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SUPPORT AND HANGER FOR EAVES TROUGH AND GUTTERS

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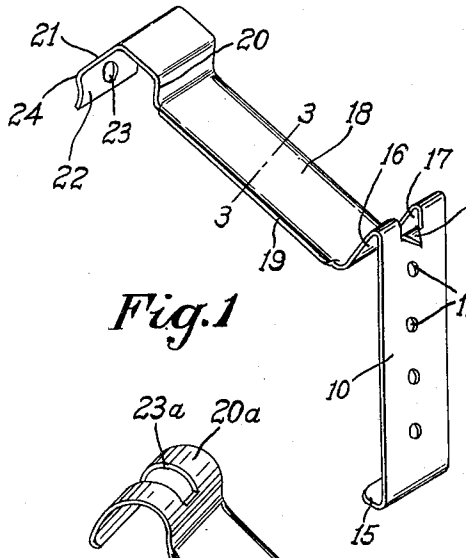


Fig. 1

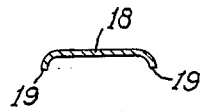


Fig. 3

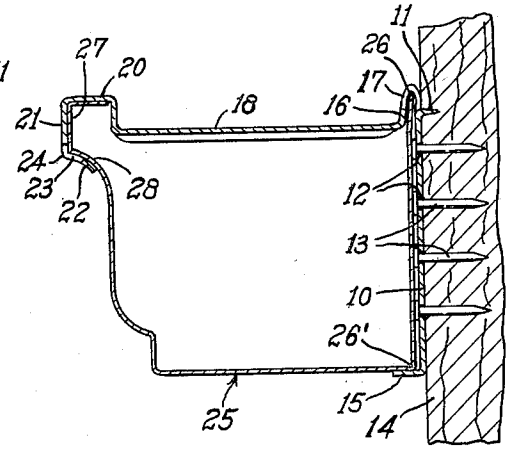


Fig. 2

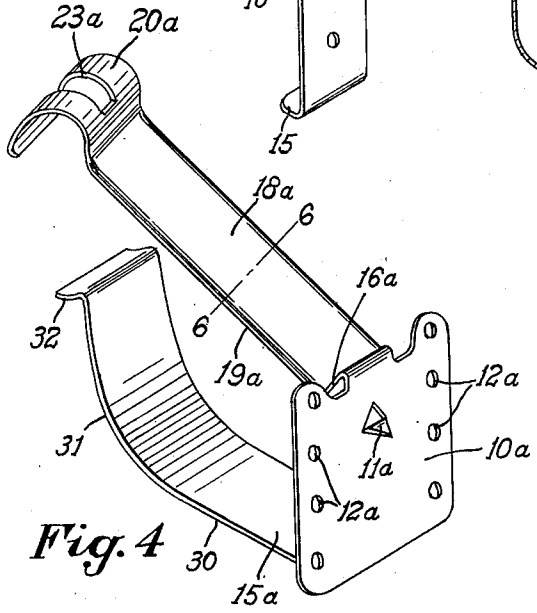


Fig. 4

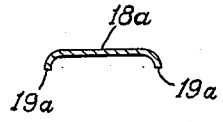


Fig. 6

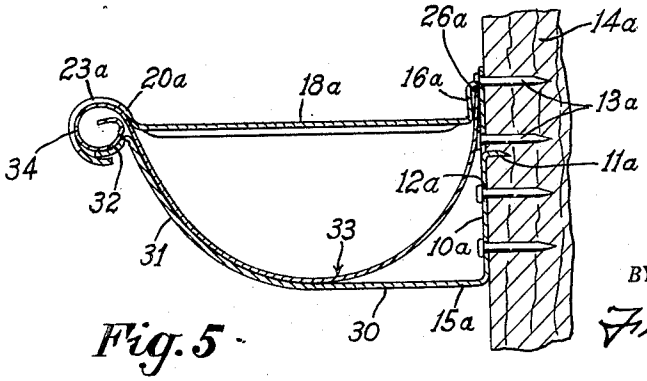


Fig. 5

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SUPPORT AND HANGER FOR EAVES TROUGH AND GUTTERS

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3 Claims. (Cl. 248—48.2)

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The invention relates to supports and hangers for eaves trough, gutters and the like, and more particularly to a one-piece sheet metal support and hanger.

It is an object of the invention to provide a simple, inexpensive and efficient hanger and support which may be quickly and easily applied for attaching eaves trough and gutters to the eaves of a building or the like.

Another object is to provide such a device formed from a single piece of heavy gauge sheet metal adapted to be attached to a building, after which the eaves trough or gutter is clamped therein and held rigidly in position upon the building.

A further object is to provide such a support and hanger having means for preventing the eaves trough or hanger from being accidentally collapsed.

A still further object is to provide a support and hanger of the character referred to having a prong thereon for initially positioning it upon a building and holding it in place while nails or the like are applied to permanently attach the support and hanger to the building.

Another object of the invention is to provide such a support and hanger in the form of a one-piece bracket of heavy gauge sheet metal comprising an attaching plate portion for attaching to a building, a supporting portion at the lower end of the attaching plate for supporting the lower portion of the eaves trough or hanger, and an integral supporting and spacing arm at the top of the attaching plate for spanning the eaves trough or gutter and clamping to the outer bead at the upper, outer edge of the eaves trough or gutter, for supporting the upper portion of the eaves trough or gutter and holding it in extended position.

A further object is to provide a downwardly disposed, offset clamping portion, connecting the upper end of the attaching plate to the spacing and supporting arm and adapted to be bent back over the upper, inner edge of the eaves trough or gutter to clamp the same against the attaching plate.

The above objects together with others which will be apparent from the drawing and following description, or which may be later referred to, may be attained by constructing the improved support and hanger in the manner hereinafter described in detail and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a support and hanger embodying the invention, especially designed for use in connection with ogee gutters;

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Fig. 2 a transverse sectional view through an ogee gutter attached to the wall of a building by a hanger such as shown in Fig. 1;

Fig. 3 a transverse section through the supporting and spacing arm, taken as on the line 3—3, Fig. 1;

Fig. 4 a detached, perspective view of a support and hanger embodying the invention, especially adapted for use in connection with the conventional half-round eaves trough;

Fig. 5 a transverse, sectional view through an eaves trough attached to the wall of a building by means of the support and hanger shown in Fig. 4; and

Fig. 6 a section through the supporting and spacing arm, taken as on the line 6—6, Fig. 4.

Referring first to the construction illustrated in Figs. 1 to 3 inclusive, in which similar numerals refer to similar parts throughout, a one-piece support and hanger for ogee gutters is illustrated. This support and hanger is preferably formed of heavy gauge sheet metal which may be galvanized or otherwise coated as a protection against rust and corrosion.

The support and hanger includes a flat, vertical attaching plate portion 10, having a sharp V-shape prong 11 stamped from the upper portion thereof and rearwardly disposed at right angles to the attaching plate 10.

A plurality of apertures 12 are formed in the attaching plate 10 for receiving nails 13, or similar attaching means, for attaching the device to the wall of a building, adjacent to the eaves thereof, as indicated at 14.

An out-turned supporting flange 15 is formed at the lower end of the attaching plate 10 for supporting the lower portion of an ogee gutter as will be later described. At the upper end of the attaching plate 10 is a downwardly and forwardly bent clamping portion 16, the central portion of which is preferably cut away as at 17 so that the same may be easily bent or folded.

The supporting and spacing arm 18 extends forwardly and slightly upwardly from the lower end of the clamping portion 16 and in order to strengthen and reinforce the same, the side edges thereof are preferably downwardly bent as shown at 19.

At the outer end of the arm 18 is formed an inverted, substantially square, U-shape portion 20, the outer leg 21 of which is outwardly and downwardly angled and terminates in the inwardly and downwardly curved terminal flange 22. An aperture 23 is preferably formed across

the bend 24 so as to facilitate the bending of this flange.

In using the support and hanger above described for attaching a conventional ogee gutter, as indicated generally at 25 in Fig. 2, a pencil or chalk line may be drawn horizontally upon the wall of a building, at the height at which the gutter is to be attached, and each hanger and support may be temporarily attached to the wall at the proper height by driving the sharpened prong 11 into the wall as shown in Fig. 2, holding the support and hanger temporarily in position upon the wall, while nails or the like as indicated at 13, are driven through the apertures 12 of the attaching plate into the wall firmly attaching the support and hanger to the wall in proper position.

The upper inner edge 26 of the gutter is then inserted between the downturned clamping portion 16 and the upper end portion of the attaching plate 10, and the lower inner corner 26' of the gutter is positioned upon the supporting flange 15.

Then by using a blunt instrument, the clamping portion 16 is folded back against the upper edge portion 26 of the gutter, clamping the same as shown in Fig. 2. With this bending of the clamping portion 16, the supporting and spacing arm 18 of the hanger and support is bent downwardly into horizontal position, so that the outer square bead 27 of the gutter is received within the inverted U-shape portion 20 of the arm 18, and the outer leg 21 of said U-shape portion is bent back, into vertical position, against the bead 27 as shown in Fig. 2, the curved terminal flange 22 being bent into contact with the curved upper outer portion 28 of the gutter, thus rigidly supporting the gutter and preventing it from being accidentally collapsed.

The form of the invention shown in Figs. 4 to 6 is especially adapted for use in connection with the conventional half-round eaves trough. This form of the support and hanger is also formed from a single strip of heavy gauge sheet metal and comprises the attaching plate portion 10a, which because of the peculiar construction of this form of the device, is preferably of greater width than the remainder of the device in order to more easily attach the same to the wall of a building.

This attaching plate is preferably provided with a rearwardly disposed, sharp V-shape prong 11a at its upper, central portion and with two vertical rows of spaced apertures 12a, near opposite side edges for receiving nails or other attaching means.

A lower supporting arm 15a is formed at the lower end of the attaching plate and extends forwardly in a horizontal direction as at 30 and is then curved forwardly and upwardly as at 31 terminating in a downwardly and forwardly curved terminal flange 32.

A downwardly and forwardly disposed clamping portion 16a is formed at the top of the attaching plate and the supporting and spacing arm 18a extends forwardly and slightly upwardly therefrom. The side edges of the arm 18a may be downturned as indicated at 19a to strengthen and reinforce the same.

An inverted, U-shape portion 20a is formed at the forward end of the arm 18a, the central portion thereof being preferably cut away as at 23a to permit the same to be easily bent.

In using the form of the support and hanger shown in Figs. 4 to 6 and above described, to

attach the conventional half-round eaves trough as indicated generally at 33 in Fig. 5, the attaching plate is positioned upon the wall 14a of the building by inserting the prong 11a and nails 13a, or other attaching means, are driven through the apertures 12a rigidly attaching the support and hanger to the building.

The upper, inner edge 26a of the eaves trough is then inserted between the upper end of the attaching plate and the down-turned clamping portion 16a, the eaves trough resting upon the arm 30 and against the curved portion 31 thereof, the usual rounded bead 34 at the upper, outer edge of the eaves trough resting upon the curved terminal flange 32 of the arm 30.

The clamping portion 16a is then bent backward, clamping the upper edge portion 26a of the eaves trough as shown in Fig. 5, and the U-shape portion 20a is bent around the bead 34 at the upper outer edge of the eaves trough and under the terminal flange 32 of the round supporting arm 30, as shown in Fig. 5, thus rigidly securing the eaves trough in position and holding it against collapsing.

From the above it will be obvious that a simple, inexpensive and efficient one-piece support and hanger is provided for eaves trough and gutters, which may be quickly and easily applied and which will rigidly hold the eaves trough or gutter in position.

We claim:

1. A one-piece support and hanger for eaves trough and gutters comprising a one-piece sheet metal structure including an attaching plate, an integral out-turned support at the lower end of the attaching plate for supporting engagement under the eaves trough or gutter, an integral downturned clamping portion at the upper end of the attaching plate providing the sole means for clamping the inner upper edge of the eaves trough or gutter against the attaching plate, a forwardly disposed supporting and spacing arm integral with said clamping portion, and an upwardly disposed inverted U-shape portion at the outer end of said arm for engagement over the bead at the outer upper edge of the eaves trough or gutter, said U-shape portion being located upward against the inner side of the bead, over the top of the bead and downward against the outer side of the bead and terminating in a downwardly and inwardly disposed flange contacting the under side of the bead.

2. A one-piece support and hanger for eaves trough and gutters comprising a one-piece sheet metal structure including an attaching plate, a rearwardly disposed sharp prong upon the attaching plate and spaced apertures therein for receiving nails through the attaching plate only, an integral out-turned support at the lower end of the attaching plate for supporting engagement under the eaves trough or gutter, an integral downturned clamping portion at the upper end of the attaching plate providing the only means for clamping the inner upper edge of the eaves trough or gutter against the attaching plate, a forwardly disposed supporting and spacing arm integral with said clamping portion, and an upwardly disposed inverted U-shape portion at the outer end of said arm for engagement over the bead at the outer upper edge of the eaves trough or gutter, said U-shape portion being located upward against the inner side of the bead, over the top of the bead and downward against the outer side of the bead, the outer end of said U-shape portion being adapted to be bent under said bead.

3. A one-piece support and hanger for eaves trough and gutters comprising a one-piece sheet metal structure including an attaching plate, an integral out-turned supporting arm at the lower end of the attaching plate for supporting engagement under the eaves trough or gutter, the outer end of said arm terminating in a forwardly and downwardly curved flange for engagement under the bead at the outer upper edge of the eaves trough or gutter, an integral downturned clamping portion at the upper end of the attaching plate providing the sole means for clamping the inner upper edge of the clamping plate against the attaching plate, a forwardly disposed supporting and spacing arm integral with said clamping portion, and an upwardly disposed inverted U-shape portion at the outer end of said supporting and spacing arm for engagement over the bead at the outer upper edge of the eaves trough or gutter, said U shape portion being located upward against the inner side of the bead, over the top of the bead and downward against the outer side of the bead and terminating in a downwardly and inwardly disposed flange contacting the under side of the bead.

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