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W. M. JORDAN ET AL

2,640,569

JALOUSIE ASSEMBLY FOR BUILDING CONSTRUCTION

Filed June 8, 1951

3 Sheets-Sheet 1

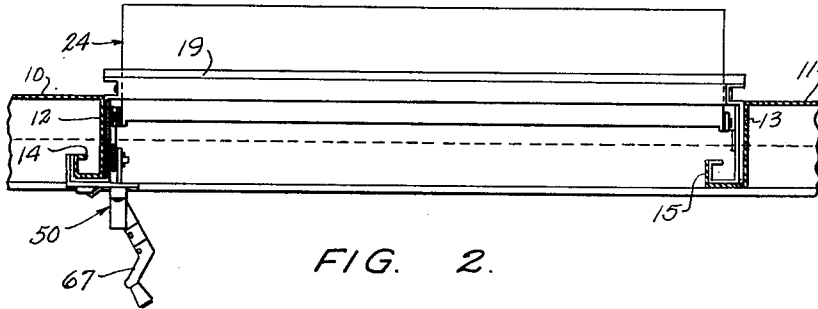


FIG. 2.

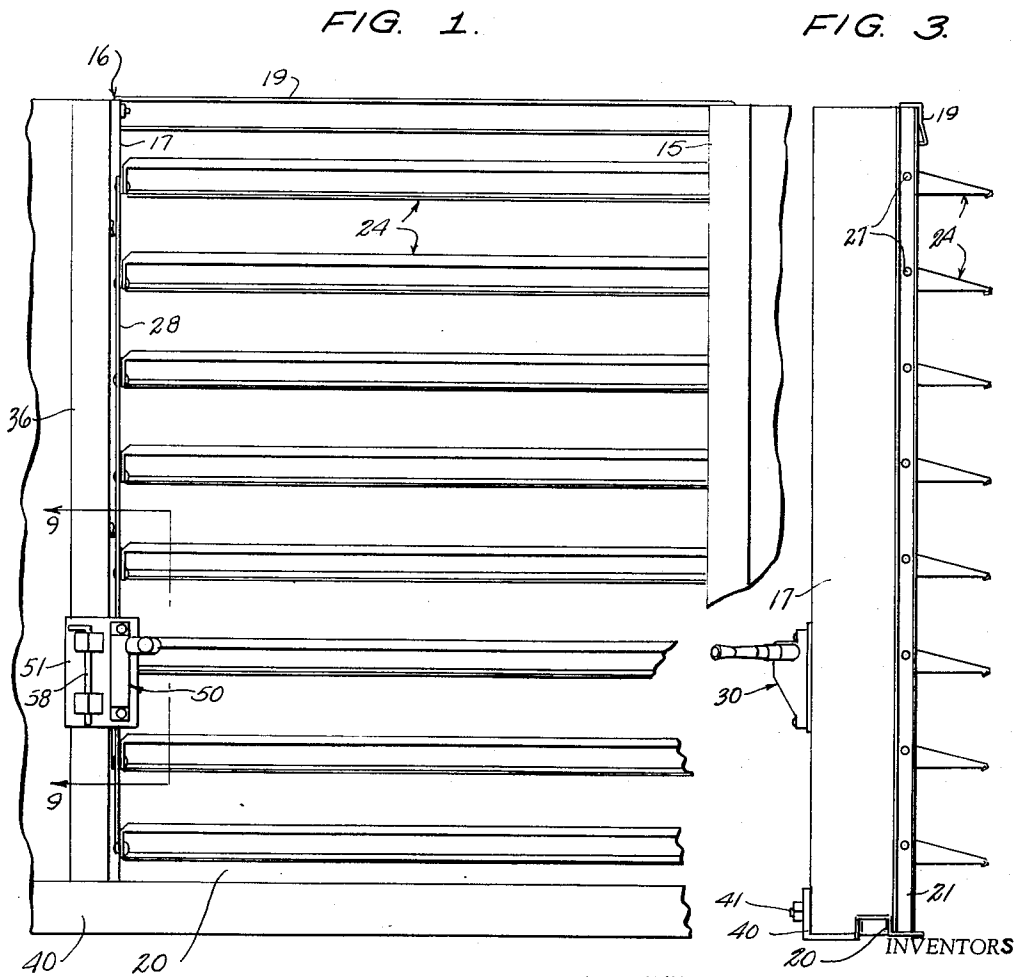


FIG. 1.

FIG. 3.

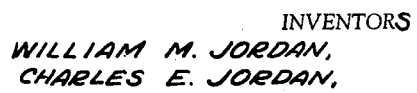
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3 Sheets-Sheet 2



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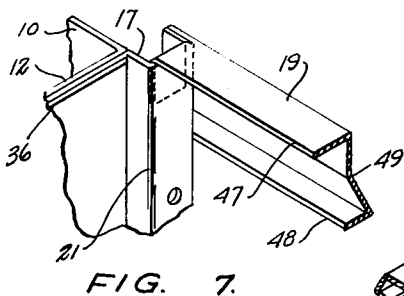


FIG. 7.

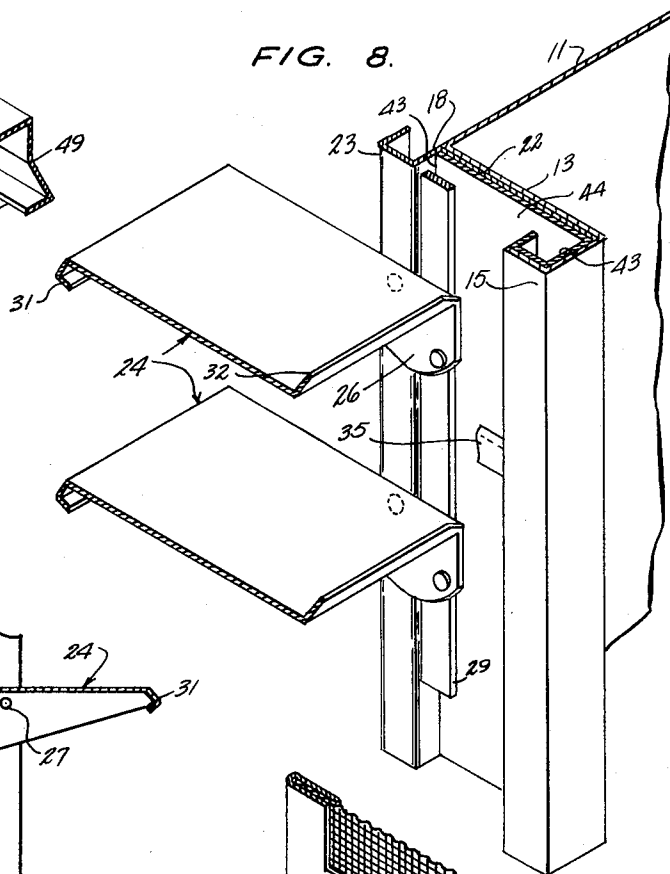


FIG. 8.

FIG. 9.

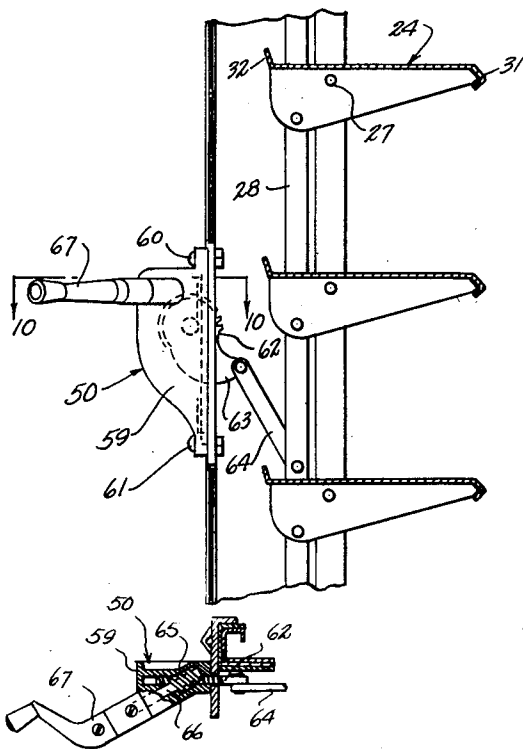


FIG. 10

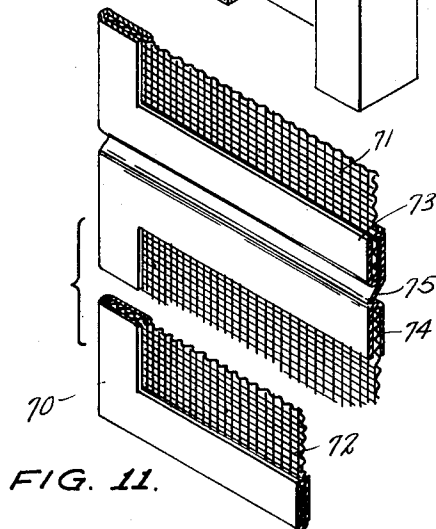


FIG. 11.

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JALOUSIE ASSEMBLY FOR BUILDING CONSTRUCTION

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Application June 8, 1951, Serial No. 230,456

5 Claims. (Cl. 189—75)

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This invention relates to jalousie assemblies and more particularly to a jalousie assembly having adjustably movable louvers and especially arranged for incorporation in a prefabricated building construction.

It is among the objects of the invention to provide an improved jalousie assembly which can be easily mounted in a prefabricated building construction and united with other components to constitute a part of the building; which is particularly adapted for installation in a prefabricated building of sheet metal construction and is installed in the building structure without the use of separate fasteners, such as bolts, rivets or welds, and can be easily removed, if desired; which provides for a screen covering the inner side of the jalousie assembly and manually operated means, also at the inner side of the assembly, for adjustably moving the jalousie louvers; and which is simple and durable in construction, economical to manufacture, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawings wherein:

Figure 1 is an inside elevational view of a jalousie assembly illustrative of the invention;

Figure 2 is a top plan view of the jalousie assembly illustrated in Figure 1;

Figure 3 is a side elevational view of the jalousie assembly;

Figure 4 is a fragmentary perspective view of the assembly particularly illustrating the mounting and interconnection of the assembly louvers;

Figure 5 is a fragmentary perspective view particularly illustrating the connection of the bottom end of the jalousie assembly to the building structure;

Figure 6 is a fragmentary perspective view particularly illustrating the connection of a cover to a jalousie frame side member;

Figure 7 is a fragmentary perspective view particularly illustrating the application of a top frame member to a side member of the jalousie frame;

Figure 8 is a fragmentary perspective view similar to Figure 4, but illustrating the construction at the opposite side of the jalousie assembly;

Figure 9 is a fragmentary cross sectional view on an enlarged scale on the line 9—9 of Figure 1;

Figure 10 is a fragmentary cross sectional view on the line 10—10 of Figure 9; and

Figure 11 is a fragmentary perspective view of a jalousie screen.

With continued reference to the drawings, the building construction in which the jalousie assembly of the present invention is especially designed for installation includes sheet metal panels, as indicated at 10 and 11, vertically dis-

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posed one at each side of the jalousie receiving opening in the building structure. Each panel is of channel shaped cross section and has its wall or web portion disposed at the outer side of the building wall and the panels 10 and 11 have inwardly directed flanges 12 and 13 respectively, extending inwardly from the edges of the web portion adjacent the jalousie receiving opening and disposed substantially perpendicular to the web portion. These flanges 12 and 13 have a width substantially equal to the thickness of the building wall and the flange 12 of the panel 10 has a rolled formation 14 of rectangular cross sectional shape extending along its inner edge, while the flange 13 of the panel 11 has a rolled formation 15 of rectangular or channel shaped cross section extending along its inner edge, the formation 15 being somewhat larger than the formation 14. The two flanges 12 and 13 constitute the opposite sides of the ventilation opening in the building wall and the top and bottom of this opening are spanned by suitable structural components of the building, not illustrated.

The jalousie assembly comprises a frame, generally indicated at 16, and including side members 17 and 18 disposed in spaced apart and substantially parallel relationship to each other, a top member 19 extending between the side members and secured at its ends to the side members at the upper end of the latter, and a bottom member 20 extending between the side members at the lower ends thereof.

The frame side member 17 is formed of suitable sheet metal and includes a flat portion lying against the outer surface of the panel flange 12 and having a length and breadth substantially the same as the length and breadth of the outer surface of this flange, and an inwardly projecting ridge formation 21 of rectangular or channel shaped cross section extending along the outer edge of the flat portion and projecting outwardly from the outer surface of the web of the panel 10.

The frame side member 18 is also formed of suitable sheet metal and includes a flat portion 22 disposed against the side of the panel flange 13 inwardly of the ventilating opening and having substantially the same width and length as the inner surface of this panel flange, and a ridge formation 23 of rectangular or channel shaped cross section projecting inwardly of the opening and outwardly of the web portion of the panel 11 and extending along the front edge of the flat portion 22 of the frame side member 18.

Louvers, as generally indicated at 24, extend transversely of the frame between the side members 17 and 18 and are spaced apart longitudinally of the frame a distance slightly less than the width of the individual louvers so that the louvers will overlap when they are in closed position to provide a weathertight closure for

the ventilating opening. Each louver has end flanges, as indicated at 25 and 26, which extend downwardly from the intermediate portions of the louvers at respectively opposite ends of such intermediate portions and are in contact with the surfaces of the ridge formations 21 and 23 disposed inwardly of the ventilating opening. The ridge formations and the corresponding louver flanges are provided with registering apertures and the louvers are pivotally connected at their opposite ends to the ridge formations of the frame side members by pivot pins or rivets 27 which are disposed intermediate the width of the corresponding louvers, but nearer the rear edges than the front edges thereof and substantially at the mid-width location of the inwardly disposed portions of the corresponding ridge formations.

Link bars 28 and 29 extend along the inner sides of the ridge formations 21 and 23 respectively, and are pivotally connected to the louver flanges 25 and 26 at the inner or rear ends of these flanges by suitable pivot pins or rivets, as indicated at 30, to constrain all of the louvers to move simultaneously and coextensively when the louvers are adjustably pivoted about their pivotal connections with the frame side members.

Each louver has at its front edge a downwardly and rearwardly directed rolled formation 31 and has at its rear edge an upwardly projecting flange 32, these rolled formations and flanges cooperating when the louvers are in closed position to provide substantially weathertight seals between adjacent louvers.

The frame side member 17 is provided in the flat portion thereof with struck out tongues 33 which are spaced apart longitudinally of the side member and project to the side of the flat portion remote from the corresponding panel flange 12. Each of these tongues has its bottom edge free, as indicated at 34, and extending transversely of the flat portion of the side member and is longitudinally curved to a substantially ogee shape to provide near its free end a transversely extending portion convex on its side adjacent the panel flange to provide a friction connection with a cover plate, presently to be described.

The flat portion 22 of the frame side member 18 is provided with struck out tongues 35, similar in all respects to the tongues 33, at spaced apart locations therealong. The tongues 33 and 35 are all downwardly directed and are disposed substantially symmetrical with the mid-width location of the flat portions of the corresponding side frame members and have a width materially less than the width of these flat portions.

A cover plate 36, formed of suitable sheet metal, has a flat portion 37 disposed against the side of the flat portion of the frame side member 17 inwardly of the opening and has one edge in contact with the rear or inner side of the ridge formation 21 of this side member. The flat portion 37 has a width and length substantially the same as the width and length of the flat portion of the corresponding frame side member and has at its inner edge a rolled formation 38 of rectangular or channel shaped cross section which extends around and closely receives the rolled formation 14 at the inner edge of the corresponding panel flange 12. This cover plate is provided in the flat portion 37 thereof with longitudinally spaced apart slots 39 each of which receives a tongue 33 carried by the frame side member 11, the tongues projecting through these slots and bearing against the cover plate at the side thereof

remote from the flat portion of the frame side member 17 to firmly secure the cover plate against the flat portion of the side member. The curvature adjacent the free or distal end of the tongue 34 facilitates passing the tongue through the slot 39 in the cover plate 36 and also provides a frictional bearing surface bearing against the cover plate to hold the cover plate firmly against the frame side member. The building structure includes horizontally disposed structural members one of which is in the form of an angle iron 40 which extends across the bottom ends of the ventilating openings in the building structure. A hook 41 is engaged with the rolled formations 14 and 38 at the inner edges of the panel flange 12 and the cover plate 36 and has a screw threaded shank extending through an aperture in the angle iron 40. A nut 42 is threaded onto this shank at the side of the angle iron disposed inwardly of the building wall and securely clamps the panel and the cover plate against the angle iron structural member. This clamping of the cover plate to the building structure firmly anchors the frame side member 17 in the building structure by reason of the interengagement of the tongues on the frame side member in the slots provided in the cover plate.

A cover plate 43 has a flat portion 44 disposed against the side of the flat portion 22 of the frame side member 18 inwardly of the ventilating opening and has its front or outer edge bearing against the rear or inner sides of the ridge formation 23 of the side member 18. The flat portion 44 of the cover plate 43 has a length and width substantially the same as the length and width of the flat portion 22 of the side member 18 and this cover plate has a rolled formation 45 of rectangular cross sectional shape extending along its inner or rear edge and closely received in the rolled formation 15 extending along the rear or inner edge of the flange 13 of the panel 11. This cover plate 43 is also formed of suitable sheet metal and has transversely extending slots spaced apart longitudinally thereof and receiving the tongues 35 carried by the frame side member 18 to secure this cover plate to the frame side member 18 in the same manner as that in which the cover plate 36 is secured to the frame side member 17, as described above.

A hook, not illustrated, engages the rolled formations 15 and 43 of the panel flange 13 and cover plate 43 and has a screw threaded shank extending through the structural member 40 and receiving a nut to firmly secure the panel flange and cover plate to the building structure. It is to be understood that the panel flanges and cover plates may be also secured to the building structure at the upper ends of the jalousie frames and also intermediate the height of the jalousie frames, if desired.

The bottom frame member 20 has a folded or beaded formation 45 extending along its outer edge and has at its inner edge an upwardly extending formation 46 of rectangular or channel shaped cross section, the rear or inner edge of which bears against the front edge of the structural member 40 and may, if desired, be sealed thereto to provide a weathertight joint. The upwardly projecting formation 46 extends from one of the frame side members to the other and cooperates with the outer edge of the bottom louver to provide a weathertight closure at the bottom end of the jalousie assembly.

The top frame member 19 is of somewhat channel shape in cross section providing upper

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and lower flanges 47 and 48 extending inwardly of the ventilating opening from the web portion 49 a portion of which is downwardly and outwardly inclined to provide a weather shedding coping at the top of the jalousie assembly. The lower flange 48 cooperates with the rear flange 32 on the upper louver to provide a substantially weathertight seal at the top of the assembly when the louvers are closed.

A manually operated louver adjuster, generally indicated at 50, is mounted on the rolled formation 38 of the cover plate 36 intermediate the length of the cover plate and includes a mounting plate 51 of rectangular shape having a flange 52 along one edge thereof, the rolled formation 38 of the corresponding cover plate being received in the angle between the flange 52 and the plate 51, so that the plate extends across the surface of the rolled formation at the inner side of the building wall and the plate is disposed substantially perpendicular to the panel flange 12 and overlies a portion of the ventilating opening.

The plate 51 has an elongated slot 53 vertically disposed at a location spaced from the cover plate 36 inwardly of the opening and has vertically spaced apart apertures 54 and 55 adjacent the flange 52. The cover plate 36 is provided in its rolled over formation 38 with outwardly projecting staples 56 and 57 which extend through the openings 54 and 55 respectively and a locking pin 58 extends through these staples at the side of the plate 51 remote from the cover plate 36 to firmly secure the mounting plate 51 to the cover plate 36 of the jalousie assembly.

A hollow housing 59 is mounted on the plate 51 over the slots 53 and is firmly secured to the plate by suitable means, such as the screws 60 and 61 extending through apertured lugs disposed one at each end of the housing and through registering apertures in the mounting plate 51. A sector worm gear 62 is mounted in the housing and has an outwardly projecting arm 63 connected at its outer end to the link bar 28 by a link 64 pivotally connected at one end to the other end of the arm 63 and at its other end to the link bar 28 at a location below the sector gear.

A worm 65 is journaled in the housing in mesh with the worm gear 62 and has a worm shaft 66 projecting out of the housing through a bearing boss on the housing. A hand crank 67 is mounted on the shaft 66 at the end of the latter projecting outwardly of the housing 59 for rotating the worm 65 and turning the gear 62 to raise or lower the link bar 28 and thereby move the louvers 24 toward their fully opened or closed positions.

The screen structure illustrated in Figure 11 is mountable on the surfaces of the rolled formation of the cover 36 and formation 15 of the panel flange 13 disposed inwardly of the building wall and comprises a sheet metal frame 70 formed by bending a strip of sheet metal along its mid-width location to a U cross sectional shape, and wire mesh panels, as indicated at 71 and 72, marginally secured in the frame. A reinforcing structure is provided intermediate the length of the screen and extending transversely thereof by forming two frame portions 73 and 74 facing in opposite directions and interconnected by a portion 75 of the same strip from which the two frame portions or channels 73 and 74 are formed.

The screen may be mounted on the above de-

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scribed structural elements by suitable means, such as clips or screws extending through the frame of the screen and threaded into the corresponding elements of the building and jalousie assembly.

It will be noted that the entire jalousie assembly is formed of sheet metal strips which can be conveniently rolled to the desired cross sectional shape and subjected to stamping operations to provide end flanges, tongues and openings, and that the jalousie assembly can be removed from the building construction at any time by merely removing the hooks which secure the assembly to the horizontal structural members of the building.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. In a building construction including sheet metal panels providing inwardly directed flanges surrounding a ventilation opening in the building structure, a jalousie assembly disposed in said opening and comprising a rectangular frame including spaced apart and substantially parallel side members each having along its edge disposed outwardly of the building wall a ridge formation projecting inwardly of said opening and having struck out tongues spaced longitudinally thereof between said ridge and the edge of the side member disposed inwardly of the building wall, and top and bottom transverse members extending between and connected at their ends to said side members at the corresponding ends of said frame, louvers extending transversely of said frame at locations spaced apart longitudinally thereof and pivotally connected at their ends to the ridge formations of said side members, link bars extending along said side members and pivotally connected to said louvers at the corresponding ends of the latter, cover plates disposed one against each frame side member at the side of the latter disposed inwardly of said opening and having transversely extending slots spaced apart longitudinally thereof and receiving said tongues, the panel flanges having rolled edges at the inner side of said wall and the sides of said opening and each of said covers having a rolled inner edge closely engaging the rolled inner edge of the corresponding channel flange, and a manually operated louver adjuster mounted on the inner edge portion of one of said covers and connected to the adjacent link bar.

2. In a building construction including sheet metal panels disposed one at each side of a ventilating opening in a building wall and each having a web portion at the outer side of the wall and a flange extending from the web portion inwardly of the wall and each flange having a rolled formation on its edge remote from the corresponding web portion, a jalousie assembly disposed in the ventilating opening and comprising a frame including side members disposed one along each panel flange and upper and lower end members extending between said side members at the upper and lower ends of said frame, cover plates disposed one against each side frame member at the sides of the frame members remote from the

corresponding panel flanges and each cover plate having a rolled formation extending along one edge thereof and closely engaging the rolled formation on the adjacent panel flange, each of said frame side members having struck out tongues spaced apart longitudinally thereof and each of said cover plates having transversely extending slots spaced apart longitudinally thereof and receiving the corresponding tongues to detachably secure said cover plates to said frame side members, louvers extending between said frame side members and pivotally connected at their ends thereto, means interconnecting said louvers for simultaneous and coextensive movements thereof, and manually operated louver adjusting means mounted on one of said cover plates and connected to said louvers for imparting opening and closing movements to the latter.

3. In a building construction including sheet metal panels disposed one at each side of a ventilating opening in a building wall and each having a web portion at the outer side of the wall and a flange extending from the web portion inwardly of the wall and each flange having a rolled formation on its edge remote from the corresponding web portion, a jalousie assembly disposed in the ventilating opening and comprising a frame including side members disposed one along each panel flange and upper and lower end members extending between said side members at the upper and lower ends of said frame, cover plates disposed one against each side frame member at the sides of the frame members remote from the corresponding panel flanges and each cover plate having a rolled formation extending along one edge thereof and closely engaging the rolled formation on the adjacent panel flange, each of said frame side members having struck out tongues spaced apart longitudinally thereof and each of said cover plates having transversely extending slots spaced apart longitudinally thereof and receiving the corresponding tongues to detachably secure said cover plates to said frame side members, louvers extending between said frame side members and pivotally connected at their ends thereto, means interconnecting said louvers for simultaneous and coextensive movements thereof, manually operated louver adjusting means mounted on one of said cover plates and connected to said louvers for imparting opening and closing movements to the latter, a structural member extending across said opening, and fastening means engaging the rolled formations of said panel flanges and said cover plates and said structural member securing said flanges and cover plates together and to said structural member.

4. In a building construction including sheet metal panels disposed one at each side of a ventilating opening in a building wall and each having a web portion at the outer side of the wall and a flange extending from the web portion inwardly of the wall and each flange having a rolled formation on its edge remote from the corresponding web portion, a jalousie assembly disposed in the ventilating opening and comprising a frame including side members disposed one along each panel flange and upper and lower end members extending between said side members at the upper and lower ends of said frame, cover plates disposed one against each side frame member at the sides of the frame members remote from the corresponding panel flanges and each cover plate having a rolled formation extending along one edge thereof and closely engaging the rolled for-

mation on the adjacent panel flange, each of said frame side members having struck out tongues spaced apart longitudinally thereof and each of said cover plates having transversely extending slots spaced apart longitudinally thereof and receiving the corresponding tongues to detachably secure said cover plates to said frame side members, louvers extending between said frame side members and pivotally connected at their ends thereto, means interconnecting said louvers for simultaneous and coextensive movements thereof, and manually operated louver adjusting means mounted on one of said cover plates and connected to said louvers for imparting opening and closing movements to the latter, each of said struck out tongues being downwardly directed and having a free lower edge extending transversely of the corresponding frame side member intermediate the width of the latter and each tongue being longitudinally curved to provide at its free lower end a portion having a convex surface adjacent the corresponding panel flange.

5. In a building construction including sheet metal panels disposed one at each side of a ventilating opening in a building wall and each having a web portion at the outer side of the wall and a flange extending from the web portion inwardly of the wall and each flange having a rolled formation on its edge remote from the corresponding web portion, a jalousie assembly disposed in the ventilating opening and comprising a frame including side members disposed one along each panel flange and upper and lower end members extending between said side members at the upper and lower ends of said frame, cover plates disposed one against each side frame member at the sides of the frame members remote from the corresponding panel flanges and each cover plate having a rolled formation extending along one edge thereof and closely engaging the rolled formation on the adjacent panel flange, each of said frame side members having struck out tongues spaced apart longitudinally thereof and each of said cover plates having transversely extending slots spaced apart longitudinally thereof and receiving the corresponding tongues to detachably secure said cover plates to said frame side members, louvers extending between said frame side members and pivotally connected at their ends thereto, means interconnecting said louvers for simultaneous and coextensive movements thereof, and manually operated louver adjusting means mounted on one of said cover plates and connected to said louvers for imparting opening and closing movements to the latter, the panel flange adjacent said one cover plate having its rolled formation extending away from the adjacent side of said opening and the rolled formation on said one cover plate extending around and embracingly engaging the rolled formation on the associated panel flange.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,046,666	Smith	Dec. 10, 1912
1,481,658	Wine	Jan. 22, 1924
1,695,768	Kelly	Dec. 18, 1928
2,577,072	Cotner	Dec. 4, 1951

FOREIGN PATENTS

Number	Country	Date
599,567	Great Britain	Mar. 16, 1948