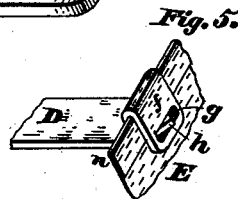
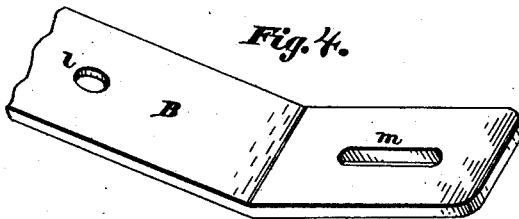
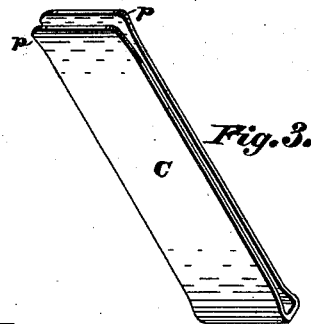
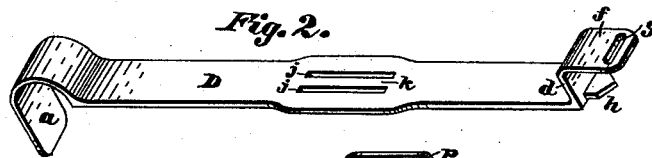
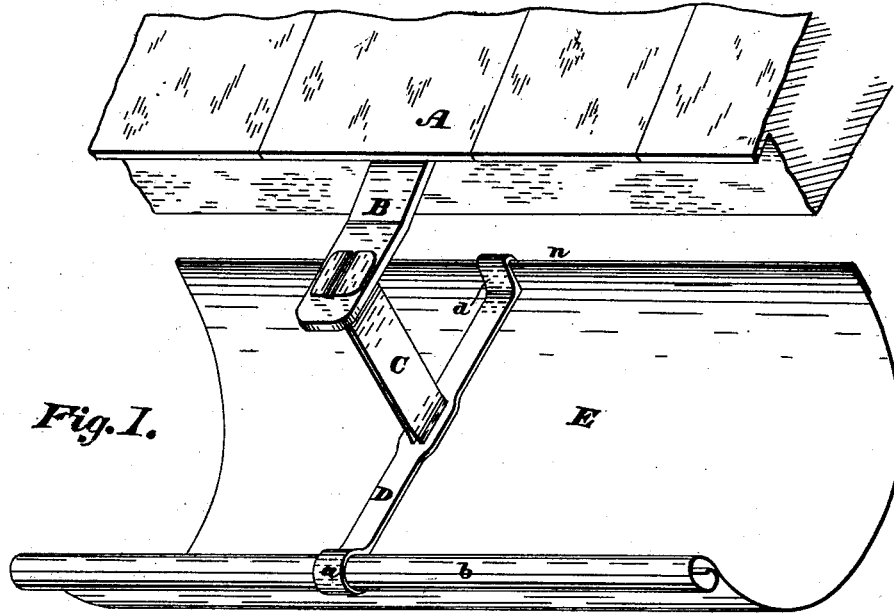


(No Model.)

D. H. HARMAN.  
EAVES TROUGH HANGER.

No. 347,348.

Patented Aug. 17, 1886.



WITNESSES

*Harry Freese*  
*Chas. R. Miller*

INVENTOR  
*David H. Harman*  
Attorney  
*By W. K. Miller*

# UNITED STATES PATENT OFFICE.

DAVID H. HARMAN, OF NEW PHILADELPHIA, OHIO.

## EAVES-TROUGH HANGER.

SPECIFICATION forming part of Letters Patent No. 347,348, dated August 17, 1886.

Application filed January 20, 1886. Serial No. 189,171. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID H. HARMAN, a citizen of the United States, and a resident of New Philadelphia, county of Tuscarawas, State of Ohio, have invented a new and useful Improvement in Eaves-Trough Hangers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in eaves-trough hangers; and it consists in providing a horizontal bar that extends across the trough and embraces the roll on one side and the edge of the trough on the other side, as hereinafter described; also, in providing in a hanger longitudinal slots for the reception of a link by which the hanger may be connected to and supported by a bracket projected from the roof.

My invention also relates to the peculiar form and adaptation of the supporting-bracket and the connecting-link.

My invention also relates to the detail and combination of parts, as described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a view in perspective from above, showing the eaves of the roof with trough attached. Fig. 2 is an isometrical view of the cross-bar. Fig. 3 is a perspective of the connecting-link. Fig. 4 is an isometrical view of the lower or projecting end of the bracket, and Fig. 5 is a detached view showing the manner of securing the inner edge of the cross-bar D to the edge of the trough.

D represents the horizontal cross-bar, which may be of malleable iron or other suitable metal, having one of its ends *a* adapted to be bent about the roll *b* of the trough E. (See Fig. 1.) The other end (see Fig. 2) is provided with an upwardly-projecting section, *d*, and an outwardly and downwardly projecting section, *f*. In the free end of the downwardly-projecting section *f* is provided an aperture, *g*, which will be hereinafter explained.

From the end of the horizontal cross-bar D, outside of the upwardly-projecting section *d*, there is projected a piercing and supporting point, *h*, which is parallel to and integral with

the bar D. This said bar is also provided at or near its center with two slots, *j j*, and a longitudinal bar, *k*, which will be hereinafter explained.

The bracket B (shown in Figs. 1 and 4) may be made of any suitable metal, about one-eighth by one inch, and cut to the desired lengths—say from five to eight inches long—and having two or more perforations, *l*, in the one end, and a slot, *m*, about one-eighth inch wide by one inch long in the other end, and formed or bent as shown in Fig. 4, so that the slotted or projecting end may be horizontal. The other end may conform to the angle or pitch of the roof, to which it may be secured by nails driven through the holes *l*.

The link C may be formed of strips of sheet or hoop iron about three-fourths of an inch wide and No. 20 gage, cut into lengths of from six to twelve inches, varying to suit the circumstances and the pitch or fall given to the trough, and bent into a U or open-link shape, as shown in Fig. 3.

One method of using my improved hanger is to place the brackets B on the sheeting before the slate or shingles are put on, so that the upper end of the bracket may be concealed, as shown in Fig. 1. This may be done by placing the brackets at regular intervals on the sheeting, after which the slate or shingles may be laid. The cross-bar D may be placed on the trough at intervals corresponding in space with the placing of the brackets on building, and secured to the trough in the following manner: Place the bar across the trough, and with tongs or pinchers adapted to the size of the roll *b* the end *a* of the bar may be bent or turned in so as to conform to and embrace the roll *b*, as shown in Fig. 1. The other end of the bar D, resting on the inside edge of the trough, may be secured to it in the following manner: By tongs or pinchers adapted to such use the outwardly and downwardly projecting end *f* may be bent down and forced in against the edge *n* of the trough, which is now resting against the point *h*, and by a continued pressure of the tongs the point *h* will perforate the side of the trough and pass into the perforation *g*, as shown in Fig. 5, the edge of the trough supported on the point *h* and between the upwardly-projecting

section *d* and the now bent-down section *f*, thus securely fixing that end of the cross-bar to the trough. The link C may be placed in the bar either before or after it is secured to the trough by passing the free ends *p p* through the slots *j j*, the bar *k* resting in the closed end of the link. The trough may now be raised to the brackets projecting from the eaves A, the free end of the link passed through the slot *m*, and the ends *p p* bent out and down, as shown in Fig. 1. The pitch or grade of the spout may be determined by the length of the link, and as thus supported by reason of the construction of parts, as hereinbefore described. The trough may be moved laterally on its hangings for convenience in erecting or to yield to the force of contraction and expansion of either the metal composing the trough or of the lumber of the building, and also rock on its bearings in the bar D and the bracket B, so that snow sliding from the roof coming in contact with the spout, it may drop back under the eaves to a position of safety, and when the snow has passed over may swing back to its former position.

The cross-bar D, when desirable, may be provided with a single central perforation, adapting it to be used with the ordinary threaded hanger-iron having threaded nuts adapted to the iron above and below the bar D for adjustment in the usual way.

I am aware that it is old to rigidly secure a link carrying a trough to a bracket secured to the roof, the said bracket having a slot for the passage of the link, and hence I make no claim, broadly, to such a construction.

Having fully described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An eaves-trough hanger consisting of a horizontal bar, D, having a curved grasp, *a*,

at one of its ends, and at the other end an upwardly-projected section, *d*, an outwardly and downwardly projected section, *f*, having a perforation, *g*, at or near its free end, and a point, *h*, projecting from the body of the horizontal bar D, the parts adapted to inclose the edge of the trough, the point *h* to penetrate and support the same and rest in the perforation *g*, substantially as shown and described, and for the purpose set forth.

2. An eaves-trough hanger consisting of a horizontal cross-bar, D, having a curved grasp, *a*, at one of its ends, and at the other end an upwardly-projected section, *d*, an outwardly and downwardly projected section, *f*, having a perforation, *g*, at or near its free end, and a point, *h*, projecting from the body of the horizontal bar D, and the slots *j j* and bar *k*, substantially as described, and for the purpose set forth.

3. In an eaves-trough hanger, the combination, with the horizontal cross-bar having a curved grasp at one end, and at its other end a bent section having a slot therein, substantially as described, of the link C and bracket B, substantially as set forth.

4. The combination, with a bracket having a slot in the outer end thereof, of a link, the upper end of which passes through the slot in the bracket and is loosely secured therein, for the purpose of permitting the link to swing toward and away from the eaves, and a trough secured to the lower end of the link, substantially as set forth.

In testimony whereof I have hereunto set my hand.

DAVID H. HARMAN.

Witnesses:

STANLEY W. SWABY,  
CHARLES H. HARMAN.