

R. A. Lucas,

Eaves-Trough.

No. 102,412.

Patented Apr. 26. 1870.

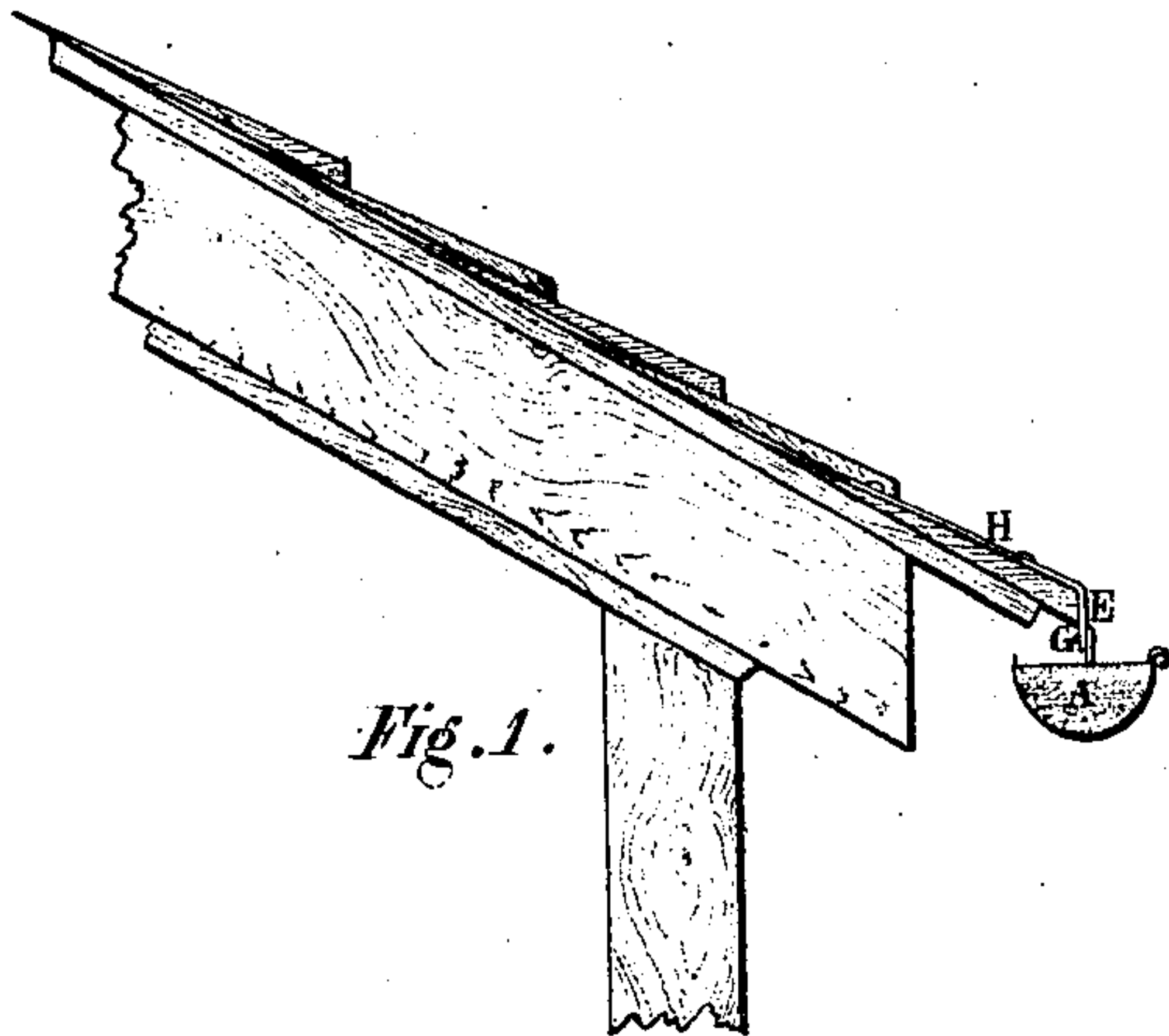
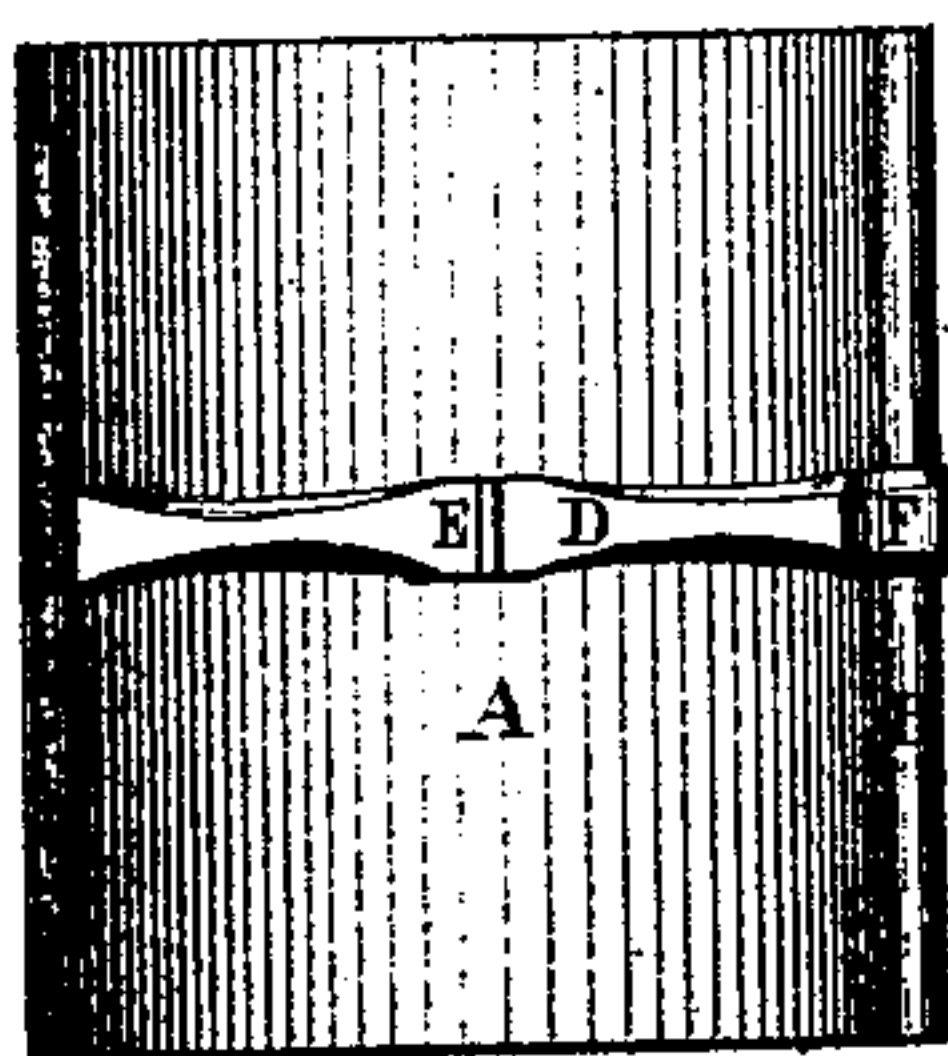


Fig. 1.



Figs. 2.

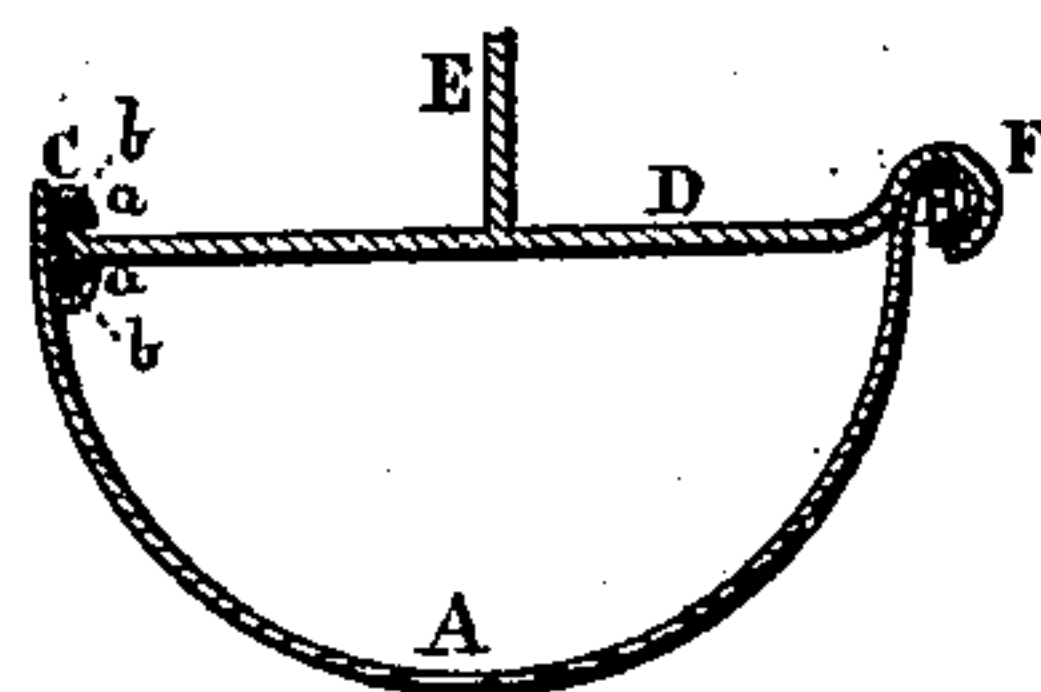
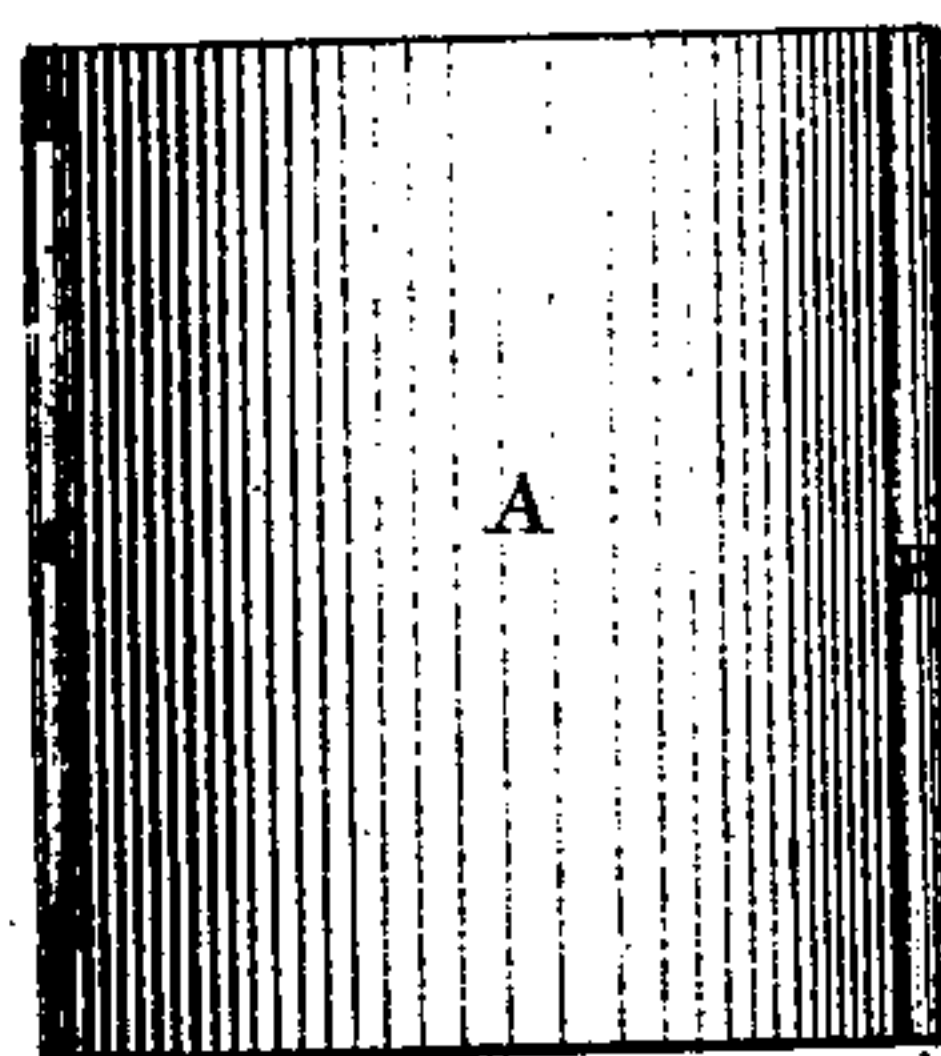
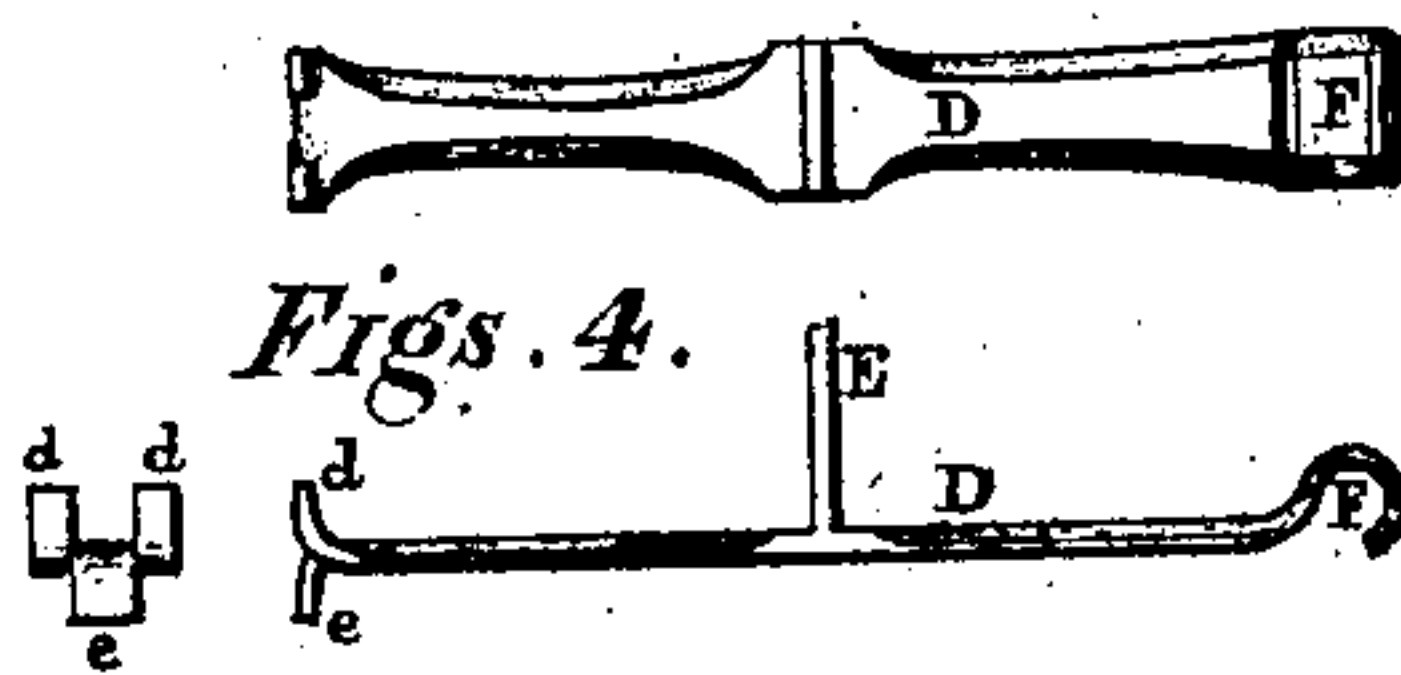


Fig. 3.



Figs. 4.

W. H. Hammond
And. Choffin } *Witnesses.*

Robert A. Lucas *Inventor*
by J. B. Abbott *Attorney.*

United States Patent Office.

ROBERT A. LUCAS, OF WOOSTER, OHIO, ASSIGNOR TO HIMSELF, AND HORACE S. WESTON, OF SAME PLACE.

Letters Patent No. 102,412, dated April 26, 1870.

IMPROVEMENT IN EAVES-TROUGH HANGER.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, ROBERT A. LUCAS, of Wooster, Wayne county, Ohio, have invented certain new and useful Improvements in Eaves-trough Hangers; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings forming part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a view, showing an application of my invention.

Figure 2 are plans of an eaves-trough, with and without the hanger-bar.

Figure 3 is a cross-section of an eaves-trough with hanger-bar secured thereto.

Figure 4 are plan, end, and side views of a hanger-bar.

My invention relates to certain improvements in the construction and mode of attaching the hanger-bar to a metal eaves-trough; and

It consists, first, in securing a short metal strip, with its upper and lower edges rolled up so as to form inside grooves, to the inner edge of the trough; and in constructing the hanger-bar with flanges or lips on its upper and lower sides at its end, so that it may be secured to the eaves-trough by simply sliding the end into the metal strip, with rolled edges, on the inner side of the trough, which metal strip is secured to the trough at the strap, thus obviating the necessity of any out-door work, and obtaining a cheap, firm, and convenient construction.

My invention consists, secondly, in the combination of a hanger-bar with an open circular clasp at one end, and with flanges or lips on the upper and lower sides, at the other end, with a metal eaves-trough constructed with one circular rolled edge, and having secured on the opposite inner edge at suitable intervals, short metal strips, with their upper and lower edges rolled up so as to form inside grooves, whereby I obtain a very cheap and easily-adjusted construction for the hanger-bars to the eaves-trough.

To enable others skilled in the art to make and use my invention, I will proceed to explain more fully its construction and operation.

The trough A is of the ordinary form of eaves-trough, and at suitable intervals along its inner edge, (depending on the distance between the hanger-bars,) are secured the short metal strips C, as shown in figs. 2 and 3.

These strips C are from three to four inches in length, and have their upper and lower edges, *a a*, rolled over, so as to form the inside grooves *b b*, as shown in fig. 3.

The hanger-bar D has the lips or flanges *d d e* formed on its upper and lower sides at the end, the distance between the extreme ends of the flanges *d e* being equal to the distance between the bottom of the grooves *b b*, from which it is evident that the end of

the hanger-bar D can be secured in the strip C, by simply sliding the flanges *d d e* into the grooves *b b*, as shown in fig. 3.

It is obvious, that by securing metal strips, C, of the form shown, at suitable intervals on each of the inner edges of the trough A, and by making both ends of the hanger-bar D with the flanges *d d e*, both ends of the hanger-bar could be secured to the trough in the manner just shown; but a more satisfactory construction is obtained by forming the circular rolled edge B on one side of the trough A, and by forming the open circular clasp F at one end of the hanger-bar D.

The hanger-bars are then slid onto the rolled edge B at one end of the trough A, and are turned down and slid into the metal strips C when brought to their proper position, thus firmly securing the bar to the trough, as is readily seen.

The pendent rod E may be cast with, or otherwise secured to the hanger-bar D, and is attached by a screw or rivet, G, to the roof-iron H, in an ordinary manner, as shown in fig. 1.

The particular construction of the flanges *d e* at the end of the hanger-bar D, can be varied, as desired, the only requisite being that there be a flange on both the upper and lower sides, to fit in the grooves *b b* in the strip C.

The hanger-bar D should be of such length as to require a slight pressing in of the edges of the trough A, to allow the flanges *d e* to enter the grooves *b b*, so as to secure a firm connection.

Having thus fully described my invention,

I do not claim, as new, the use of a hanger-bar as a means of suspending an eaves-trough, nor the circular rolled edge on the eaves-trough, nor the open circular clasp at one end of the hanger-bar, as these features have been before shown;

What I do claim herein as new and of my invention, and desire to secure by Letters Patent, is—

1. The hanger-bar D, provided with the end lips or flanges *d e*, when used in combination with the metal strip C, secured on the inner edge of the trough A, and having the rolled edges *a a*, substantially as and for the purpose specified.

2. The hanger-bar D, provided with the open circular clasp F, and with the end lips or flanges *d e*, when used in combination with the eaves-trough A, provided with the circular rolled edge B, and having the metal strip C, with rolled edges *a a* secured on the opposite inner edge, substantially as and for the purpose specified.

As evidence of the foregoing, witness my hand, this 12th day of February, A. D. 1870.

ROBERT A. LUCAS.

Witnesses:

GEORGE BRAUNECK,
ALBERT BRAUNECK.