

[54] BUILDING ELEMENT

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[51] Int. Cl. E04d 13/06
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[57] ABSTRACT

A building element for attachment to the periphery of the roofing rafters of a building in lieu of a separate guttering and eaves covering, the building element comprising an eaves cover panel length formed along one edge thereof with an integral channel-shaped gutter section.

1 Claim, 10 Drawing Figures

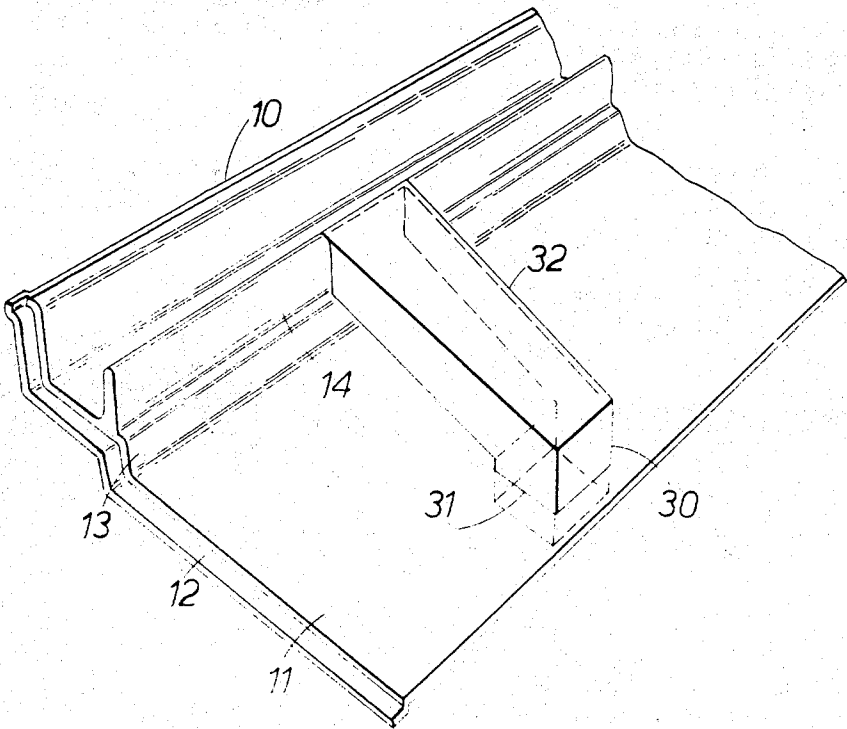


FIG. 1.

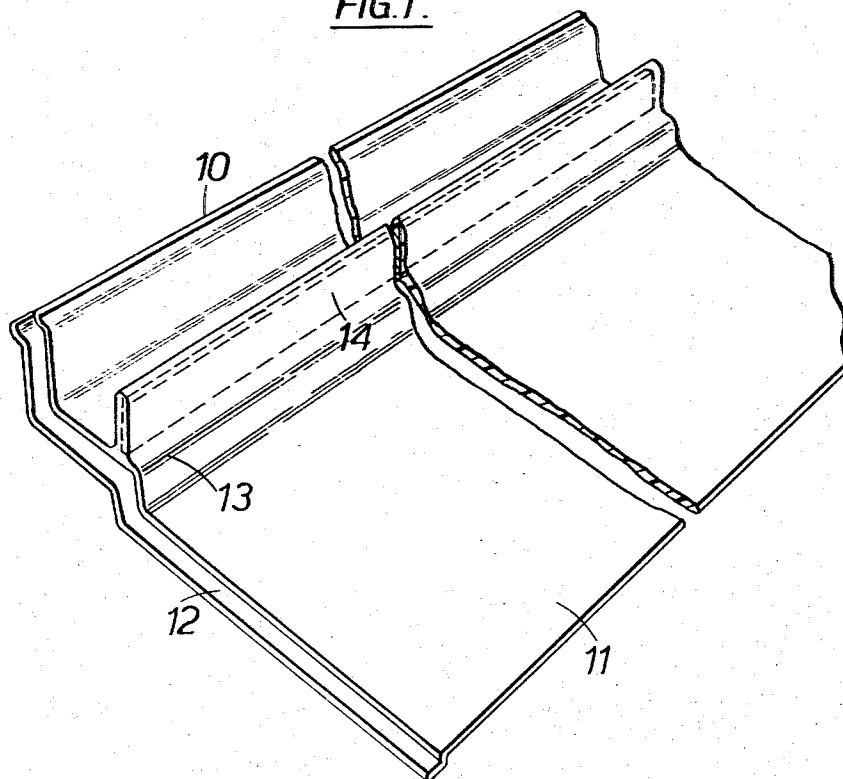
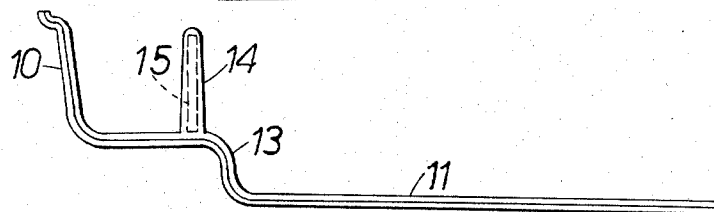
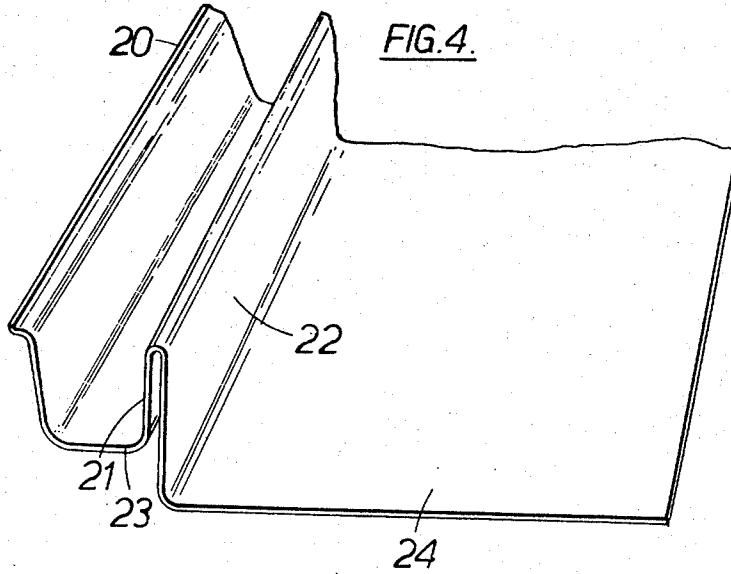
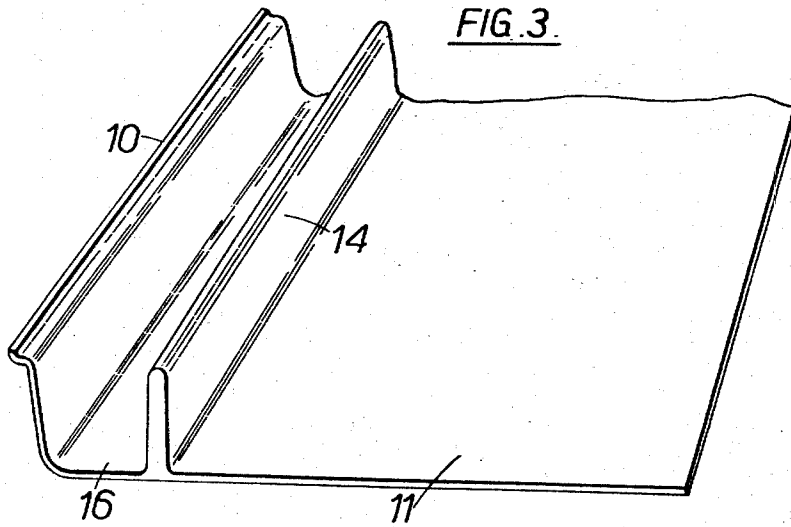


FIG. 2.





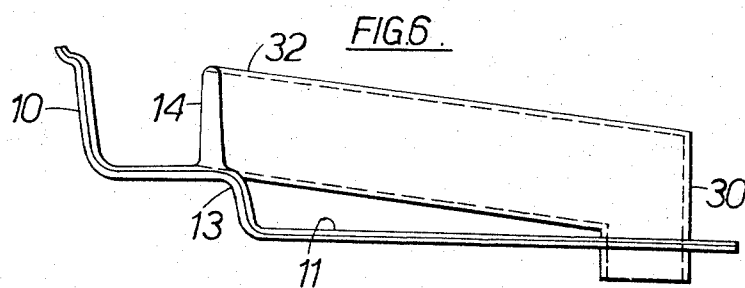
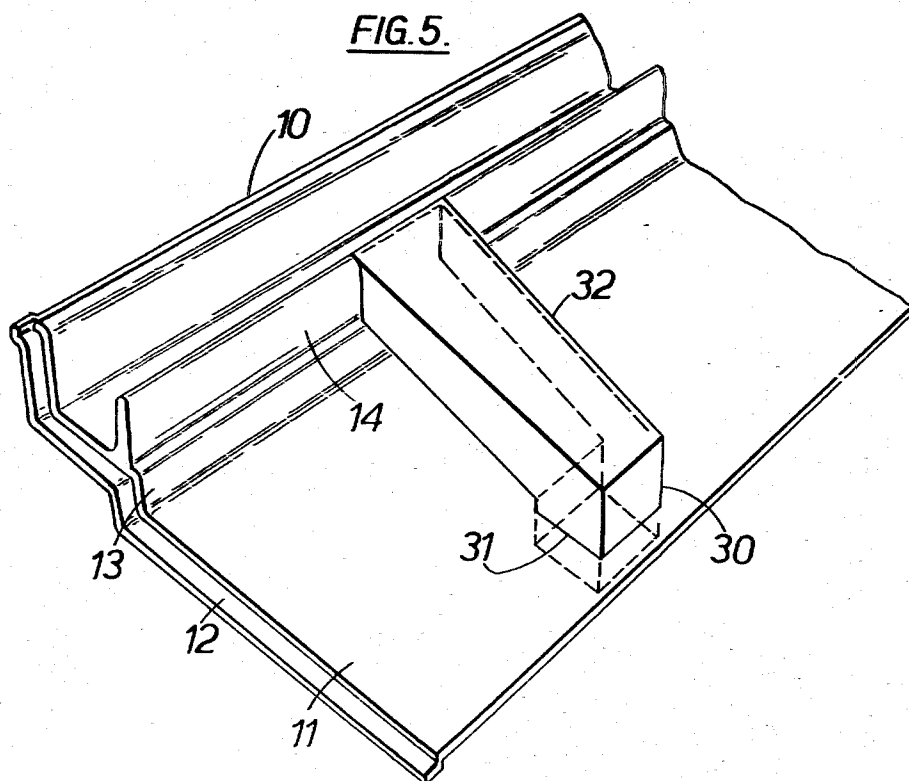


FIG. 7.

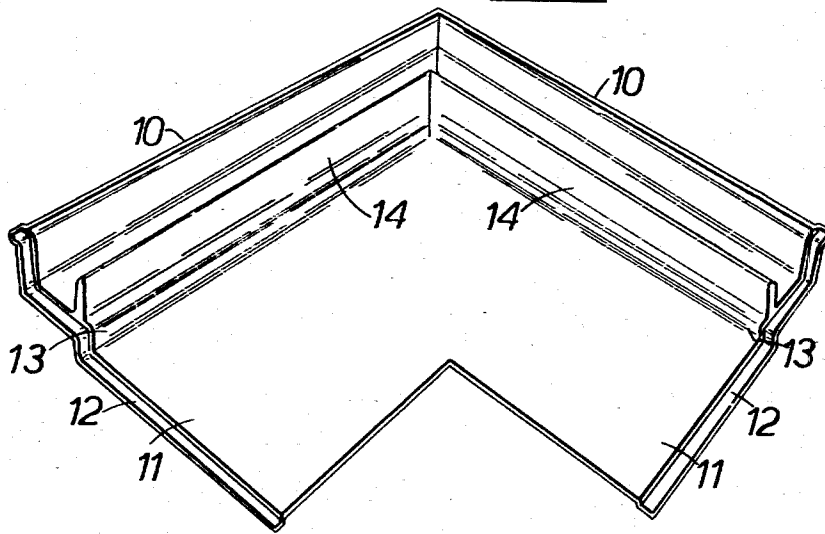


FIG.8.

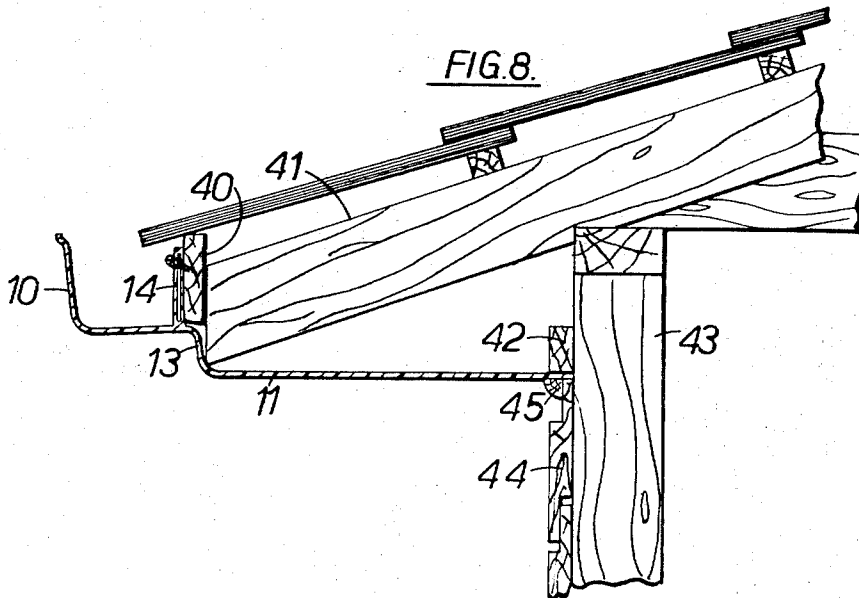


FIG. 9.

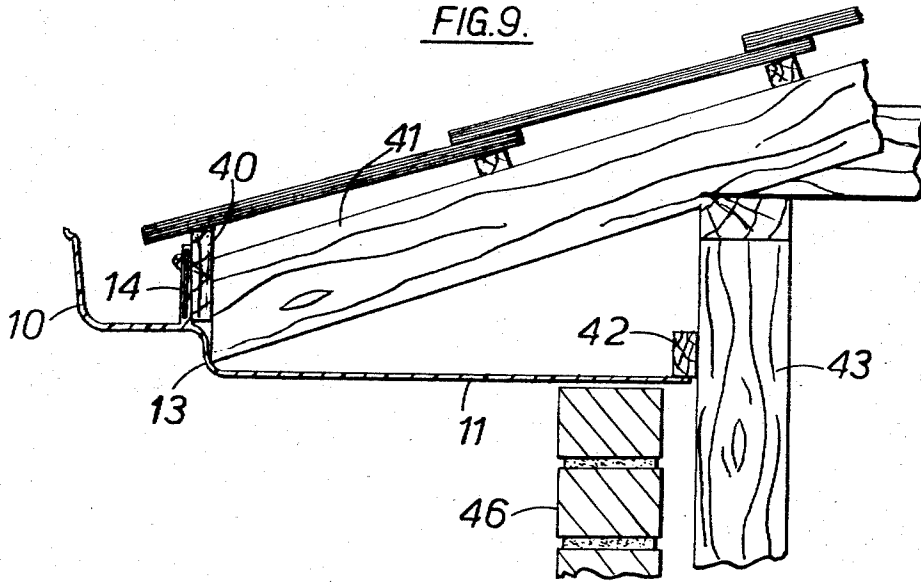
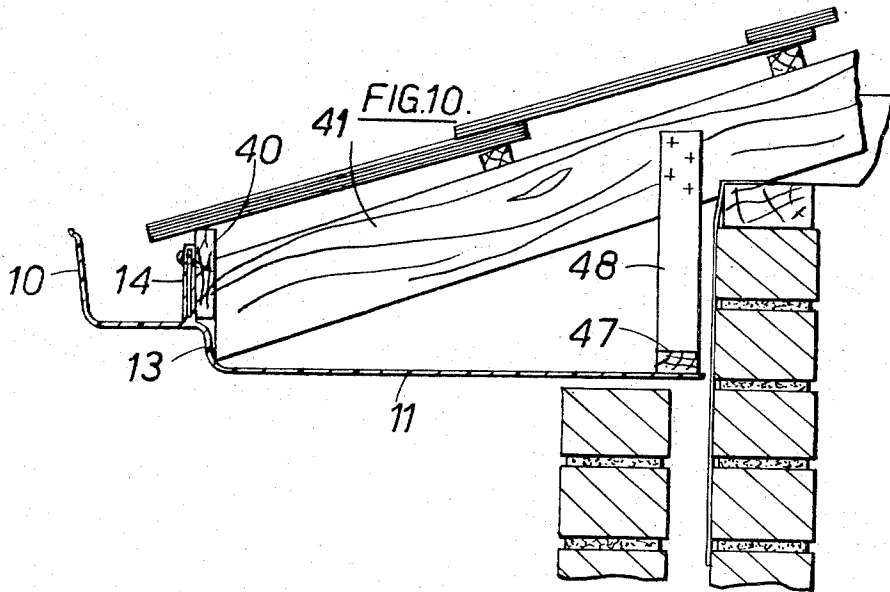


FIG. 10.



BUILDING ELEMENT

This invention relates to a building element and, in particular, to an integrally formed guttering/eaves covering for attachment in suitable lengths to the edge of a building roof.

The invention may be broadly defined as a building element comprising an eaves cover panel length formed along one edge thereof with an integral channel-shaped gutter section.

The building element is preferably formed from a plastics material and most preferably from a glass-fibre reinforced plastics material.

The base portion of the gutter may constitute an extension of the edge of the cover panel but the panel is preferably connected with the gutter portion by an upwardly extending marginal edge of the panel, the base portion of the gutter being thereby disposed in a plane above the plane of the panel.

The building element may be attached directly to the edge of a building in place of conventional eaves panels, guttering and gutter clips; it obviating the need for skilled labour normally required for the separate steps of installing eaves panels and guttering. Adjacent lengths of the element may be connected to one another by way of a lapped joint and by sealing the joint with a suitable bonding or caulking agent.

The invention will be more fully understood from the following description of a number of embodiments thereof taken in conjunction with the accompanying drawings wherein,

FIG. 1 is a perspective view of a preferred form of a building element in accordance with the invention,

FIG. 2 is an end elevation view of such element,

FIG. 3 is a perspective view of a second embodiment of the building element,

FIG. 4 is a perspective view of a third embodiment of the building element,

FIGS. 5 and 6 are perspective and end elevation views respectively of the element of FIG. 1 fitted with a downpipe coupling channel,

FIG. 7 shows a corner connector for joining two intersecting elements of the type shown in FIG. 1, and

FIGS. 8 to 10 show typical arrangements for mounting the building element to the roof line of a timber-framed, a brick veneer and a full-brick house respectively.

As illustrated in FIGS. 1 and 2, the building element comprises a guttering portion 10 and an integrally formed eaves cover portion 11. The element is produced in predetermined lengths, for example, in 10, 15 and 20 ft. lengths, and it is formed at one end with a stepped portion 12 to permit a lapped connection between adjacent elements.

Although not shown, adjacent (overlapping) lengths of the element would be interconnected by rivetting and the joint would be caulked with a suitable waterproof non-setting composition.

The element is composed of a glass-fibre reinforced plastics material, and it may be coated over those of its faces which would normally be exposed in situ with a composition having the appearance of paint.

The eaves cover portion 11 is connected with the guttering 10 by an upwardly extending edge 13 of the cover portion, for the purpose of preserving a similarity in appearance between the element shown in FIG. 1

and a conventional guttering when mounted to a fascia panel.

The building element would normally be secured to the roof edge of a building by way of an inner wall 14 of the guttering and, because the guttering would be required to carry a heavy load under high rainfall conditions, the inner load supporting wall is formed in a thicker section than the rest of the element.

The element is preferably composed of a laminate structure and it would be formed, in a shaped mould, by performing the successive steps of:

- Depositing a layer of polyester resin in the mould, such resin incorporating a colouring agent as required for external appearance purposes,
- Laying a mat of glass-fibre sheeting upon the resin deposit,
- Applying a second coat of polyester resin to cover the glass-fibre matting,
- Mounting a strip 15 of asbestos or asbestos-cement edge-on to the laminate, such strip constituting a structural component of the load supporting wall 14 of the guttering,
- Laying a second mat of glass-fibre sheeting to cover the laminate and to extend around the asbestos cement strip 15, such mat being employed to hold the strip 15 in position, and
- Applying a third coat of polyester resin to bond the second mat of glass-fibre.

The element would then be left to set within the mould and, subsequently, be removed.

The building element shown in FIG. 3 of the drawings would be formed in much the same manner as that described above, but, as illustrated, the base portion 16 of the guttering is constituted by an extension of the edge of the cover panel 11.

FIG. 4 of the drawings shows a building element having a shape similar to that of FIG. 1 but, instead of being formed from a glass-fibre reinforced plastic material, it is fabricated by folding a single sheet of metal. A particularly suitable metal is aluminum.

Thus, as shown in FIG. 4, the building element comprises a roll formed guttering portion 20 having an inner wall 21 which is folded upon itself at 22, the folded portion 22 extending downwardly to a level below the base 23 of the guttering and being bent outwardly to constitute an integral eaves cover portion 24.

The base of the guttering 10 or 20 may be formed at spaced intervals along its length with downwardly projecting sleeves (not shown) for connecting to downpipes. However in its preferred construction, as shown in FIGS. 5 and 6, a downwardly projecting sleeve 30 is provided to extend through a cut-out 31 in the eaves covering portion 11 of the element for connection with a downpipe (not shown). The sleeve 30 is formed integrally with a rectangular section channel 32 which opens into the guttering 10 through the inner wall 14 of the guttering. The channel 32, together with the sleeve 30, is formed from a glass-fibre reinforced plastics material and it is glued or otherwise bonded to the inner wall 14 of the guttering.

In order to permit interconnection of intersecting building elements of the type above described, such as at the corner of a roof line, a corner connector as shown in FIG. 7 is employed. Such corner connector is formed in a manner similar that described with reference to FIG. 1, but it incorporates two integral stepped

portions 12 to permit a lapped connection with two straight section elements.

Reference is now made to FIGS. 8, 9 and 10 of the drawings which show typical mounting arrangements of the building element:

In the case of a timber framed house structure, as shown in FIG. 8, the inner wall 14 of the guttering 10 is screw mounted to a tilting batten 40 which is in turn secured to the free end of the roof rafters 41. The inner margin of the eaves cover panel 11 is then screw or nail mounted to the underside of a support batten 42 which is secured to wall studs 43. Timber cladding 44 and a beading strip 45 conceal the inner margin of the eaves panel.

A similar construction is adopted in the case of a brick veneer type structure as shown in FIG. 9, but in this case the inner margin of the eaves cover panel 11 is concealed by an outer brick wall 46.

In the case of a full-brick type house structure, as shown in FIG. 10, the inner margin of the eaves cover panel 11 is screw or nail mounted to the underside of a batten 47 which is in turn supported from the roofing rafters by a hanger 48.

I claim:

1. A gutter and eave cover unit comprising:

a. a channel-shaped gutter having an outer side wall,

b. a bottom and

c. an inner side wall integrally formed thereon;

d. a substantially flat eave cover panel formed integrally with and extending from said inner side wall at the bottom thereof;

e. one end of said outer side wall, said bottom and said eave cover panel having an offset lip formed therein and being adapted to receive the nonoffset end of the next adjacent unit to permit a lapped interconnection and support between adjacent elements;

f. said gutter being connected with said eave cover panel by a marginal edge extending downwardly from the juncture of said bottom and said inner side wall;

g. said bottom of said gutter being disposed in a plane above that of said eave cover panel;

h. each of said inner side wall and said eave cover panel having an aperture formed therethrough and;

i. wherein said unit includes an inclined flow sleeve in fluid connection with and extending between said apertures to facilitate the drainage of fluid from said gutter.

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