United States Patent

[11] 3,603,056

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[54] **BATTEN SEAM JOINT**
3 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** ..... **52/46 D,** 52/461, 52/468
[51] **Int. Cl.** **E04d 1/36**
[50] **Field of Search** 52/465, 461, 468, 463

[56] **References Cited**

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Assistant Examiner—R. A. Schwartz
Attorney—Webster B. Harpman

ABSTRACT: A batten seam joint providing a leakproof joint between adjacent roofing or sheathing member includes a longitudinally extending extrusion having spaced upstanding flanges inwardly from the edges thereof and a centrally disposed bifurcated fastener section. The adjacent longitudinal edges of the roofing or sheathing to be joined are positioned over the upstanding flanges and bent downwardly therebetween and a cap strip of the roofing or sheathing material is formed with longitudinally extending down turned flanges which are doubled and of a size to fit over the spaced upstanding flanges of the extrusion. A plurality of cut sections of a different extrusion are positioned at intervals in the cap strip and these cut sections include centrally disposed depending fastener members for engaging the bifurcated fastener so as to hold the cap strip securely in position and complete the batten seam joint.

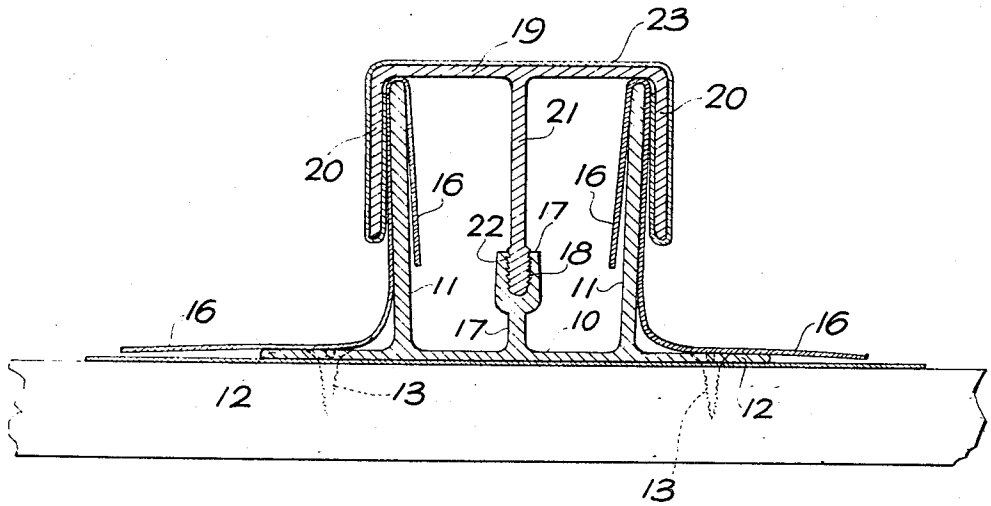

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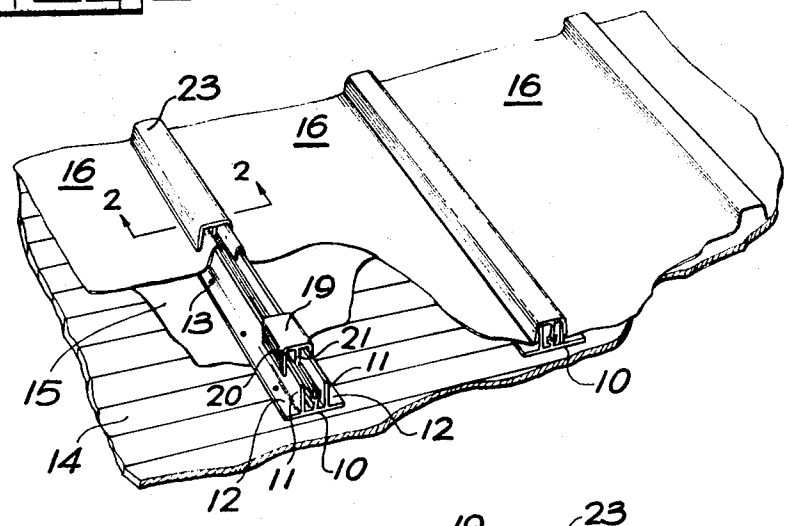
FIG. 1



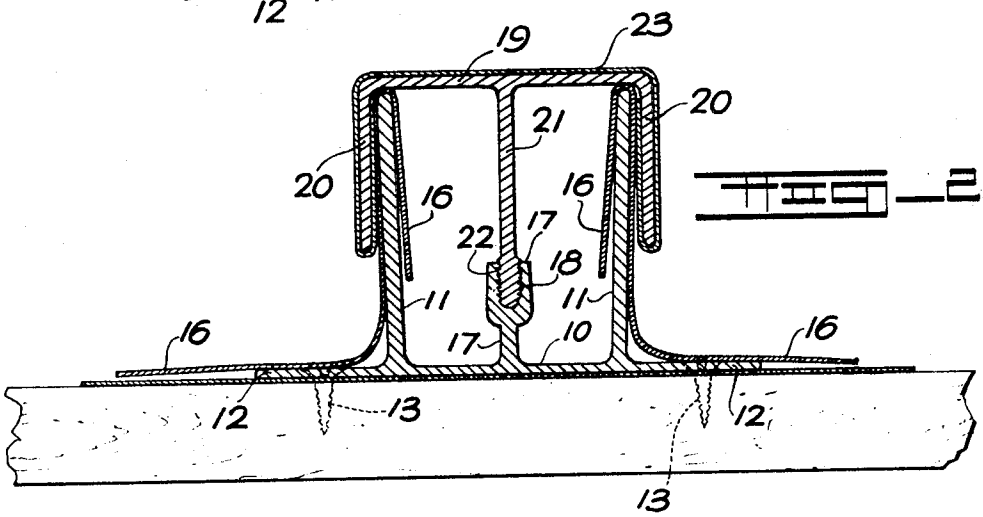


FIG. 2

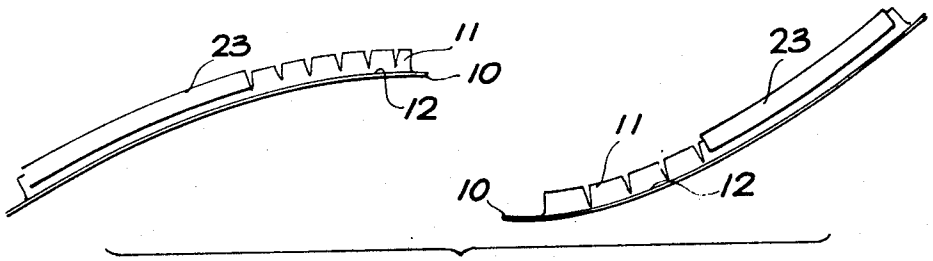


FIG. 3

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BATTEN SEAM JOINT

BACKGROUND OF THE INVENTION

1. Field of the invention

This invention relates to batten seam joints of the type normally employed to provide leakproof upstanding seam joints between adjacent longitudinal edges of sections of roofing or sheathing material such as sheet metal or the like.

2. Description of the Prior Art

Prior structures of this type usually employ wooden batten strips over which the upturned longitudinal edges of the roofing or sheathing material to be joined are shaped and fastened. Alternate constructions include metal shapes substituted for the wood batten strips and metal fasteners holding the longitudinal upturned edges of the roofing or sheathing material in position thereover (See U. S. Pat. No. 2,907,287). This invention eliminates exposed fasteners and the openings through which the same have been positioned as customary in the prior art structures.

SUMMARY OF THE INVENTION

A batten seam joint structure comprising an elongated member having spaced upstanding flanges longitudinally thereof and having a longitudinally extending bifurcated fastener member therebetween, the inner opposed surfaces of the bifurcated member having longitudinally extending grooves therein, a plurality of clips each of which has downwardly extending flanges on its longitudinal edges and a central down turned portion having longitudinally extending ribs on its outer lower surfaces, said clips being positioned at spaced intervals in an inverted channel shaped closure member formed of flexible sheet-roofing material, the flanges of which are reversely bent on themselves and arranged to cover and enclose the clips and the upstanding spaced flanges of the elongated member so as to hold the channel-shaped closure member in position thereon and in clamping relation to the spaced longitudinal edges of a pair of roofing sheets having their opposite edges shaped to provide hook like engagement with the upstanding flanges of said elongated member.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary top plan perspective view of a roof structure incorporating the batten seam joint.

FIG. 2 is an enlarged cross-sectional illustration taken on lines 2—2 of FIGURE 1.

FIG. 3 is a composite view showing in side elevation two portions of the batten seam joint structure showing the ability of the same to be curved in an outwardly or inwardly bowed shape.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In its simplest form the batten seam joint structure of this invention is comprised of an elongated member 10 having a pair of upstanding spaced flanges 11 thereon, spaced inwardly from the longitudinal edges thereof and so as to define a pair of out turned flanges 12. The out turned flanges 12 are apertured at longitudinally spaced intervals for the reception of fasteners such as screws 13 by which the member 10 may be mounted to the roofing deck or similar structure.

By referring to FIG. 1 of the drawings in particular it will be seen that a roofing deck structure has been disclosed and is indicated by the numeral 14 and that a section of roofing material 15 is shown superimposed thereon. The member 10 is positioned over the material 15 and secured to the deck 14 by fasteners 13 and it will be observed that adjacent sections of sheet-roofing material 16 are arranged so that their longitudinal edges may be positioned upwardly and over and down turned with respect to the spaced flanges 11 of the member 10. In the enlarged detail of FIG. 2 of the drawings the roofing material 16 is shown with the longitudinal edges thereof so formed.

Still referring to FIGS. 1 and 2 of the drawings it will be seen that midway between the upstanding flanges 11 there is a bifurcated flange 17, the inner opposite surfaces of which are sharply grooved as at 18. The bifurcated flange 17 forms a continuously extending fastener configuration for the reception of a plurality of spaced clips 19 which are seen in FIG. 1 of the drawings and one of which is shown in cross section in FIG. 2 of the drawings. Each of the clips 19 has a pair of down turned flanges 20 defining its longitudinal edges and a centrally disposed depending portion 21, the lower end of which is formed with sharpened ribs 22 on its opposite sides and thereby arranged for locking engagement with the bifurcated flange 17.

The clips 19 are normally positioned in spaced relation within in inverted channel-shaped flexible closure member 23 formed of roofing material which is preferably the same material as the roofing material 16, the ends of which are being joined and sealed by the batten seam joint structure.

In FIG. 2 of the drawings, the enlarged detail illustrates the down turned and upturned configuration of the flanges formed in the channel-shaped flexible closure member 23 which covers the exterior surfaces of the clips 19 and the inner opposed surfaces of the flanges 20 thereof. When the clips 19 are positioned in the channel-shaped closure member 23 the same may then be applied to the member 10 in overlapping relation to the flanges 11 thereof and the depending portion 21 will then engage the elongated bifurcated flange 17 and the fastening configurations 18 and 22 thereof will lock the assembly in position.

It will be seen that the upstanding flanges 11 are bent outwardly away from one another in slight degree so that when the clips 19 and the channel-shaped closure member 23 are applied longitudinal there is sufficient resilience in the flanges 11 to insure a close contact with the clips 19 as best illustrated in FIG. 2 of the drawings.

It will occur to those skilled in the art that the resulting batten seam joint completely conceals the fastening means and at the same time insures a tight yet flexible seal between the longitudinal edges of the sheets of roofing material 16.

It will further be observed that the construction disclosed can be shaped easily to conform to outwardly bowed roofing sections or inwardly bowed roofing sections as seen in the two figures of FIG. 3 of the drawings. In arranging the device to be used with roofing or mansard roofing sections wherein the ornamental appearance of a batten seam roof is highly desirable, the flanges 11 may be notched as shown in FIG. 3 of the drawings to enable the member 10 to conform to the particular shape of the basic roof structure. It has been determined that in large areas of relative small curvature, the distortion capable in an aluminum extrusion from which the member 10 and the clips 19 are preferably formed, it is sufficient to permit the construction to be conformed to the small curvature without the notching of the flanges 11 as seen in FIG. 3 of the drawing. Although but one embodiment of the present invention has been illustrated and described, it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit of the invention.

We claim:

1. A batten seam joint structure comprising an underlying elongated member having spaced upstanding flanges and a bifurcated flange therebetween, and elongated inverted channel shaped flexible closure member, the flanges of said closure member being reversely bent on themselves, a plurality of channel-shaped clips nested in spaced relation in said elongated flexible closure member, said clips having depending portions with means for engagement in said bifurcated flange of said underlying elongated member, a pair of adjacent roofing sheets having their opposite edges shaped to provide hooklike engagement with the upstanding flanges of said underlying elongated member and held thereon beneath said elongated flexible closure member and the clips therein in sealing relation thereto.

2. The batten seam joint structure set forth in claim 1 and wherein the bifurcated flange has a plurality of grooves on its oppositely disposed inwardly facing surfaces and the depending portions of said clips have registering ribs on the opposite outer sides thereof.

3. The batten seam joint structure of claim 1 and wherein

the elongated inverted channel-shaped flexible closure member comprises a section of sheet material having its reversely bent flanges positioned around the flanges of said channel-shaped clips.