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3,221,452

FROST BARRIER AND VENT

Filed May 24, 1963

2 Sheets-Sheet 1

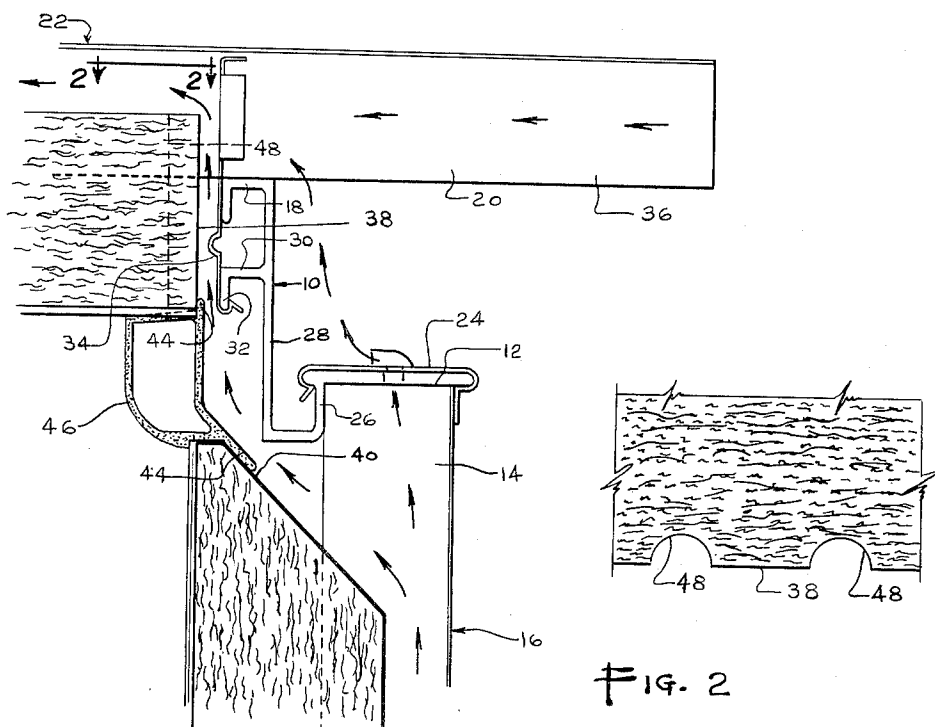


Fig. 2

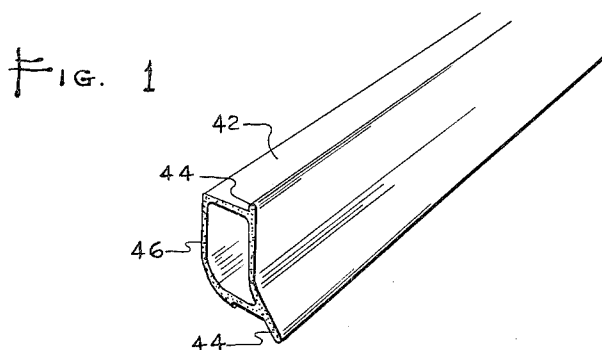


Fig. 1

Fig. 3

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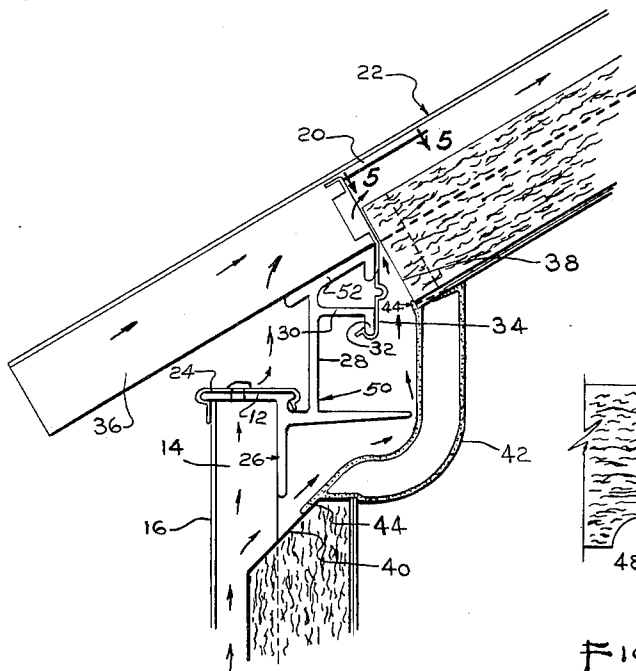


FIG. 4

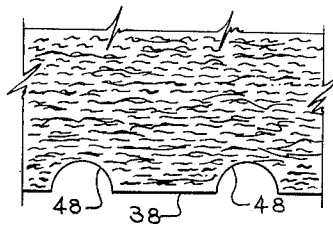


FIG. 5

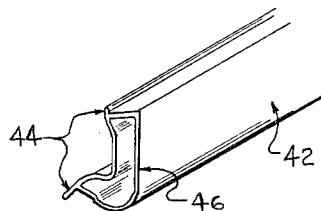


FIG. 6

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3,221,452

FROST BARRIER AND VENT

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5 Claims. (Cl. 52—95)

This invention relates to building and container construction having hollow panel walls, providing a frost barrier and vents at the corner joints between the side wall panels and the roof or cover panels.

The object of this invention is to make an extrusion forming a cover support having a base flange for mounting over the upper edge of the outer side of the wall panels, and an upper flange for supporting the outer side of the roof or cover panel, and to provide a frost barrier in the inside corner between the inner sides of said panels and a vent connection between the hollow vent spaces in said panels.

A further object is to make the outer side of the roof or cover panel overhang the top of the wall panel to provide eaves, and the inner sides having their edges spaced from the support extrusion to provide vent passage openings between the roof and wall hollows for passages around the inside of said support extrusion, and a resilient corner sealing strip between said inner side edges spaced from said support extrusion to form said vent passages.

A further object is to make the outer sides of said hollow panel walls of heat conductive material and the inner sides of heat insulating material, said corner sealing strip being of heat insulating material.

A further object is to make said corner sealing strip of hollow construction to provide more resilience to the seal and a good frost barrier at the ceiling corners in the building.

A further object is to provide said sealing strip with a rounded moulding shape bulging internally between the ceiling and wall surfaces and a substantially concave shape externally with flanges extended upwardly and downwardly over the edges of the inner sides of the respective hollow panels.

Other and more specific objects will become apparent in the following detailed description of the invention as illustrated in the accompanying drawings, wherein:

FIG. 1 is a sectional view in elevation of a side wall and flat roof or cover corner structure made according to the present invention,

FIG. 2 is a partial end view of the inner side of the hollow cover panel taken on the line 2—2 of FIG. 1,

FIG. 3 is a perspective view of the sealing strip extrusion, and

FIGS. 4, 5 and 6 are similar views of a side wall and inclined roof or cover corner structure.

The present invention is applicable generally to the roof or cover corner structure, where hollow ventilated walls are used and it is desired not to close off the communication of the hollow passages with the outside and between the edges of the walls at the corner. For illustration, I have shown a panel wall structure disclosed in my pending application Ser. No. 200,682, filed July 7, 1962.

The flat roof or cover construction shown in FIG. 1, differs from the inclined roof or cover construction of FIG. 4 substantially only in the support extrusion forms, which provide supporting flanges 18 and 52 at correspondingly different angles in accordance with the inclination of the roof or cover wall.

The support extrusion 10 the cross-section of which has a base flange 12 for mounting over the outer side 14 of the hollow side panel wall 16 and an upper channel

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flange 18 for supporting the outer side 20 of the hollow roof or cover panel wall 22. The inner sides of the side panel wall and the roof or cover panel wall comprise insulation slabs, such as 38 and 40, which are cut short of the corner support extrusion 10, providing passage spaces for ventilation between the hollows of the walls.

Base flange 12 may be perforated and a correspondingly perforated mounting strip 24 may be clipped over the top of the base flange to hold the side 14 firmly against the inside of the flange groove 26. The support extrusion includes a web 28 extending from this flange groove up to the upper channel flange 18. A second channel flange 30 extends from the web 28 below flange 18. The lower edge 32 of channel flange 30 serves as an anchor over which the spring clips 34 are snapped for holding down the outer side 20 on the flange 18. Each clip 34 has an upper plate portion which is adapted to be attached to the outer side 20. The outer side 20 may be extended to overhang the base flange on top of the outer side 14 to provide eaves 36 for the roof structure if desired.

The edges of the inner sides or slabs 38 and 40 of the roof and side panel walls are closely spaced from the support extrusion 10 and provide a gap inside the corner structure between the side wall and the ceiling, which is filled by a self supporting resilient sealing strip 42. This sealing strip may be made hollow to improve its flexibility, resiliency and adaptability to form a good sealing contact with uneven edges of the gap and to provide a good frost barrier in the event of freezing temperatures on the outside of the structure. The hollow sealing strip may be provided with a concave rear wall with external flanges 44 at top and bottom for mounting against the edges 38 and 40 respectively when the strip is inserted into the gap with its front convex wall bulging out in the shape of a moulding strip 46 in the inside corner between the ceiling and the side wall surfaces.

The end of the inner side of the roof or cover wall 22 may be provided with spaced cross grooves 48 to assure ample clearance between this end and the support extrusion for better ventilation, if desired.

The modified support extrusion 50 in FIG. 4 has its upper channel flange 52 extending at an angle in accordance with the incline of the roof or cover panel wall 22. The rest of the structure is substantially the same as illustrated in FIG. 1 and is designated by like numerals.

Other obvious modifications in the details of the parts may be made without departing from the spirit and scope of this invention, as defined in the appended claims.

I claim:

1. A side and cover hollow panel wall corner structure comprising

side and cover hollow panel walls each having inner and outer sides with hollow spaces forming ventilating passages between them,

a cover support extrusion for said corner structure having a base flange mounted over the upper edge of the outer side of the side panel wall, and an upper flange supporting the cover panel wall at the outer side thereof,

said base flange being perforated over the hollow space portions in said outer side of the side panel wall, said support extrusion having a web extending downwardly from the inner edge of its base flange and then being turned upwardly and extending to the outer edge of said upper flange,

a perforated clip fastened over said base flange and having a ledge extending over its outer edge holding the top of said outer side of the side panel wall in place under said base flange against said downwardly extending portion of said web,

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- said web having a channel flange extending from its side,
 a spring clip having an upper plate portion attached to said outer side of the cover panel wall and having a hooked lower edge sprung over the lower edge of said channel flange, thereby fixing the cover panel wall over said upper flange,
 the inner sides of said side and cover walls being terminated short of their respective outer sides and of said support extrusion so that their edges are closely spaced from each other and from said support extrusion at the corner of the structure, and
 a resilient sealing strip mounted between said closely spaced inner side edges and spaced from said support extrusion to form a passage with the inside of said support extrusion extending between the ventilating passages of the side and cover panel walls.
2. A corner structure as defined in claim 1, said outer sides of said walls being of heat conductive material.
3. A corner structure as defined in claim 2, said inner sides of said walls and said sealing strip being of heat insulating materials.
4. A corner structure as defined in claim 3, said resilient sealing strip being a hollow extrusion, providing a frost barrier in freezing weather as well as insulation.

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5. A corner structure as defined in claim 4, said hollow extrusion having an outward substantially concave wall with external flanges at top and bottom mounted against the edges of said inner sides when the strip is inserted therebetween with its inward bulging wall providing a moulding-like appearance at the ceiling corner.

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