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STRUCTURAL EAVES COVERING

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FIG. 1

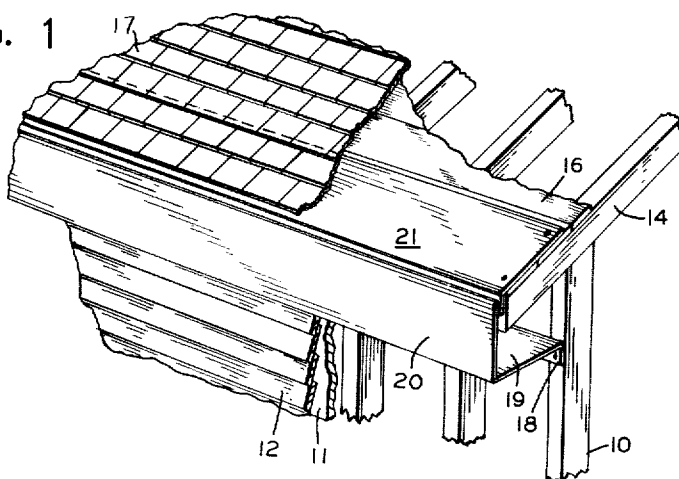


FIG. 2

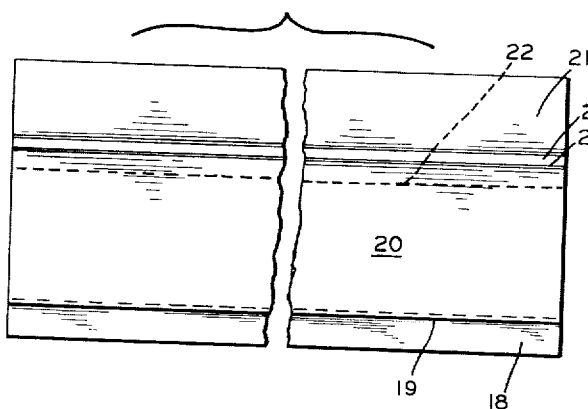


FIG. 3

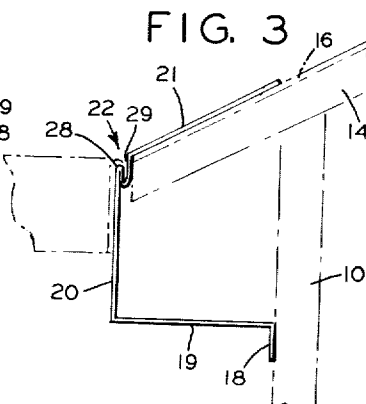


FIG. 4

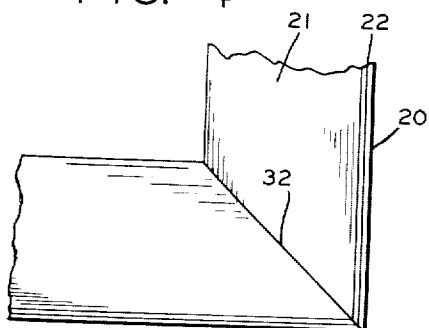
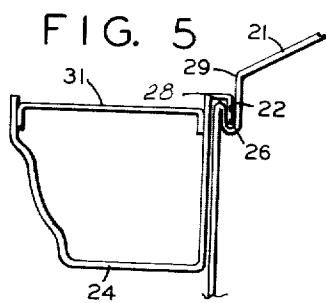


FIG. 5



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STRUCTURAL EAVES COVERING
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This invention relates to building structures and relates more particularly to a pre-formed metallic structure which is affixed to the new building along the lower edge of the sloping roof and which eliminates the usual fascia board, the soffit, and the wood starter course for the shingles which have heretofore been used in virtually all types of homes and many commercial buildings.

In conventional wood construction the roof rafters extend anywhere from 6 to 12 inches beyond the siding of the building and a vertical backboard or fascia is usually nailed to the lower terminals of the rafters before the roof sheathing is formed and the shingles applied. The lower end of the fascia board is then connected with the building siding by a soffit board, and an eaves gutter, generally of wood or metal, is suitably secured to the fascia board. The principal objection to this type of construction resides in the fact that water flowing down over the lower edge of the shingles has a tendency to pass upwardly under the shingles and rots the fascia board, the soffit, and the siding, in due time. It also destroys the edge of the sub-roofing and causes water streaks down the siding. The damage is considerably increased when heavy snow is on the roof where the lower layer melts before the upper layer, due to the heat within the house. Another and still greater source of trouble resides in ice forming in the eaves gutter which tends to build up above the level of the gutter and forms in effect a dam and causes the water to back up under the shingles the height of the dam.

An important object of the present invention is to provide a preformed building strip unit, preferably of metal, which will not rust, which will eliminate the formation of any water condition behind the ordinary gutter, and will prevent the formation of most water conditions where snow, rain or ice has a tendency to back up under the shingles and drip behind the fascia board, which causes extreme damage to the fascia, the soffit and also to the interior walls.

Another object of the invention is to provide an elongated building strip of angular cross-sectional contour which is secured along an edge of the roof before shingles are applied and extends over several joints of the structure including the lower edge of the roof. It also forms its own fascia board and soffit and thus forms a joint between these elements and between the latter and the outside wall.

Yet another object of the invention is to provide a one-piece metal unit for the purpose described which eliminates any possible warping, rotting or replacing of the eaves, and also eliminates any possibility of water reaching the wall studs. These studs, when wet, have a tendency to expand and cause cracking of the walls, or cause other serious damage.

A further object of the invention is to provide a pre-formed metallic building unit which is quickly installed by nailing its lower flange to the studs or header and the top section to the roof sheathing. Other quick-fastening devices, such as clips, can also be used.

Another and very important object of the invention is to provide the combination of an eaves joint covering and eaves trough wherein a novel contoured building strip which extends over a joint of the building structure and which has an elongated hook-shaped supporting element on which a gutter may be hung without the need for any

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fastening devices. The gutter is then secured by gravity and can be readily removed.

In the drawing:

FIG. 1 is a perspective view of a building showing a roof and wall section fitting with the unit of the present invention;

FIG. 2 is a broken side elevation of a length of the fabricated unit;

FIG. 3 is an end elevation thereof and showing the building components in broken lines;

FIG. 4 is a broken plan view of a corner section and showing the manner of mitering the meeting ends of the unit;

FIG. 5 is an enlarged view showing in more detail the eaves trough mounting means.

A roof and wall joint is shown in FIG. 1 and the wall is formed with spaced studs 10 and having a sheathing 11 secured thereto and lapped siding 12 over the sheathing. The roof is formed with rafters 14 on which sub-roofing 16 is secured and shingles 17 are used to finish the roof.

After the roof sheathing has been applied and before the roof is shingled, the structural eaves covering of the present invention is nailed or otherwise secured in place. The unit may be made from metal which will not rust such as aluminum, cooper or galvanized iron. It may come in desired lengths which are convenient for manufacturing and handling and two lengths may be joined together in abutting relation by welding or soldering. The eaves covering unit is formed from an elongated generally rectangular metal blank having a plurality of generally parallel bend lines therein dividing the blank into a plurality of juxtapositioned panels of varying widths. In cross-sectional contour it includes a lower vertical flange 18, which is nailed to the outer wall or face of the building, a somewhat wider horizontal panel 19 which forms the soffit, a vertical panel 20 of about the same width as panel 19 which forms the fascia board, and an upwardly inclined panel 21 which forms a flashing and is secured to the lower margin of the roof section before the shingles are applied. The corners between sections 18-19-20 are preferably right-angular.

Between panels 20 and 21 there is an important structural element comprising a narrow channel 22 of about one inch in depth and which forms a supporting element for an eaves trough or gutter 24 which may also be formed from sheet metal and which has a downwardly turned continuous lip 26 along its rear upper edge which is received in channel 22 and is secured therein merely by gravity. In forming channel 22 the upper edge 28 of the outer wall of the channel is preferably about 1/2 inch below the corner 29 formed at the upper edge of the inner wall.

The gutter mounting means is shown in more detail in FIG. 5. The gutter itself may be of conventional construction with the usual spaced inverted U-shaped strengthening straps 31 welded at their downturned terminals to the front and rear walls of the gutter. It may be formed from a single piece of sheet metal having a plurality of longitudinal bend lines to form a channel with a curved front face. The rear edge is bent back on itself, downwardly, to form the mounting flange 26.

While many of the significant advantages of the present invention may be achieved by eliminating the channel 22 and mounting the eaves trough in some other fashion or dispensing with the latter entirely, the whole combination of the eaves covering and demountable eaves trough gives the best results and the latter is required by most building codes.

The present invention presents no problem when a mitered corner is required as shown in FIG. 4. The upper flashing section 21 and the lower soffit section are

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simply cut off at an angle of 45 degrees and the abutting edges 32 welded or soldered.

While there have been described herein what are at present considered preferred embodiments of the invention, it will be obvious to those skilled in the art that many modifications and changes may be made therein without departing from the essence of the invention. It is therefore to be understood that the exemplary embodiments are illustrative and not restrictive of the invention, the scope of which is defined in the appended claims, and that all modifications that come within the meaning and ranges of equivalency of the claims are intended to be included therein.

What I claim is:

1. In combination with a building having a vertical wall and a sloping roof and covering therefor, the provision of a structural eaves covering formed from an elongated strip of sheet metal having a plurality of longitudinal bend lines forming a plurality of juxtaposed panel sections having an angular relation to each other and including a lower vertical flange section secured to said vertical wall, a horizontal soffit section at generally right angles to the flange section, an upwardly extending vertical fascia section, and a flashing section extending diagonally upwardly from the fascia section and underlying the lower section of said roof covering, the eaves covering having an upwardly opening substantially U-shaped narrow channel forming the juncture between the fascia section and the flashing section, the leg portions of said channel being in close alignment with each other and defining a flange-receiving support, the juncture with the fascia section being below the edge of the flashing section.

2. In combination with a building having a vertical

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wall and a sloping roof and covering therefor, the provision of a structural eaves covering and an eaves trough supported thereby, said eaves covering being formed from a strip of sheet metal having a plurality of longitudinally disposed, generally parallel bends extending from end to end and dividing the strip into a plurality of elongated, juxtaposed panel sections including a relatively narrow vertical flange section along the lower edge attached to said vertical wall, and three wider panel sections including a horizontal soffit section, a fascia section, both at substantially right angles to each other, and an upwardly and diagonally inclined flashing section underlying the lower portion of said roof covering, the eaves covering having an upwardly opening substantially U-shaped channel forming the juncture between the two latter sections, the juncture with the fascia section being below the edge of the flashing section, said eaves trough provided with a flange receivable in said channel and being removable therefrom.

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