

July 12, 1955

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HANGER FOR MOLDED GUTTER

2,712,915

Filed April 27, 1951

Fig. 1

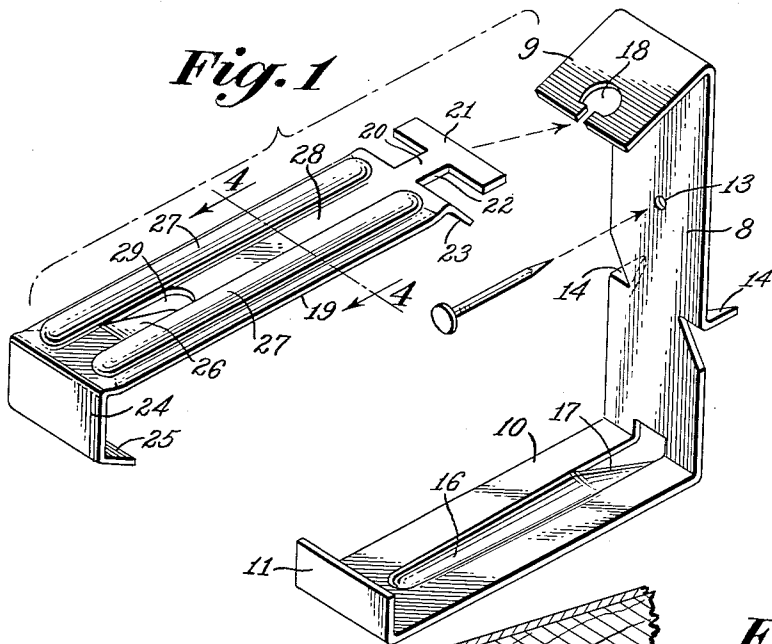


Fig. 3

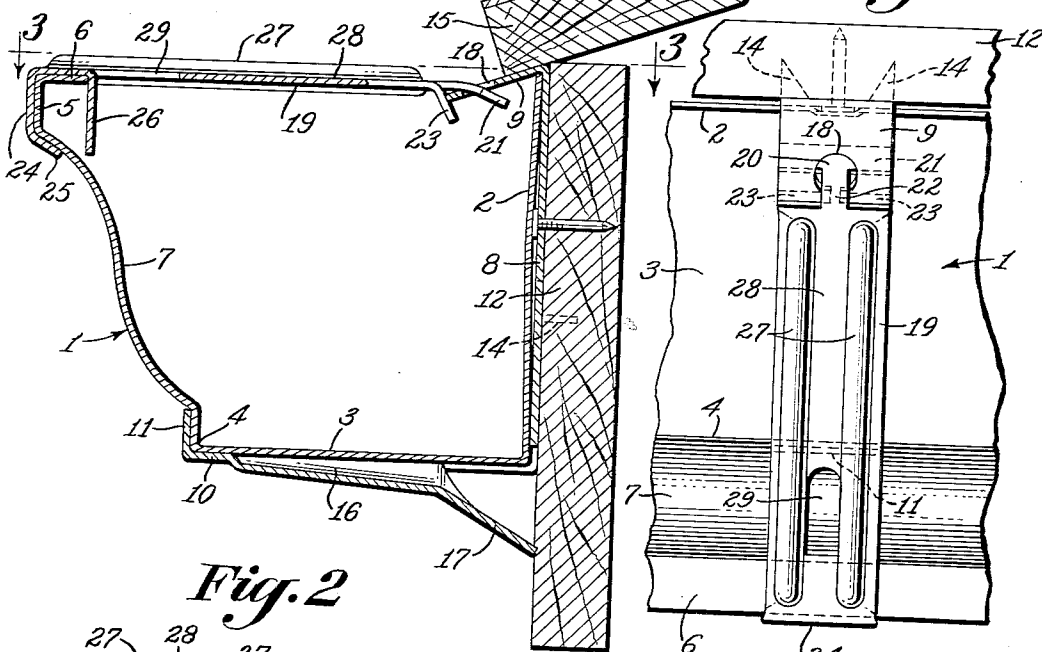


Fig. 2

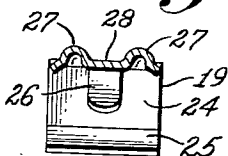


Fig. 4

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HANGER FOR MOLDED GUTTER

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Application April 27, 1951, Serial No. 223,374

2 Claims. (Cl. 248—48.2)

This invention relates to hangers for molded roof gutters.

Aside from its functional utility, the molded gutter is designed to give the appearance of an integral and ornamental part of the roof structure and is therefore secured against the fascia board, close to the edge of the roof which slightly overhangs the fascia board, and it should be so supported as permanently to maintain its original position and shape.

The molded gutter is subject to the hazards of excessive strains due to the weight of snow, ice or impounded water, or due to heavy depending icicles which tend to cause the gutter to sag, and it is frequently called upon to bear the weight of a ladder rested against it when the house-holder services his roof, which may buckle the gutter inwardly.

The hangers which support the gutter should be technically designed to adequately support and give shape-sustaining rigidity to the gutter. In order to be accessible to the installer, the hangers should also permit easy and efficient installation of the gutter and be simple and inexpensive from the standpoint of manufacture.

The general object of the present invention is to provide a hanger for molded gutters that shall embody all of these desirable attributes. Stated somewhat more specifically, it is an object of the invention to provide a hanger having a body member adapted to be secured uprightly to the fascia board, having a forwardly projecting lug at its upper end and a gutter supporting bracket extending forwardly from its lower end, the free ends of said bracket and lug defining between them a mouth through which the gutter is passed in the act of erecting it, and a strap secured to said lug, bridging said mouth, and rigidly supporting the lip of said gutter, said strap being movable relative to said lug to a nonobstructive position relative to said mouth, to facilitate inserting the gutter.

Other objects of the invention will appear as the following description of a preferred and practical embodiment thereof proceeds.

In the drawing which accompanies and forms a part of the following specification, and throughout the several figures of which the same reference characters have been used to denote identical parts:

Figure 1 is an exploded view in perspective, showing the elements which make up the hanger, including the nail for securing it to the fascia board;

Figure 2 is a cross-section through the hanger, including also the gutter and the adjacent portions of the fascia board and roof;

Figure 3 is a fragmentary plan view in the horizontal plane of the line 3—3 of Figure 2;

Figure 4 is a cross-section through the strap, taken along the line 4—4 of Figure 1.

Referring now in detail to the several figures, the numeral 1 represents a molded gutter, the shape being conventional, including planiform back and bottom portions 2 and 3, a rectangular lower front corner 4, a

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rectangular lip 5 having an turned edge portion 6, and a front portion 7 of reverse curvature between the respective rectangular corner and lip. The hanger is designed to support a gutter of this type.

Adverting now to the hanger itself, this is preferably made of sturdy sheet material in flat strip form. It consists of a body portion 8 bent forwardly at its upper end to form a downwardly extending lug 9, and bent forwardly at its lower end to form a bracket 10 perpendicular to the plane of said body portion. The forward end of said bracket is bent up at right angles to the base of said bracket, forming a flange 11.

The body portion is designed to be secured in upright position against the fascia board 12, as shown in Figure 2. It has a nail hole 13, through which a nail may be driven into the fascia board. It has integral spurs 14 extending rearwardly so that it may be temporarily located before nailing by tapping the body portion with a hammer to drive the spurs into the fascia board. The fact that it may be temporarily secured in place to the fascia board before nailing enables it to be readily moved to a new position by the installer, without the necessity of drawing the nail. In placing the hanger, the lug 9 is pushed up into the angle between the fascia board and roof 15, as shown in Figure 2. Presumably, the top longitudinal edge of the fascia board will be level, but frequently the installer will find that this is not the case, so that contact of the lug 9 with the under side of the roof cannot always be relied upon to properly position the hanger, which accounts for the suggestion that its initial position may have to be changed. Since roofs differ in pitch, the angle between the lug 9 and body portion 8 may not be the same as the angle between the roof and fascia board, in which case the lug 9 can readily be bent to the proper angle with the thumb or pliers.

The bracket 10 is preferably stiffened by the provision of a downwardly embossed rib 16 extending longitudinally thereof. Preferably, the base of said rib, and including the lower part of the body portion, is stamped out in a downward direction to form an inclined brace 17 which bears against the fascia board, and maintains the bracket in a horizontal plane, regardless of the downward pressure upon it from the gutter and its contents. The bracket is of such length that when the gutter is installed the flange 11 bears against the outer face of the corner 4. Since the gutter by virtue of its shape is resilient, the flange 11 holds the gutter with resilient pressure.

The lug 9 is provided with a keyhole slot 18, opening in its outer end. The hanger includes the removable strap 19, which has a T-shaped keeper 20 at its inner end, including the cross piece 21 and shank 22. In forming the T-shaped member, tabs 23 are stamped out and deflected downwardly. The width of the shank 22 is less than the width of the wide portion of the keyhole slot 18. In attaching the strap 19 to the lug 9 it is turned so as to present the edge of the shank 22 to the opening into the keyhole slot. When the shank is in the wide portion of the keyhole slot, the strap is turned so that the cross piece 21 lies transversely beneath the lug 9 with the shank 22 being above the lug 9 and overlying the narrow portion of the keyhole slot. When in this position the forward edge of the lug 9 contacts the adjacent faces of the tabs 23, holding the strap 19 in a cocked up position. The forward end of the strap 19 has a flange 24 bent down perpendicularly to the adjacent portion of said strap, said flange having an inclined turned free end 25. Said flange, including its inturred end, forms a flat hook which fits the rectangular lip of the gutter, as shown in Figure 2. The strap 19 holds the

lip of the gutter in place, the latter resiliently pressing outwardly against the hooked end of said strap.

In erecting a length of the gutter, the installer first secures the body portions of all the hangers in proper position on the fascia board. Customarily, these will be thirty or thirty-six inches apart. When the nail is driven, the brace 17 beneath the bracket 3 will automatically make pressure contact with the fascia board, and in fact may dig in slightly, in which case, it becomes a supporting member of great strength, since the bracket cannot sag regardless of the pressure put upon it due to the thrust of the brace into the fascia board. When the body portions of the hangers are secured, the straps may or may not be in place. If not, they are next inserted in the manner set forth. In order to keep the mouths of the hangers open to enable the insertion of the gutter, the straps are turned to one side facing in an outward direction. Generally they cannot be folded straight back, on account of the presence of the overhanging roof. The length of gutter is then taken up by a single workman holding it by the middle, or two workmen holding it near the ends. The gutter is inserted through the mouths of all the hangers simultaneously in a slightly tilted position so as to enable the upper edge of the back portion 2 to enter beneath the lug 9. The gutter is pushed back against the fascia board, then tilted back into a level position, whereupon, the corner 4 will snap into the bracket 10 back of the flange 11. The gutter is now self-sustaining. It remains only for the workmen to go from one hanger to the other and adjust the straps 19. This he does by moving the strap from its sidewise position to a position in forward alignment with the lug 9. It will be recalled from the previous description that the lug normally rests in a cocked up position with the tabs 23 against the front edge of the lug 9. The workman pushes the strap down and at the same time pushes the front edge of the gutter in until the hooked end of the strap snaps over the lip of the gutter. In pushing the strap down, the tabs 23 fulcrum against the lug 9 so as to draw the cross piece 21 tightly against the forward edge of the wide part of the keyhole slot, thus taking up all lost motion and creating a tight joint between the strap and lug.

The strap 19 is provided with a struck down tongue 26. The last step in securing the gutter is for the installer with his finger or a screwdriver or other tool to bend the tongue 26 down over the inturned edge 6 of the lip of the gutter, as shown in Figure 2. This completely immobilizes the lip of the gutter so that if later a ladder or similar weight is pressed inwardly against the lip of the gutter, any inward movement of the lip is prevented, the thrust being taken up by the tongue 26, strap 19, tabs 23 and the lug 9.

It has been a complaint with respect to hangers which embody a strap portion that bridges the gutter and supports the lip of the gutter, that rainwater off of the roof runs down the strap portion onto the outside of the gutter, creating a stain at each hanger. By the present invention, the strap 19 is embossed with spaced longitudinal ribs 27, forming between them a channel 28, which drains into the hole 29 formed by the stamping down of the tongue 26. The ribs 27 are close to the lateral edges of the strap and are of downwardly flared cross-sectional shape so that rain falling upon them either drains

into the channel 28, or flows sidewise into the gutter. Thus, the cause of objectionable staining of the outside of the gutter is obviated.

The mode of manufacturing this hanger is extremely simple, involving merely a process of stamping and bending. The erection of the gutter can be efficiently accomplished even by one workman, with a maximum of precision and a minimum of expenditure of time. The precise shape and positioning of the gutter is permanently assured by the nature of the hanger which rigidly supports the gutter at all points at which distortion or buckling through excessive strains may occur.

While we have in the above description disclosed what we believe to be a preferred and practical embodiment of the invention, it will be understood by those skilled in the art that the specific details of construction and arrangement of parts, as described and illustrated, are by way of example and not to be construed as limiting the scope of the invention.

What we claim is:

1. A hanger for molded gutters comprising an integral strap having a flat rear portion for attaching to a fascia board and supporting the rear of the gutter, and a portion outfolded perpendicularly from the lower end of said rear portion for supporting the bottom of the gutter, said rear portion having a downwardly deflected flange at its upper end for gripping the inner edge of the gutter and said outfolded portion having an upturned flange at its outer end for gripping the lower outside corner of the gutter, a strap for maintaining the outer edge of said gutter against transverse displacement, comprising a rigid member adapted to bridge the gutter, said member being formed with a T-shaped coupling extension at one end and said downwardly deflected flange being provided with a keyhole slot the narrow portion of which opens in an edge of said downwardly deflected flange, said coupling extension being inserted in said keyhole slot with the head of the T beneath said downwardly deflected flange, said member having a downwardly extending flange at its outer end for embracing the lip of the gutter and having downwardly inclined tabs at the base of said coupling extension thrusting against the end of said downwardly deflected flange when said member is engaged with the lip of said gutter.

2. A hanger for molded gutters as claimed in claim 1, said strap having a stamped out tongue adjacent said downwardly extending flange adapted to be bent against the inside of the lip of said gutter.

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