July 12, 1932. M. WALTEN 1,867,121

EAVES TROUGH HANGER

Filed Jan. 23, 1929

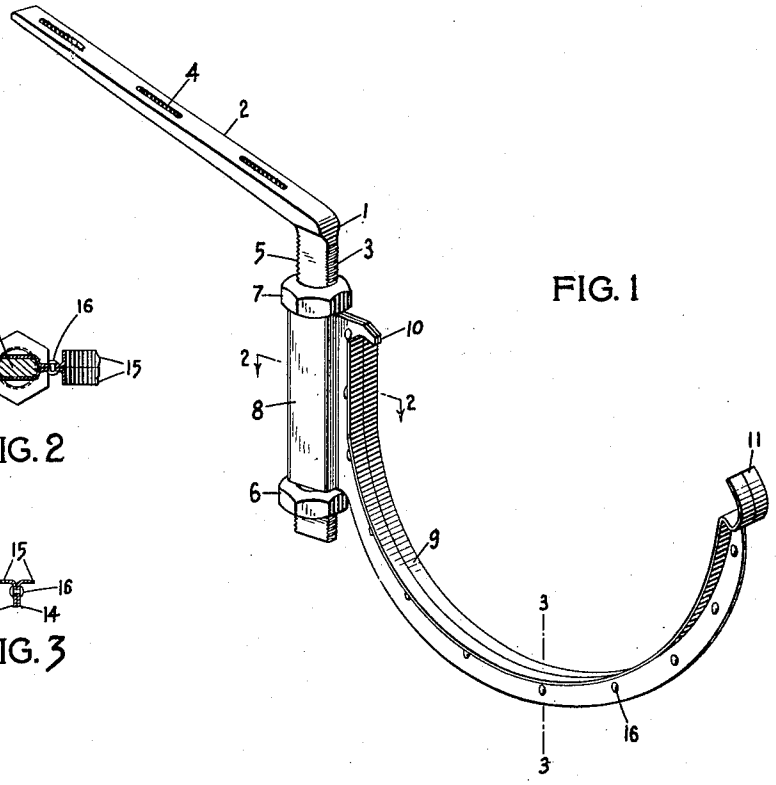


FIG. 1

FIG. 2

FIG. 3

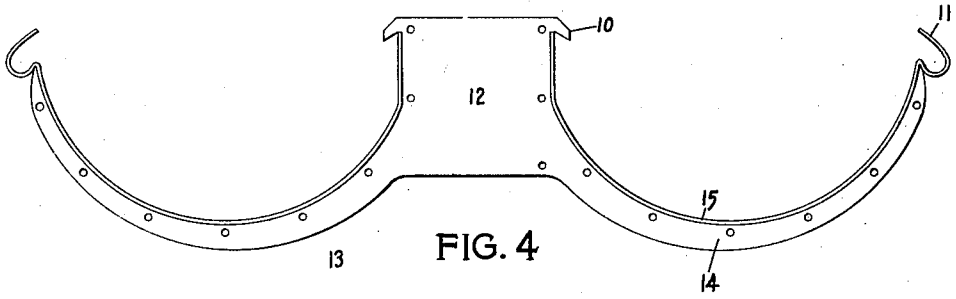


FIG. 4

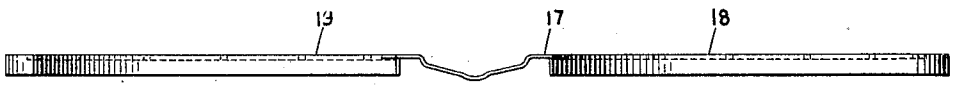


FIG. 5

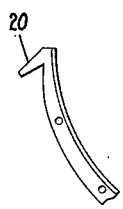


FIG. 6

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UNITED STATES PATENT OFFICE

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EAVES-TROUGH HANGER

Application filed January 23, 1929. Serial No. 334,457.

This invention relates to eaves-trough hangers and particularly to the method of making a hanger circle. The principal object of the invention is the provision of a novel method whereby the circle or gutter support proper may be rapidly and cheaply made of sheet metal and either completely finished for application to the shank of a hanger on the job or constructed so as to be completed and applied to the shank of the hanger as it is installed.

A further object of the invention is to provide a simple and efficient eaves-trough hanger which is of sturdy construction, neat appearance and which can be installed with a minimum amount of labor. Also one which may be adjusted and maintained in adjusted position against downward or upward thrusts produced by weight or wind.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawing which forms a part of this application, and in which

Fig. 1 is a perspective view of the completed hanger;

Fig. 2 is a horizontal sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 shows the stamped up blank;

Fig. 5 is a top plan view of a modified form of blank adapted to be bent around the shank and bolted together on the job; and

Fig. 6 is a detail side elevation of one end of the blank shown in Fig. 5.

Referring more particularly to the drawing, 1 generally indicates the shank as it is commonly spoken of in the art, which consists of angularly related arms 2 and 3, the former arranged to be secured to the roof as by fastening devices passing through the slots 4 into the sheathing or in any other suitable manner. When a shank of this type is utilized in a fireproof construction with concrete eaves, the free end of the arm 2 is usually bent up at right-angles and the entire arm embedded in the concrete. The manner of attachment of the shank to the roof or eaves forms no part of the present invention and is, therefore, not described in detail. The arm 3 of the shank which is usually arranged in a vertical or nearly vertical plane, is generally rectangular in outline and is provided, as shown, on two opposite faces with screw threads 5 to receive the adjusting and clamping nuts 6 and 7. These clamping nuts engage opposite ends of the supporting collar 8 which is formed integrally with the gutter circle, generally indicated at 9. As is customary, the gutter circle is provided with a hook 10, under which the inner edge of the gutter engages and the outer end of the circle is provided with a bead clamp 11 which may be bent over upon the bead of the gutter and soldered thereto if desired.

So far and with the exception of the adjusting and clamping nuts, I have described the features of an ordinary eaves-trough hanger. My device, however, is distinguished from the ordinary eaves-trough hanger in the construction of the gutter circle which, as shown in Fig. 4, is stamped up from a single sheet of metal and comprises a main body portion 12 and oppositely extending arc-shaped arms 13 and 14 each being substantially identical and provided at their upper edge with a laterally extending flange 15 forming when the arms are brought together, as will be hereinafter described, a wide supporting surface for the gutter or trough. In the manufacture of this circle the body 12 is bent around a die or other suitable forming tool and the arms 13 and 14 brought together with the flanges 15 thereof extending in opposite directions as shown in Figs. 2 and 3. The collar 8 is thus formed and the opening therein substantially conforms to the cross sectional outline of the arm 3 of the shank, being slightly larger than the shank so as to freely slide thereover without having any material amount of play between the shank and collar. When the arms are brought together, for instance as shown in Fig. 1, they are held in contact in any suitable manner, such for instance as by the use of a plurality of rivets 16 which I have shown.

With the form of the device shown in Fig. 1 the shank is formed in the shape indicated and the arm 3 properly threaded and the

circle is made up as previously indicated and slipped upon the arm 3 previous to which the clamp nut 7 has been set in the proper position. Thereafter the adjusted nut 6 is screwed up on the shank, whereupon the circle is held against vertical movement in either direction. By manipulating the nuts 6 and 7 the circle may be adjusted to any desired or required height so as to get the proper fall from the high point of the gutter to the outlet. The arm 3 of the shank being rectangular the circle cannot swing in a horizontal direction thereon and while I prefer the cross sectional form illustrated herein for the arm 3, I wish it to be clearly understood that any other rectangular form or partially rectangular form may be employed which will prevent rotation of the circle on the shank arm.

From the foregoing it will be seen that the shank and circle are separate and distinct elements of the hanger which are made up at the factory and assembled on the job, but in the form shown in Figs. 5 and 6, I have illustrated a blank form of circle which is stamped up in the form shown with the body 17 provided with a slightly off-set portion preformed in the press so that the arms 18 and 19 may be conveniently brought together and the collar properly formed to receive the arm 3 of the shank. In the use of this device the off-set portion is placed against the shank and the body bent around the same until the arms are brought into contact, whereupon they are secured together in any suitable manner. I have shown the arms 18 and 19 provided with holes which may receive bolts or if desirable suitable rivets which may be conveniently upset by the workmen installing the hanger. In this form also I have shown the arms provided with hooks 20 to receive the usual bead-clamping strips but if desirable this type of device may have the bead-clamps such as I have indicated at 11 in Figs. 1 and 4.

In either form of the device when the arms 13 and 15 or 18 and 19 are brought together and secured by bolts, rivets, or otherwise, a very rigid structure is produced, one which can be conveniently installed and which can be adjusted and maintained in adjusted position with a minimum amount of labor.

Applicant is aware of the LeClare Patent 894,019 in which the gutter circle is produced by casting and is adjusted on the shank in a somewhat similar manner to that illustrated herein, but applicant lays no claim broadly to a circle adjustable on the shank in this manner. He does, however, wish to cover as broadly as is possible, the idea of forming a hanger of sheet metal bent upon itself to produce an adjusting and supporting collar and flanged as shown to reinforce the structure.

What I claim is:

1. A circle for eaves-troughs constructed of a flat sheet of metal and comprising a pair of oppositely curved arms brought together in mating relation, means for securing said arms together in contacting relation, lateral supporting flanges on each of said arms, said flanges extending beyond the arms at one end thereof to form gutter retaining elements adapted to be bent over the outer marginal edge of a gutter to retain the same in place in the circle, and other gutter retaining elements formed integral with the opposite ends of said arms and adapted to engage the inner marginal edge of a gutter.

2. An eaves-trough hanger circle constructed of a single sheet of metal having a tubular body portion adapted to receive an arm of the hanger shank, and contacting mating arms each provided with laterally projecting flanges extending beyond the arms at one end thereof into malleable gutter retaining elements adapted to be bent over the marginal outer edge of a gutter to retain the same in the circle.

In testimony whereof I affix my signature.

MAX WALTEN.