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COMBINED FACIA AND ROOF PANEL HOLD DOWN MEANS

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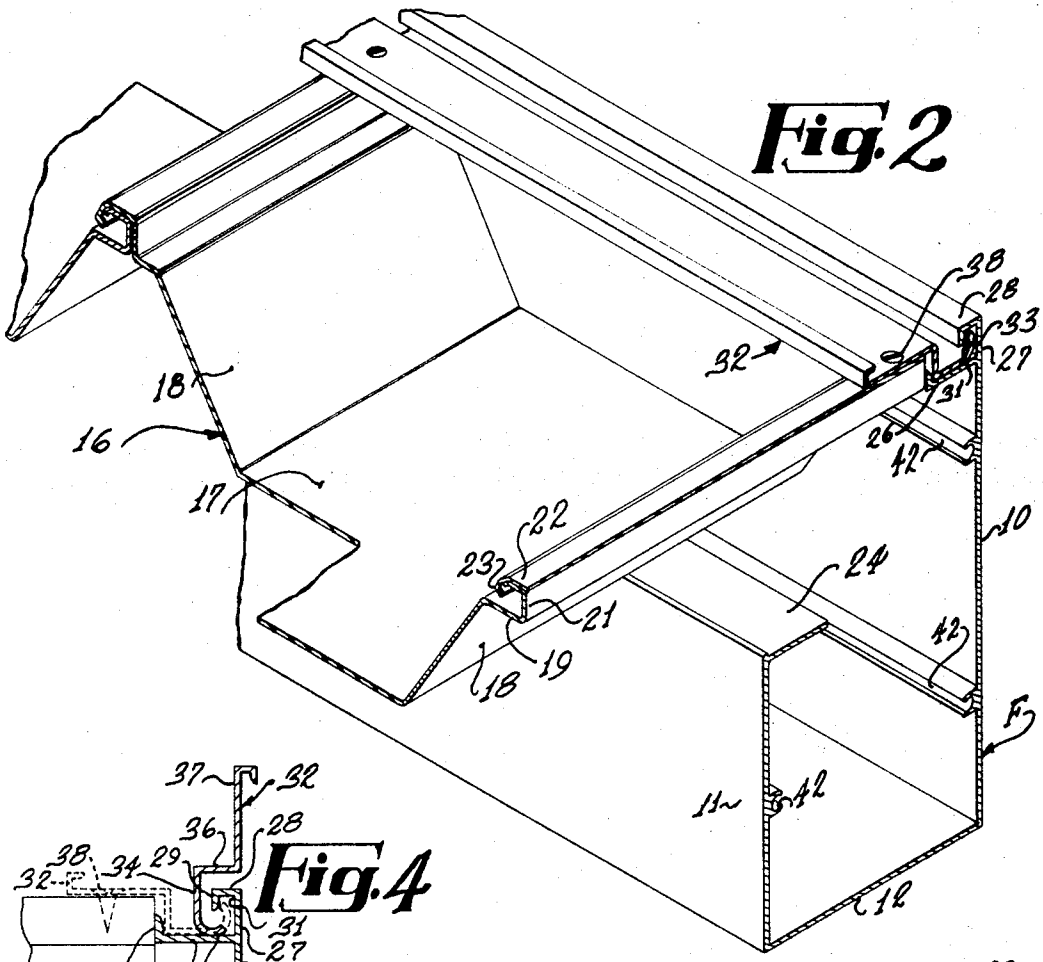

Fig. 2

Fig. 4

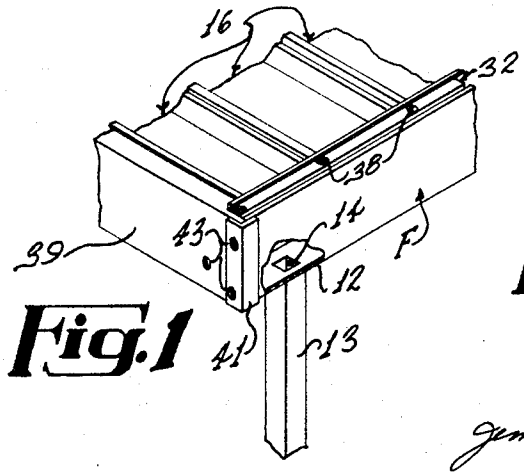

Fig. 1

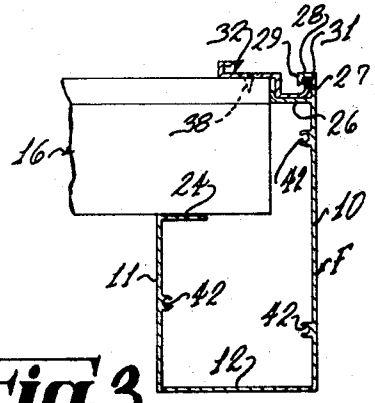

Fig. 3

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COMBINED FACIA AND ROOF PANEL HOLD DOWN MEANS

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ABSTRACT OF THE DISCLOSURE

A combined facia and panel roof hold down means in which the facia is provided with a transverse flange on which the panels rest, a transversely elongated groove on the inner surface of the facia, outwardly disposed relative to the ends of the panels, and an elongated clip having an upturned end disposed to fit in said groove whereby, when the clip is rotated so that a rearwardly extending, flat portion contacts the tops of the panels, and a fastener is passed therethrough and into the panels, the entire structure is securely locked together.

This invention relates to a combined facia and panel roof hold down means and has for its principal object the provision of an improved, simple means for holding roof panels in place where they join or are supported from a facia.

Generally stated, an object of my invention is to provide an improved hold down for facia-panel roof construction in which the free edges of the panels adjacent the facia are held in place by means of a simple, effective, transverse locking clip which cooperates with a groove provided therefor in the facia and overlies the lapped edges of the roof panels, thereby to hold them in place on the facia.

More particularly, an object of my invention is to provide an improved hold down means for the ends of lapped, sheet metal roof panels which embodies essentially an elongated clip member which is adapted to interlock at one end with a groove provided on a facia and with its free end secured by fastening means which pass into the lapped edges of the roof panels, thereby securely fastening the lower edges of the panels to the facia.

In the construction of sheet metal, panel type roof, such as are employed for car ports, patios, and so forth, it often is desirable to cover the lower ends of such panels by a facia member. Further, it oftentimes is desirable for such facia also to incorporate or form a gutter. In view of the fact that most of the panels which form the roof are dished and lapped at their edges, it is not practical to secure bottoms of such members to the facia flange because to do so would permit leakage past such fasteners. It further is extremely difficult in fabricating such roof construction to snap each individual, overlapped set of the panels under a preformed flange or the like on the facia and in general, it can be stated that heretofore it has been time consuming to fabricate such a roof construction.

Generally stated, my invention comprises an improved facia and roof construction in which the roof panels rest directly on a flange provided therefor on the facia. The roof panels further abut against another flange adjacent the forward, inner wall of the facia. Above the wall just mentioned I provide a longitudinally extending downwardly opening groove, the bottom of which is located approximately at the tops of the overlapped edges of the roof panels which rest on the first named flange. With the facia in place, the panels simply are lapped over each other at their edges and rest on the first named flange. With all of the panels thus in place it is only necessary to install my improved clip by inserting one end under

the groove at the top of the facia and pivot it downwardly, whereby a portion thereof overlaps the lapped edges of the panels and to insert sheet metal screws or the like through the clip into the lapped edges of the panels. When this has been done the panels are securely fastened to the facia and are spaced from the front wall thereof to permit the water draining from the bottoms of the pans to fall into the facia which, incidentally, may also be a gutter and a load bearing member for the lower end of the roof.

Construction illustrating features of my invention is shown in the accompanying drawing forming a part of this application in which:

FIG. 1 is a fragmental view of a portion of a facia and associated roof panels, the parts being broken away;

FIG. 2 is an enlarged isometric, fragmental view of a section of my improved facia and hold down means;

FIG. 3 is a detail, fragmental sectional view showing my improved clip in position holding the panels down on the flange of the facia; and,

FIG. 4 is a fragmental detail view drawn to a larger scale and showing the method of inserting the clip and securing it to the panels.

Referring now to the drawings for a better understanding of my invention I indicate in FIG. 1 generally by the letter F a portion of the facia. The facia may be provided with a front wall **10**, a rear wall **11** and a bottom wall **12** which in effect form a gutter. A downspout **13** may be provided to receive water through a hole **14** provided in the bottom of the wall **12**.

The individual roof panels indicated generally by the numeral **16** may be of the type in which the bottoms or pans thereof indicated at **17** are continued as upwardly sloping walls **18**, outturned flanges **19**, a vertical flange **21**, an inwardly turned horizontal flange **22** and finally an overturned, locking flange **23**. The purpose of the flange formation is to permit adjacent side edges to overlap as shown in the drawing, in interlocking fashion, thus to provide a continuous, waterproof roof.

Referring particularly to FIG. 3 it will be seen that the rear wall of the facia F is provided with a flange **24**, forwardly turned, on which the bottoms **17** of the roof members rest. Furthermore, the front wall is provided with a rearwardly turned, horizontal, continuously extending wall **26** having a vertical flange **26a** against which the edges of the panels abut. Therefor, when in place, as stated, the panels rest on the flanges **24**, and their lower or free ends abut the rear edge of the flange **26a**.

The forward wall **10** of the facia F extends upwardly as indicated at **27**, and is provided with a bent over, horizontal flange portion **28** and a downturned flange **29**. It will be apparent that this arrangement of flanges **27**, **28** and **29** provides a longitudinally extending groove **31**, extending for the entire length of the facia.

Illustrated at **32** is my improved clip member which likewise may be an extrusion of metal, and which is long enough to overlie the entire series of roof panels. As shown, the clip **32** is provided with an outwardly disposed end **33**, bent upwardly as shown. The upwardly bent end is joined by a flat section **34**. At the rearward end of section **34** is a generally vertically disposed section **36** and finally, a generally horizontally disposed section **37**. It will be noted that the section **34** is substantially the length of the upper portion of the wall **26**.

In use, and in erecting a roof with my improved construction, the facia, which may be an integrally formed extrusion of aluminum or the like, may be erected as a load bearing member or otherwise tied in to the framework of the roof. At all events, whenever the framework of the roof, including the facia, is in position, the roof panels **16** simply are laid in place, with their edges overlapping and interlocked and with the lower ends thereof

resting on the flange **24** and abutting the flange **26a** of flange **26**. Thus, the entire roof is laid in place without attachments insofar as the lower ends are concerned. When this is done the clip **32**, namely, a continuous length of the same, is inserted by first starting it generally as shown in the full line position, FIG. 4, so that when moved to the dotted line position of that figure or to the full line position of the other figures, end **33** engages in the groove **31**. Further downward movement of the section **37** of the clip positions it as shown in the full lines in FIGS. 1, 2 and 3, namely, with the portion **34** lying on top of the flange **26** and with portion **37** lying on top of the overlapped edges of the roof members. When thus positioned it is an easy matter to insert sheet metal fasteners such as screws **38** through the clip and into the lapped edges of the panel. Thus, all of the roof panels are securely locked and held firmly down onto the flange **24**. In view of the fact that the end of the clip is locked in the groove **31**, the entire ends of the panels thus are prevented from moving upwardly, as would occur when wind tends to blow the roof upwardly.

The entire roof construction may be finished by providing side panels **39** and angle members **41**. The facia may be provided with screw receiving grooves **42** which receive screws **43**, thus to hold the members **39** and **41** in place.

In view of the foregoing it will be apparent that I have devised an improved combined facia and panel roof construction. My invention is characterized by its simplicity and the accuracy with which it holds the panels in place. Further, my invention results in a considerable amount of saving in labor inasmuch as the panels may all be laid in place prior to actually physically affixing them to the facia. By the expedient of the clip which passes over all the panels and is interlocked under the flange of the facia, I am able to hold the lower ends of all of the panel members in place, without further means of attachment.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claim.

I claim:

1. In a combined facia and lapped panel roof construction,

(a) a first transverse flange on the inner side of the facia on which the roof panels rest,

(b) there being a transversely elongated clip receiving groove in the facia located outwardly of the ends of the roof panels,

(c) a transversely elongated clip having one end disposed for insertion in the groove and another portion disposed to engage the tops of the panels adjacent the ends thereof,

(d) fastening means securing the clip to the panels,

(e) the end of the clip disposed for insertion in the groove being upturned and said other portion of the clip being a generally flat section disposed to lie on top of the lapped edges of said panels with said fasteners passing through the said flat section and into the panels,

(f) a second transverse rearwardly extending flange on the facia located in part beneath the groove, the end portions of the panels being disposed to abut the rearmost edges of said second flange,

(g) said clip being further provided with a second generally flat portion located intermediate the upturned end and flat portion thereof, said intermediate flat portion being disposed to lie on top of the second flange, whereby when assembled the clip is securely locked against upward and downward shifting relative to the facia and the panels are securely held in contact with and on top of the first named transverse flange of the facia.

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