July 19, 1966 M. M. MILLER 3,261,132

OVERHANGING EAVES WITH GUTTERS

Filed Aug. 6, 1962

FIG. 2

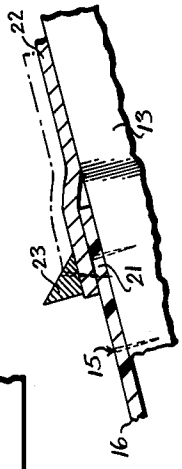


FIG. 4

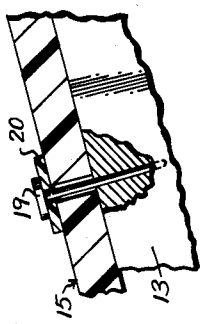


FIG. 1

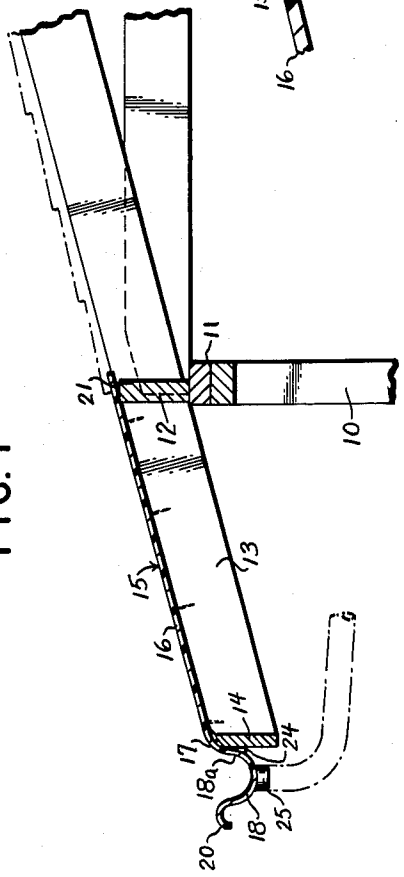
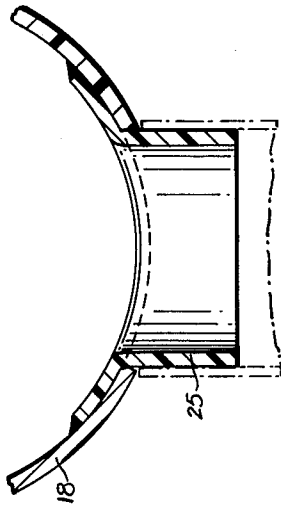


FIG. 3



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OVERHANGING EAVES WITH GUTTERS

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The present invention relates to an improved construction for the gutter, eave sheathing and related roof flashing components of building structures of the type with sloped overhanging eaves, and aims to provide a prefabricated sheet of simple and economical construction providing such components as a unit.

A further object is to provide a particular durable gutter-eave sheathing-roof flashing construction which can be easily applied.

Another important object is to provide an arrangement whereby windows and flora beneath overhanging eaves are exposed to more light than with conventional construction.

Other objects and advantages in view will appear and be understood in the course of the following description and claims, the invention consisting in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawings:

FIGURE 1 is a vertical sectional view illustrating a typical installation embodying the present invention.

FIG. 2 is a detail vertical sectional view showing the flashing portion with a mopped roof.

FIG. 3 is a transverse vertical sectional view through the gutter portion at the location of a downspout nipple.

FIG. 4 is a detail sectional view at one of the nail connections to the rafters.

Referring to the drawings it is seen that for purposes of example I have illustrated a frame side wall of conventional construction including studs **10**, double plate **11**, blocking **12**, and sloping rafters **13** with an eave overhang terminating at a facia **14**. The eave is sheathed with the central portion **16** of lengths of translucent plastic sheets **15** fabricated, for example, by hand lay up, preform or mat molding of the glass-fiber reinforced polyesters commonly used for architectural sheets. Each of these sheets bends downwardly along the lower longitudinal side edge of its sheathing portion **16** by a quarter-turned elbow **17** to an open gutter **18**. Along its other longitudinal edge the gutter **18** terminates by a concavo-convex reinforcing rib **20** having its convex side facing upwardly and at a level below that of the top of the elbow **17**.

The sheets **15** are nailed at **19** to the rafters through pre-punched holes provided at the rafter module. These nails are preferably either provided with fiber or elastic sealing washers **20**, or have their heads resin mopped after being nailed in position.

For maximum economy and convenience the sheets **15** are prefabricated in various lengths comprising integer multiples of standard rafter modules. At their ends the sheets may be butted and the butt joints then mopped with glass fiber reinforced plastic to seal the joints, or one end of each sheet can be upset during forming to permit a lap joint.

It will be noted that the sheets **15** are wide enough to extend upwardly beyond the side wall of the related building structure to provide a flashing portion **21**. The latter may be overlapped by the roof sheathing **22** and the roof finished in a conventional manner. For example, if a tar mopped roof is desired a cant strip **23** can be nailed at the lower edge of the roof sheathing **22** as shown in FIG. 2 to serve as a stop for the tar and roof aggregate. In the case of a shingle roof the shingles are nailed to terminate at the eave sheathing portion **16** of the sheet **15** as indicated by the broken line shingle outline in FIG. 1.

The sheets **15** are positioned such that the inner wall **18***a* of the gutter firmly bears against the outer face of the facia **14**. A drain slope can then be readily applied to the gutter by inserting wedge shaped shims **24** of varying thicknesses between the gutter walls **18***a* and the facia to thereby spring the gutter outwardly about the elbow **17** as a fulcrum. To elaborate, the gutter may be prefabricated so that when the sheet **15** is in a relaxed state the sheathing and flashing portions **16, 21** thereof are normal to a longitudinal upright plane extending midway between the opposed lower edges of the rib **20** and elbow **17** and the extreme lower end of the gutter. Thus when the sheet **15** is installed the gutter portion is sprung outwardly to the vertical in engagement with the facia **14**. Then when the shim **24** is applied it springs the adjacent portion of the gutter away from a true vertical and therefore raises the bottom of the adjacent part of the gutter. Accordingly, by adjusting the thickness of a series of shims along the length of the gutter a proper drain slope can be readily obtained.

To provide for downspouts, drain openings are provided in the gutter in selected of the sheets **15** and these are fitted with flanged nipples **25** bonded in place as shown in FIG. 3. At the end of a gutter run the terminal sheets **15** may be fitted with plastic end caps or the end rafters may be extended as clousures for the gutter with the aid of suitable sealant such as epoxy adhesive.

From the foregoing explanation it is believed apparent that my combination gutter-eave sheathing-roof flashing sheets **15** can be readily applied and easily adjusted for proper gutter draining. Furthermore, because of the translucent property of the sheet **15**, the eave sheathing portion thereof permits light transfer through the eaves to the underlying windows in the building structure, thereby brightening the related rooms over the natural lighting factor which would be achieved by conventional roof construction with the same amount of overhang. In addition, flora planted beneath the translucent eaves is benefited by increased sunlight.

It is thought that the invention will have been clearly understood from the foregoing detailed description. Changes will suggest themselves and may be resorted to without departing from the spirit of the invention, wherefore it is my intention that no limitations be implied and that the hereto annexed claims be given a scope fully commensurate with the broadest interpretation to which the employed language admits.

What I claim is:

1. In combination, a building structure with a side wall surmounted by a sloping roof with overhanging rafters terminating at a facia, a translucent plastic sheet secured to said rafters and covering the overhanging portion thereof as an eave sheathing section with upper and lower faces exposed for light transmission and extending by its upper edge above said side wall as a roof flashing section, roofing overlapping said flashing section, the lower edge of said sheet bending downwardly by an elbow against said facia to an integral gutter extending therealong and having its outer free longitudinal edge spaced below the level of the lower edge of said eave sheathing section, said eave sheathing section and roof flashing sections being collectively considerably wider than said gutter.

2. The structure of claim **1** in which said side wall has windows receiving light through said eave sheathing section.

3. The structure of claim **1** in which said sheet is glass-fiber reinforced.

4. The structure of claim **1** in which said outer edge of the gutter is formed with a longitudinal rib.

5. The structure of claim 1 in which shims of varying thicknesses are inserted between said gutter and the facia to give a drain slope to the gutter.

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EARL J. WITMER, *Primary Examiner.*