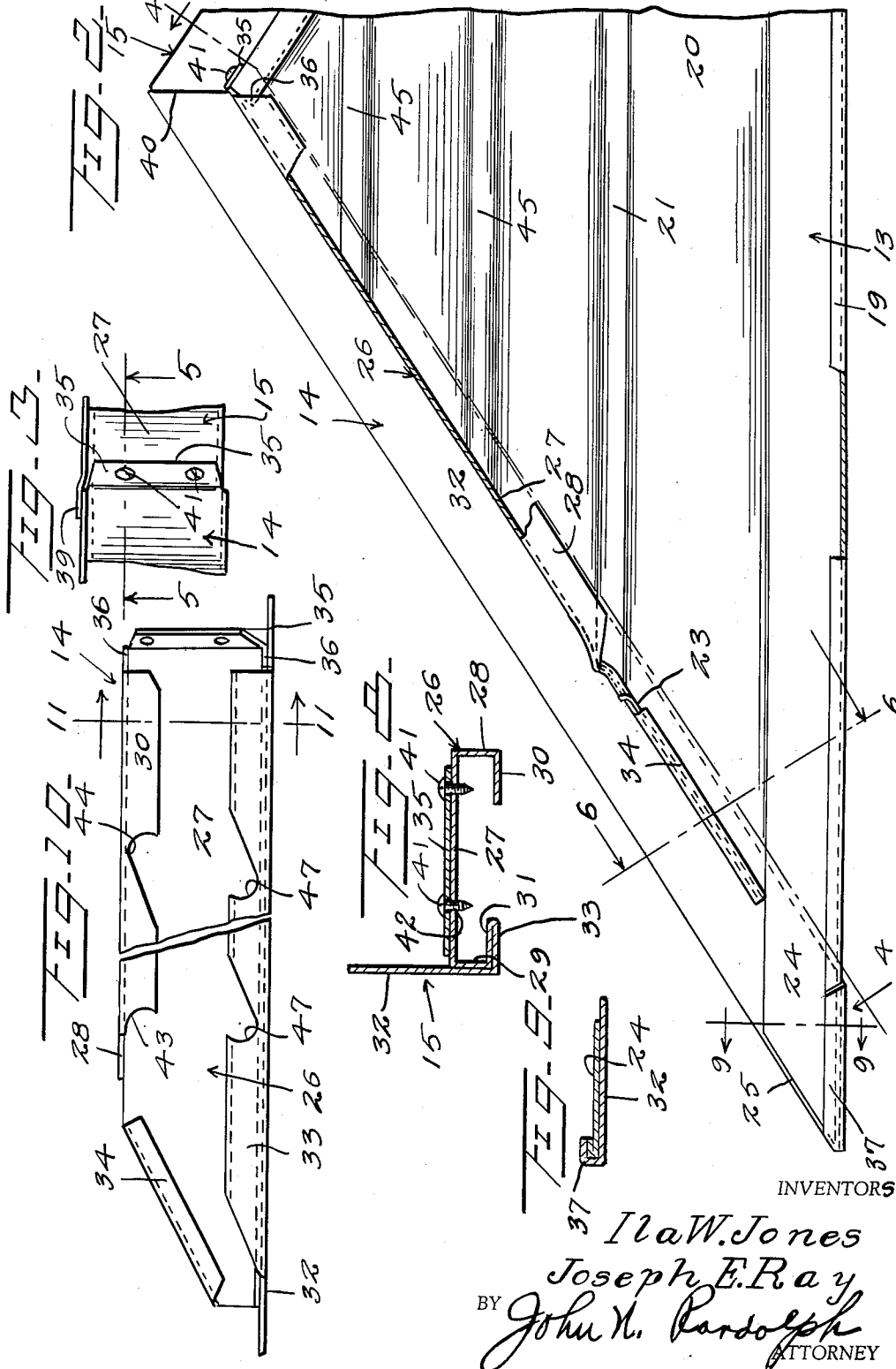
I. W. JONES ET AL

2,726,595

LOUVER

Filed March 25, 1953

2 Sheets-Sheet 2



INVENTORS

I. W. Jones

Joseph E. Ray

BY John H. Randolph
ATTORNEY

1

2,726,595

LOUVER

Ira W. Jones and Joseph E. Ray, Beaumont, Tex.

Application March 25, 1953, Serial No. 344,630

8 Claims. (Cl. 98—121)

This invention relates to a louver or ventilator for use in the walls of buildings, particularly dwellings, and has for its primary object to provide a louver of extremely simple construction composed of a minimum number of parts capable of being quickly and easily fabricated and assembled.

Another object of the invention is to provide a louver the parts of which may be effectively secured together with a minimum of fastenings and without requiring soldering or welding, so that if necessary a damaged louver blade or slat may be readily replaced.

A further object of the invention is to provide a louver wherein the louver slats or blades have turned back edges providing rounded surfaces and which effectively function to prevent rain or snow beating in through the louver between the slats or blades thereof.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is an elevational view, partly in section, looking toward the outer side of the louver;

Figure 2 is an enlarged fragmentary elevational view, partly in section, looking toward the inner side thereof;

Figure 3 is a fragmentary top plan view of the central portion of the louver;

Figure 4 is a sectional view thereof taken substantially along a plane as indicated by the line 4—4 of Figure 2;

Figure 5 is an enlarged longitudinal vertical sectional view taken substantially along a plane as indicated by the line 5—5 of Figure 3;

Figure 6 is an enlarged cross sectional view taken substantially along a plane as indicated by the line 6—6 of Figure 2;

Figure 7 is a fragmentary plan view looking toward the inner side of the uppermost louver blade or slat;

Figure 8 is an enlarged cross sectional view taken substantially along a plane as indicated by the line 8—8 of Figure 5;

Figure 9 is an enlarged cross sectional view taken substantially along a plane as indicated by the line 9—9 of Figure 2;

Figure 10 is a fragmentary side elevational view looking toward the inner side of one part of the louver; and

Figure 11 is a cross sectional view on an enlarged scale of said louver part taken substantially along a plane as indicated by the line 11—11 of Figure 10.

Referring more specifically to the drawings, the novel louver in its entirety is designated generally 12 and includes a bottom member 13, substantially identical side members 14 and 15 and a plurality of separate louver blades or slats 16, 17 and 18. Each of said parts is formed preferably of a single piece of sheet metal.

The bottom member 13 is formed from an elongated strip of sheet metal and is provided with a turned back or rolled bottom edge 19 extending from end-to-end thereof. The upper portion of the strip forming the bottom member 13 extends upwardly and inwardly at an

2

incline to provide a bottom louver slat or blade 20 having an outwardly turned back upper edge 21 forming a downwardly and outwardly opening channel 22. The slat or blade 20 extends upwardly and inwardly from the inner or rear face of the bottom member 13 and the rolled bottom edge 19 is likewise turned backwardly against said rear face, as best illustrated in Figure 4. As best seen in Figures 2 and 6, the bottom slat or blade 20 has upwardly and inwardly inclined ends each of which is provided with an upturned flange 23 which is disposed in a plane substantially perpendicular to the plane of the bottom member 13, as seen in Figure 6. The lower portion of the bottom member 13 includes end portions 24 which extend beyond the ends of the blade or slat 20 and which are provided with beveled ends 25 which extend downwardly and outwardly in diverging relationship to one another.

Each of the side members 14 and 15 comprises an elongated strip of sheet metal which is folded longitudinally to form an inwardly opening channel 26, as best illustrated in Figures 8, 10 and 11 and which includes a relatively wide intermediate or bight portion 27 and substantially parallel inner and outer walls 28 and 29. The walls 28 and 29 have inturned flanges 30 and 31, respectively, at their outer edges which extend toward one another and the adjacent edges of which are spaced a substantial distance apart. The channel 26 is formed by one longitudinal side edge of the strip forming the side member 14 or 15, the other side edge of which provides a relatively wide front flange 32 which is disposed along the outer side of the front wall 29 and extends laterally therefrom substantially beyond the intermediate portion 27 of the channel 26. A portion 33 of the strip forming the side member 14 or 15 extends along the outer side of the flange 31 and constitutes an outwardly turned back ply thereof and which connects said flange to the flange 32. The outer wall 29, located adjacent the front flange 32, has a lower end extending substantially below the lower end of the inner wall 28. The intermediate or bight portion 27 is provided with an inclined lower end portion having an inwardly turned back lip 34. The upper end of the bight portion 27 of the side member 14 is provided with an extension forming an apertured fastening strip 35 which is bent inwardly relatively to the plane of said bight portion 27. The walls 28 and 29 of the side member 14 have beveled upper ends 36, as best seen in Figures 2 and 10. The front flanges 32 of the side members 14 and 15 extend beyond the ends of the channel portions 26 thereof. The lower ends of said flanges 32 are provided with inwardly turned back lips 37 which are disposed at oblique angles to the longitudinal axes of said front flanges 32 and at acute angles to the outer edges thereof and in which the ends of the bottom rolled edge 19 of the bottom member 13 are received and clamped. The end flanges 23 of the bottom slat 20 are received and clamped in the inwardly turned back inclined lips 34 of the side members 14 and 15, as best illustrated in Figure 6.

It will thus be seen that the side members 14 and 15 are clamped to the ends of the bottom member 13 by the turned back lips 34 and 37 thereof engaging the flanges 23 and the ends of the rolled bottom edge 19 of said bottom member 13. Said side members 14 and 15 extend upwardly from the ends of the bottom member 13 in upwardly converging relationship to one another. The upper end of the front flange 32 of the side member 15 is provided with a tapered extension 39 which overlies the beveled upper end 40 of the front flange 32 of the side member 14. The upper ends of the side walls 28 and 29 of the side member 15 interfit between or under the beveled upper ends 36 of the walls 28 and 29 of the member 14, as illustrated in Figure 2. The apertured exten-

3

sion 35 of the member 14 lies against the outer side of the upper end of the bight portion 27 of the member 15 and is secured thereto by screw fastenings 41 which extend through the apertures thereof and which threadedly engage apertures 42 of said last mentioned bight portion 27.

The parts 13, 14 and 15 comprise the frame of the louver 12, which frame also includes the bottom louver slat or blade 20. Before the frame is completely assembled, as previously described, that is, before the upper ends of the side members 14 and 15 are connected by the fastenings 41, the detachable louver blades 16, 17 and 18 are applied to the frame between said side members 14 and 15 and above the bottom louver blade 20. The detachable louver blades 16, 17 and 18 are demountably supported in the louver frame adjacent their ends by the channel portions 26, the inner flanges 30 of which are provided with downwardly and outwardly inclined notches including a lower notch 43 and an intermediate and upper notch, each designated 44. The notches 43 and 44 are inclined downwardly and outwardly of the louver 12. The lower notch 43 receives end portions of the turned back upper end 21 of the lower louver slat 20. The two slats 16 and 17 are provided with similar turned back upper ends or edges 45 which are received in the notches 44 of the flanges 30 of the sides 14 and 15 and which turned back portions 45 form downwardly and outwardly opening grooves 46, corresponding to the groove 22. The outer flanges 31 and the overlying ply 33 thereof are each provided with three corresponding upwardly and inwardly opening notches 47. The lower edges of the detachable slats 16, 17 and 18 are turned inwardly and back upon themselves to form turned back portions 48, which are disposed on the opposite sides of said slats to the turned back portions 45. Said turned back portions 48 form upwardly and inwardly opening channels 49. The turned back portion 48 of the slat 16 has end portions thereof engaging in the lowermost notches 47 and the turned back portion 48 of the slat 17 has end portions thereof engaging in the two intermediate notches 47. The turned back portion 48 of the uppermost slat 18 has end portions engaging in the uppermost notches 47, so that each of said slats and the slat 20 are inclined upwardly and inwardly with respect to the frame of the louver. The uppermost slat 18 is substantially triangular in shape and converges upwardly to a point and has its upwardly converging side edges and upper end seated in the upper portions of the channels 26, as illustrated in Figures 2 and 4, and is not provided with a turned back upper edge. It will thus be seen that a louver of extremely simple construction has been provided which may be assembled with a minimum of fastenings and without the use of soldering or welding, and which may be readily dismantled sufficiently to remove and replace any one or more of the slats 16, 17 and 18.

Obviously, the louver 12 may be made in various sizes and the shape thereof may also be varied.

Various other modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as herein-after defined by the appended claims.

We claim as our invention:

1. A louver of the character described comprising a bottom member and side members each formed from a single piece of material, said side members each including a front flange having an end overlying an end of said bottom member and provided with a turned back terminal portion in which a part of an end portion of the bottom member is received and clamped, each of said side members including a longitudinally extending channel member disposed behind the front flange thereof and in a plane substantially perpendicular to the plane of said front flange, said channel members opening inwardly with respect to one another and each having side walls provided with intumed flanges, said flanges being pro-

4

vided with notches opening outwardly of the inner edges thereof and disposed obliquely to the longitudinal axes of said channels, a plurality of louver slats extending between said side members and having end portions engaging in said channels and longitudinal edge portions engaging said inclined notches, said longitudinal edge portions of each louver slat engaging staggeredly arranged notches of the two channels whereby the slats are supported in inclined planes behind said front flanges of the side members and in spaced apart substantially parallel relationship to one another, and means constituting an angular extension of the channel of one of said side members and detachably secured to the channel of said other side member and detachably connecting said side members at their upper ends for releasably retaining the end portions of the louver slats in engagement with said channels and flange notches.

2. A louver as in claim 1, and an upper louver slat having a bottom edge engaging uppermost notches of the two channel flanges located adjacent said front flanges of the side members, said uppermost louver slat having upwardly converging side edges merging at the apex thereof, said upwardly converging side edges being seated in the upper ends of said channels.

3. A louver as in claim 1, said bottom member having an upwardly and inwardly inclined upper portion spaced from the ends thereof constituting a lower louver slat, said lower louver slat having end portions seated in said channels and an inner edge portion engaging notches of the channel flanges disposed remote from said front flanges.

4. A louver of the character described comprising a substantially triangular frame consisting of a bottom member and a pair of side members each formed from a single piece of material, said side members having lower end portions overlying end portions of the bottom member and including turned back lips engaging around and clamped to said bottom member, said side members extending upwardly in converging relationship to one another and having upper ends, including overlapping portions, defining the apex of the louver frame, fastening means detachably connecting said overlapping portions of the upper ends of said side members, each of said side members including a front flange, said front flanges being disposed substantially coplanar with one another and with a bottom front flange portion of said bottom member, each of said side members including a longitudinally extending inwardly opening channel disposed behind the front flange thereof and in a plane substantially perpendicular to the plane of said front flange, said channels having side walls provided with intumed flanges, said side wall flanges having notches opening through inner edges thereof and inclined relatively to the longitudinal axes of the channels, a plurality of demountable louver blades having end portions engaging in said channels and longitudinal edge portions engaging staggered notches of the flanges of each channel for supporting said louver blades behind said front flanges of the side members and inclined relatively to the plane thereof.

5. A louver as in claim 4, a bottom louver blade formed integral with said bottom member and having end portions engaging in said channels and portions of a free edge thereof engaging complementary notches of the two channels.

6. A louver of the character described comprising a bottom member and a pair of side members defining a substantially triangular shaped frame, each of said side members having a front flange, said front flanges having lower ends engaging around and clamped to end portions of said bottom member, said side members having overlapping upper end portions, fastening means detachably connecting said overlapping upper end portions, inwardly opening channels formed integral with said front flanges and disposed therebehind and longitudinally thereof, a plurality of louver slats extending between said

5

side members and having end portions engaging in the channels thereof, said channels having inturned notched flanges receiving edge portions of the louver slats for demountably supporting said louver slats in inclined positions relatively to the plane of said front flanges and in spaced apart substantially parallel relationship to one another. 5

7. A louver as in claim 1, said longitudinal edge portions of the louver slats comprising turned back channel edges disposed on opposite sides of the planes of the slats. 10

8. A louver as in claim 7, each of said slats being inclined upwardly and rearwardly away from said front flanges of the side members, and said upper channel edges being disposed above the slats individual thereto and opening outwardly and downwardly of the louver. 15

6

References Cited in the file of this patent

UNITED STATES PATENTS

1,118,365	Loehler	Nov. 24, 1914
1,785,682	Hamilton	Dec. 16, 1930
2,389,970	Ferguson	Nov. 27, 1945
2,458,134	Belden	Jan. 4, 1949
2,555,626	Avers et al.	June 5, 1951
2,587,509	Moyer et al.	Feb. 26, 1952
2,589,529	Bowers	Mar. 18, 1952

FOREIGN PATENTS

551,023	Great Britain	Feb. 4, 1943
---------	---------------	--------------