

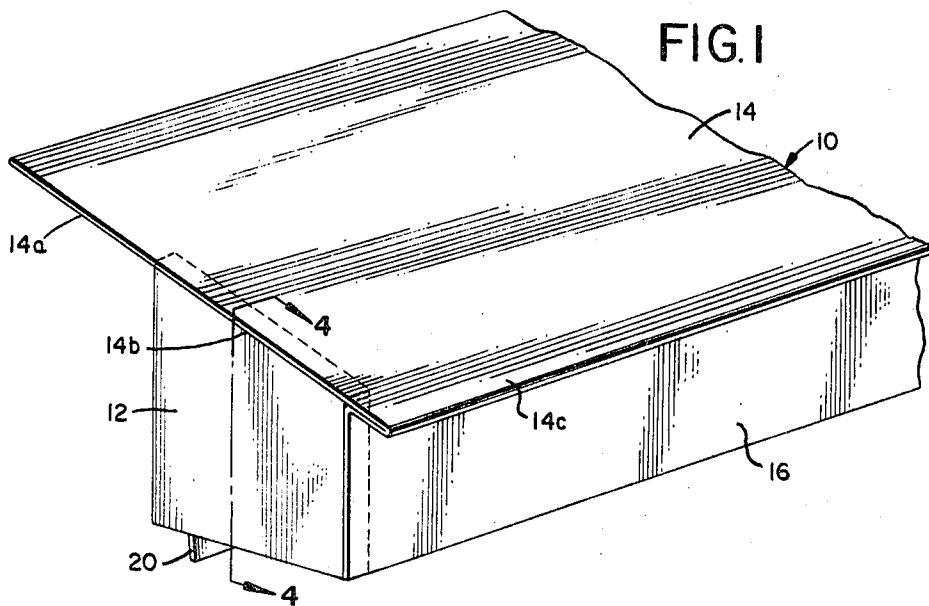
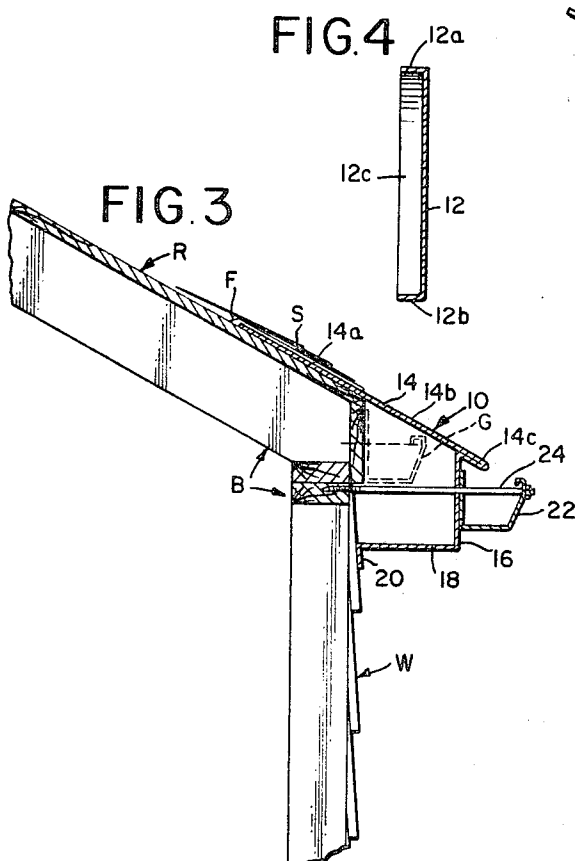
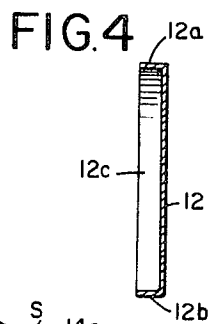
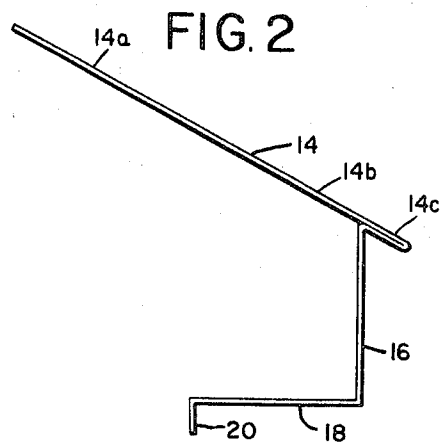
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3,436,877

PREFABRICATED EAVE MEMBER

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1

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3 Claims

ABSTRACT OF THE DISCLOSURE

This invention relates to a prefabricated metal eave which is installed on buildings having no roof overhang. The prefabricated eave extends the roof of the building to give an enclosed box eave. The inclined top section of the eave includes substantial flashing and eave extension portions unpunctured by nails to prevent water damage caused by water backup from clogged gutters. New gutters are attached by hangerbolts extending through the eave and anchored into the building, whereby no strain is placed on the prefabricated eave structure.

An eave, for the purpose of this invention, is defined as an extension of the roof which projects beyond the side of a building. The eave can extend along the sloping edge of a roof, such as on a house, or it can extend along the horizontal edge of the roof. Rain gutters on houses are attached to the horizontal eaves and, as will be pointed out in the ensuing discussion, the eave has aesthetic and practical importance in respect to the home.

During World War II a shortage of lumber caused home builders to eliminate the eaves, or roof overhang, from most of the houses built during that period. The eaveless house became a tradition of economy for home builders and, many years after the war, houses are still being built without any roof overhang.

An eave adds to the aesthetic appeal of a house. This is evidenced by the fact that as the size and cost of a house increase, whereby the additional cost of an eave is minimized, a roof overhang will be provided. It is also evident that the size of the eave extension has a relationship to the cost and luxuriousness of a house. As the size and cost increases the bigger the eave will be, although this need not always be true.

Actually the aesthetic appeal of an eave on a house is second to its practical importance. An eave protects the house proper from leakage due to the malfunction of rain gutters. The gutters are attached to the edge of the horizontal eaves, but if the house is eaveless then the gutters must be attached at the edge of the roof directly onto the outside wall of the house. When a rain gutter becomes inoperative due to the collection of leaves or ice in it, water will back up the roof, seeping under the tiles and consequently will find its way through the roof. The leakage will usually occur close to the edge of the roof. When the water leaks through the roof of an eave no damage is done to the house since the leakage is on the outside. However, considerable damage can result on the eaveless house since the leak will pass water into the house proper and the water will either follow across the ceiling or down through the wall. The type of damage which can result from the backing up of water on the roof of an eaveless house includes; damage to ceiling and wall plaster, damage to hardwood floors, blistering of outside paint due to the excessive moisture and if the condition is prolonged the frame structure will be subject to decay. All but the latter damage occurred to the inventor's house. Many

2

neighbors in the vicinity of the inventor's house experienced similar damage.

There are methods for eliminating the problems which accompany eaveless homes. One obvious method is to build a wooden roof extension out from the house and attach new gutters. This method is expensive and time consuming. It would also require the installation of roofing tile over the extension and matching the color of the old tile with new is a problem which seldom sees a satisfactory result.

A roofing expert suggests the installation of metal flashing which should overhang the roof and go down behind the gutters one to two inches. The flashing should extend up under the roofing felt for eight to ten inches. This remedy is said to prevent the leakage caused by clogged gutters. The method is not entirely satisfactory because, after the flashing has been extended up under the roofing felt the shingles near the edge of the roof are nailed down and the nails puncture the flashing, again creating points where water can leak through the roof.

It is the purpose of my invention to be able to install the necessary flashing and also add an eave to an eaveless house by a simple and inexpensive method. To this end there is provided an eave for installation on a building including a generally vertical wall and a sloping roof having a covering but no overhang, such eave being prefabricated to form a plurality of angularly related contiguous sections including a generally vertical depending flange section adapted to be secured to the vertical wall, a generally horizontal soffit section extending outwardly from the flange section, a generally vertical fascia section extending upwardly from the soffit section, and an inclined top section including an eave extension portion extending upwardly and inwardly from the fascia section over the soffit section, a flashing portion extending upwardly and inwardly from the eave extension portion a substantial distance beyond the flange section and adapted to be secured to the roof under the covering, and an overhang portion extending downwardly and outwardly from the eave extension portion beyond the fascia portion. The eave is prefabricated from an elongated strip of sheet metal, the sections are joined along longitudinal bend lines, and the top section is reversely bent upon itself at its juncture with the fascia section to form the overhang portion. The new gutter is adapted to be arranged against the fascia section beneath the overhang portion and to be hung independently of the eave by a generally horizontal hangerbolt adapted to extend through the gutter and fascia section and to be anchored into the wall.

FIG. 1 is a partial perspective view of an eave embodying the invention with an end cap installed.

FIG. 2 is an end view of the eave with the end cap removed.

FIG. 3 is a vertical section through a building and showing the eave and new gutter installed on the roof and wall over the existing gutter shown in dotted lines.

FIG. 4 is a section through the end cap taken generally along line 4—4 of FIG. 1.

Referring to the drawing, one of the basic concepts of the invention is embodied in a prefabricated metal eave generally indicated at 10 and having a shape substantially similar to that shown in the perspective view of FIG. 1 and the end view of FIG. 2. FIG. 1 also shows the end cap 12 which is installed as described below. The prefabricated eave 10 can be made of any suitable metal, which can be painted any desired color before or after the forming operation. This inventor has used for his prototypes commercially available painted aluminum sheet stock about

19 mils thick and similar to that used in the manufacture of aluminum cladboard siding. The prefabricated shape can be formed on any suitable machine at any suitable stage in the manufacture of the finished eave extension. The inventor employed a capable sheetmetal fabricator to form the first prototypes of the subject invention on a ten foot sheet metal brake and these prototypes were installed by the inventor on his own house as an experiment.

Thus, to summarize, in a building construction including a generally vertical wall, and an inclined roof having a covering thereon, such roof and covering terminating substantially flush with the outer surface of the wall at the outer edge of the roof, there is provided a prefabricated eave member secured to the building construction at the juncture of the wall and roof. The eave member, which is formed from an elongated strip of sheet metal, comprises a plurality of angularly related contiguous sections joined along longitudinal bend lines, such sections including a generally vertically disposed flange section secured to the vertical wall, a generally horizontally disposed soffit section extending outwardly from the flange section, a generally vertically disposed fascia section extending upwardly from the soffit section in substantially parallel relation to the flange section and an inclined top section extending upwardly and inwardly from the fascia section in overlying relation to the soffit section. The top section includes a flashing portion generally co-planar therewith, such flashing portion extending inwardly of such flange section a substantial distance inwardly of the roof edge and underlying the covering, and this top section further includes an overhang portion in generally coplanar relation therewith projecting outwardly of the fascia section, the strip being reversely bent upon itself at the juncture of the fascia and top sections to form such overhang portion.

Further, there is provided in such building construction an elongated gutter disposed against the fascia section beneath the overhang portion, and an elongated generally horizontal hangerbolt extending through the gutter and fascia section and anchored in the wall, thereby supporting the gutter in cantilevered relation to the building construction independently of the eave member.

FIG. 2, which is an end view of the eave 10 shows the major dimensional features. Numeral 14 represents the inclined top section which includes the flashing portion 14a which extends up under the roofing felt F forming part of the covering of roof R (FIG. 3), the eave extension portion 14a, and the overhang portion 14c which extends about one inch beyond the face or fascia section 16, which face comes into contact with but need not be attached to the back side of the new gutter 22. Along the back edge of the bottom side or soffit section 18 at about a right angle to it is a tab or depending flange section 20 which is anchored upon installation (FIG. 3) to the side or generally vertical wall W of the house or building B by nails (not shown). From the foregoing, eave 10 may be more specifically described as being prefabricated into convenient lengths, from five to thirty feet, from a single elongated strip or sheet of aluminum, painted or unpainted and between fifteen and thirty mils in thickness, to form a plurality of angularly related contiguous sections joined along longitudinal bend lines. These sections are composed of generally vertical depending flange section 20 (or more than one such section) from one-half to one and one-half inches in height; generally horizontal soffit section 18 extending outwardly from section 20 and from four to six inches in depth; generally vertical fascia section 16 extending upwardly from soffit section 18 and from five to seven inches in height, and inclined top section 14 which can be made to conform to the slope of the roof. This latter section includes eave extension portion 14b extending upwardly and inwardly from fascia section 16 over soffit section 18, flashing portion 14a extending upwardly and inwardly from eave extension portion 14b a substantial distance beyond flange section 20, and a three-quarter

to one and one-half inch overhang portion 14c extending downwardly and outwardly from portion 14b beyond fascia section 16, such overhang portion being formed by reversely bending section 14 upon itself at its juncture with fascia section 16. The installation of such eave structure adds to the aesthetic appearance of the building and offers a practical solution to water leakage problems which can occur on buildings without eaves.

As best seen in FIGS. 1 and 4, an open end of eave 10 readily may be closed by end cap 12 which has top, bottom and front flange portions 12a, b and c respectively conforming to the inner sides of eave extension portion 14b, soffit section 18 and fascia section 16 respectively, for securement thereto by any suitable means (not shown). Thus, end cap 12 may be arranged within and close the opening formed by such soffit and fascia sections and eave extension portion.

Referring to FIG. 3, it shows a cross section of a completely installed eave 10 and the new gutter 22. An important feature of the invention is that the existing gutter G does not need to be removed except for several inches at each end. This reduces the installation time and consequently reduces the cost of installing the eave. The flashing portion 14a which extends up under the roofing felt F is nailed down on roof R, along with the first row of previously loosened asphalt tiles or shingles S which complete the roof covering. The nails (not shown) are driven along the top edge of the flashing portion 14a. This leaves approximately ten to twelve inches of metal flashing portion 14a and eave extension portion 14b without any nail punctures through which water can seep. The new rain gutter 22 is supported against fascia section 16 on long hangerbolts 24 (only one shown) which pass through fascia section 16 beneath eave extension portion 14b and the old gutter G, and are anchored into the wall W of the house or building B. The hangerbolts 24 are from ten to twelve inches long, one quarter to three eighths inch in diameter and have a thread for wood on one end and a machine thread on the other end. This type of support allows the gutter 22 to hang independently of the eave 10, thus reducing the weight which the eave must support.

I claim:

1. In a building construction, a generally vertical wall and an inclined roof having a covering thereon, said roof and covering terminating substantially flush with the outer surface of said wall at the outer edge of said roof, a prefabricated eave member secured to said building construction at the juncture of said wall and roof, said eave member comprising a plurality of angularly related contiguous sections, said sections including a generally vertically disposed flange section secured to said vertical wall, a generally horizontally disposed soffit section extending outwardly from said flange section, a generally vertically disposed fascia section extending upwardly from said soffit section in substantially parallel relation to said flange section and an inclined top section extending upwardly and inwardly from said fascia section in overlying relation to said soffit section, said top section including a flashing portion generally co-planar therewith, said flashing portion extending inwardly of said flange section a substantial distance inwardly of said roof edge and underlying said covering, said top section further including an overhang portion in generally co-planar relation therewith projecting outwardly of said fascia section.

2. The building construction of claim 1, wherein said eave member comprises an elongated strip of sheet metal, said sections being joined along longitudinal bend lines and said strip being reversely bent upon itself at the juncture of said fascia and said top sections to form said overhang portion.

3. The building construction of claim 1 and further comprising an elongated gutter disposed against said fascia section beneath said overhang portion, an elongated generally horizontal hangerbolt extending through said gutter

and fascia section and anchored in said wall, thereby supporting said gutter in cantilevered relation to said building construction independently of said eave member.

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