

J. P. ABBOTT.
Eaves-Trough Hangers.

No. 146,855.

Patented Jan. 27, 1874.

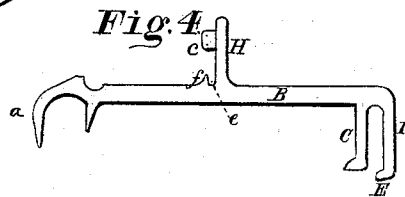
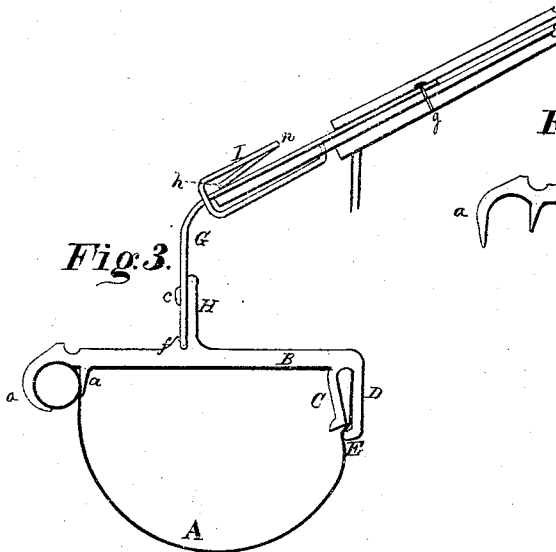
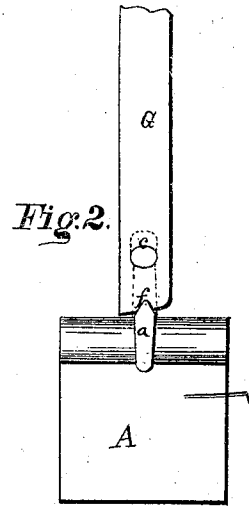
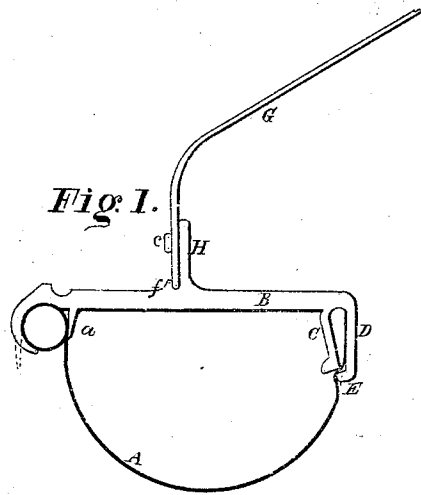


Fig. 5.

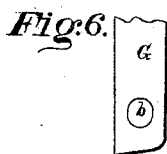
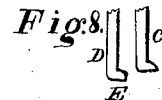
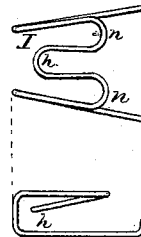
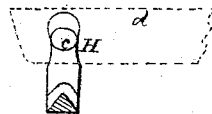


Fig. 8.



Witnesses.

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JONATHAN P. ABBOTT, OF CLEVELAND, OHIO.

IMPROVEMENT IN EAVES-TROUGH HANGERS.

Specification forming part of Letters Patent No. **146,855**, dated January 27, 1874; application filed December 29, 1873.

To all whom it may concern:

Be it known that I, JONATHAN P. ABBOTT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Eaves-Trough Hanger, of which the following is a complete description, reference being had to the accompanying drawings making part of this specification.

This invention is a hanger for attaching eaves-troughs to a building, the construction and operation of which hanger are as follows:

Figure 1 is a side view of the hanger and eaves-trough. Fig. 2 is a front view. Fig. 3 is a view of the trough and hanger attached to the eaves. Fig. 4 is a detached view of the bar of the hanger.

The other figures are detached sections, to which reference will be made.

Like letters of reference refer to like parts in the several views.

A represents an eaves-trough, which is of the ordinary construction. B is a brace, one end of which is bent around the head of the trough, which, by the aid of the lug *a*, Fig. 1, holds the outer edge thereof. The lug *a*, being of considerable length, and of malleable iron, can be bent so as to admit the inclosing of a large or small bead between it and the end of the brace. The inner edge of the trough is secured to the brace or bar by the fingers C D, Fig. 4. The finger D is a trifle longer than the finger C, and on its end is a thick lip or knob, E. Between the two fingers the inner edge of the trough is inserted, and is therein retained by bending the finger C back against the finger D, thereby crimping the side of the trough over the lip E of the finger, as shown in Figs. 1 and 3. The lip E forms a dent in the side of the trough, which prevents it from being drawn out from between the fingers. By this means the trough is firmly and securely attached to the brace or bar without making a hole therein for that purpose. G is the strap whereby the trough is secured to the roof. In the lower end of the strap is made an oblong hole, *b*, Fig. 6, which corresponds in shape and size to the head of the nib *c*, formed on the face of the stud H. The neck of the nib is round.

It will be observed that the greatest diameter of the hole *b* is in the line of the length

of the strap, whereas the greatest diameter of the head of the nib *c* is transverse to the length of the stud, the purpose of which is to lock the strap to the stud, which is done by bringing the strap to the position indicated by the dotted lines *d*, Fig. 7, thereby allowing the head to enter the hole of the strap, which, on being turned on the neck of the nib to the position shown in Figs. 1 and 2, brings the longest diameter of the head across the shortest diameter of the hole, and prevents it from coming off.

To render the attachment of the strap G to the stud more secure, the lower end of the strap is held in the notch *e*, Fig. 4, formed by the nib *f* and the side of the stud, as shown in Figs. 1 and 2. In this way the end of the strap cannot be strained outward in consequence of any undue strain being exerted upon the brace B, or otherwise, thereby relieving the nib *c* from alone bearing such strain; hence it is less liable to give way. The strap G is secured to the roof by inserting the upper end under the shingles, and thereto fastening it with a nail, *g*, in the ordinary way.

In order to secure the strap to the edge of the eaves, and thereby make its attachment to the roof stronger, a clamp, I, Fig. 5, is used, the application of which, for this purpose, is shown in Fig. 3. By this means that part of the strap passing over the edge of the eaves is firmly fastened thereto, so that the trough cannot be lifted up by the wind, or vibrate on the nail. In case the trough should receive an upward pressure, by wind or otherwise, the strain would be exerted upon the point *h* of the clamp, the result of which would be to throw the parts *n* down upon the strap, and thereby hold it more firmly to the roof.

The position of the lips E of the fingers C D may be changed from that shown in Fig. 4 to that shown in Fig. 8, to accomplish the same purpose. The position of the lips shown in Fig. 4 is, however, preferred for general use.

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

1. The brace B, fingers C D, and lip or knob E, in combination with the eaves-trough A, in the manner and for the purpose set forth.

2. The nib *c* of the stud H, constructed as described, in combination with the strap G,

having an oval hole, *b*, therein, corresponding to the shape of the nib *c*, for locking the strap and stud together, substantially in the manner and for the purpose specified.

3. The nib *f*, in combination with the strap *G*, substantially as and for the purpose set forth.

4. The clamp *I*, in combination with the

strap *G* and the eaves of a building, substantially in the manner as described, and for the purpose set forth.

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Witnesses:

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