(No Model.) 2 Sheets—Sheet 1.

M. BINGMAN.

EAVES TROUGH HANGER.

No. 456,877. Patented July 28, 1891.

Fig 1

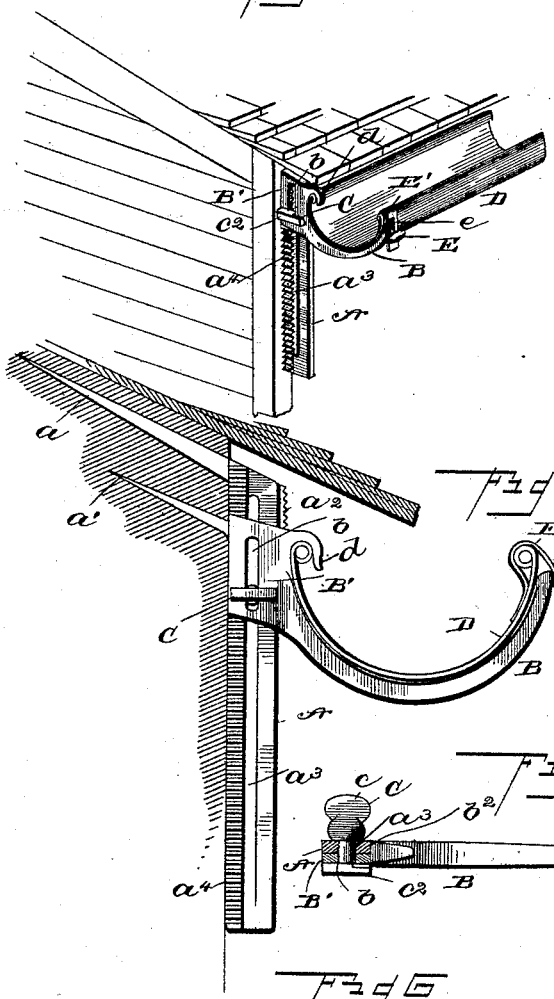


Fig 3

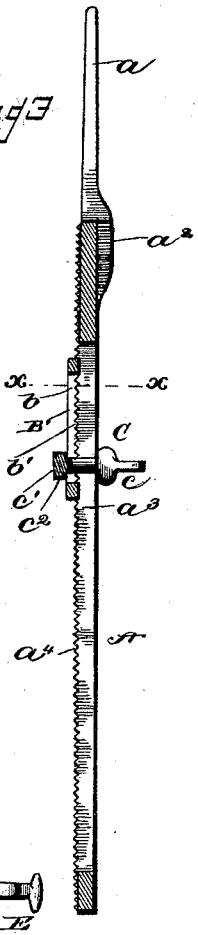
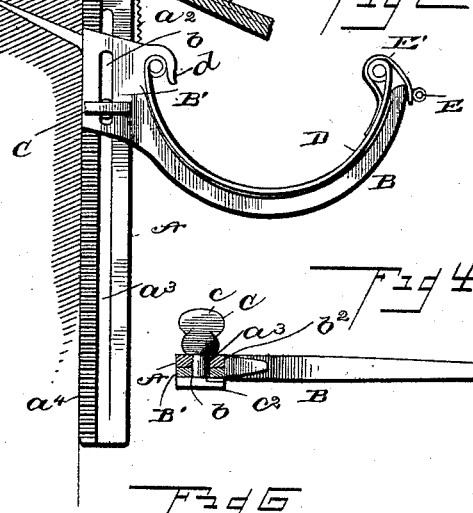


Fig 2



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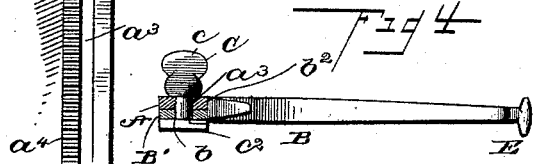
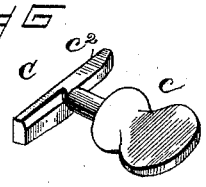


Fig 5



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

M. BINGMAN.

EAVES TROUGH HANGER.

No. 456,877. Patented July 28, 1891.

Fig 5

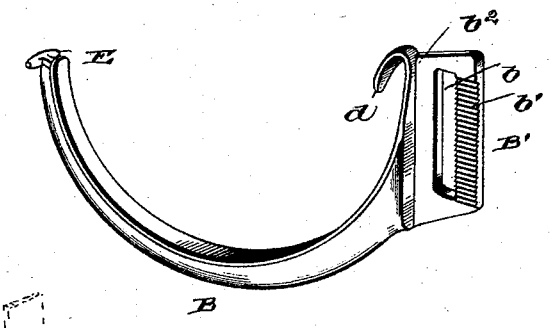


Fig 7

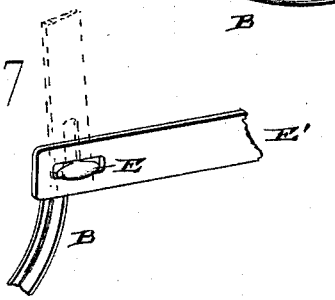


Fig 8

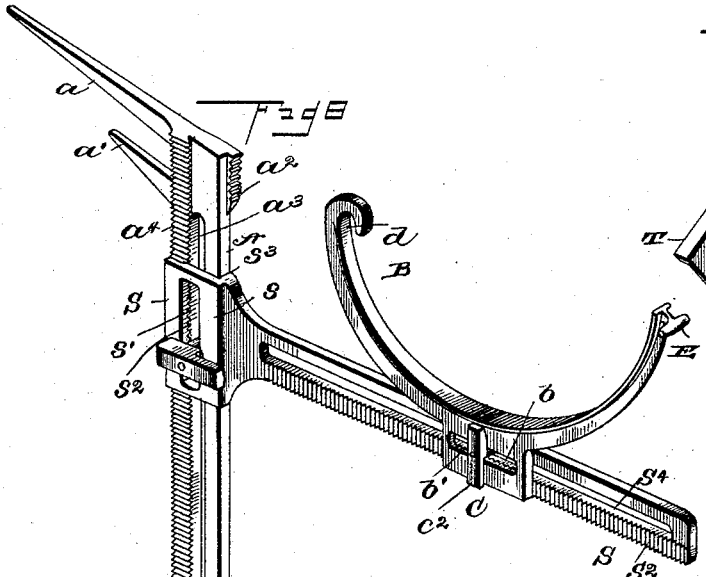


Fig 10

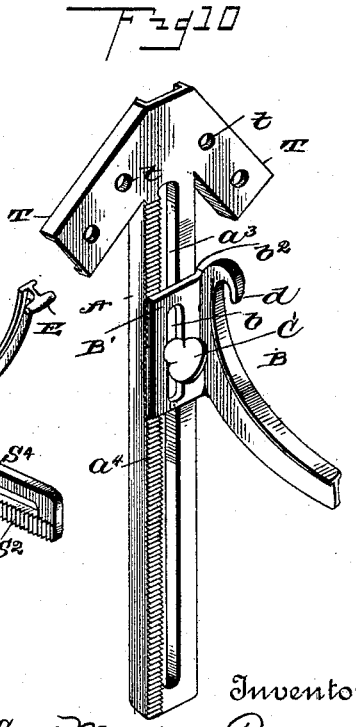
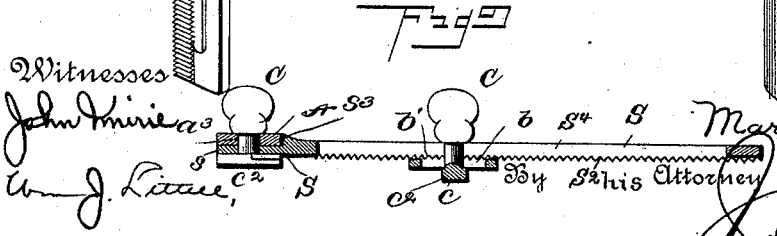


Fig 9



Witnesses
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Inventor
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By his Attorney
J. R. Littell,

UNITED STATES PATENT OFFICE.

MARTIN BINGMAN, OF SHELTON, WASHINGTON, ASSIGNOR OF TWO-THIRDS TO ALBERT JOHNSON AND OLE C. HANSON, OF SAME PLACE.

EAVES-TROUGH HANGER.

SPECIFICATION forming part of Letters Patent No. 456,877, dated July 28, 1891.

Application filed December 10, 1890. Serial No. 374,199. (No model.)

To all whom it may concern:

Be it known that I, MARTIN BINGMAN, a citizen of the United States, residing at Shelton, in the county of Mason and State of Washington, 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 the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to eaves-trough hangers of that class employing a stationary support and a trough-holder adjustably connected therewith.

The object of the invention is to provide a device of this character in which the parts are readily and quickly set and adjusted, one of which is of simple and inexpensive construction, and which is adapted to be manufactured of such material as will insure strength and durability.

To this end my invention consists in certain improvements upon the construction covered by the patent issued to me September 22, 1885, No. 326,709, substantially as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of an eaves-trough hanger embodying my invention. Fig. 2 is a side elevation thereof, showing its application to a building and with the trough in position. Fig. 3 is a vertical sectional view taken longitudinally and centrally through the rigid or stationary member. Fig. 4 is a sectional view on the line x x, Fig. 3. Figs. 5 and 6 are detail perspective views, respectively, of the adjustable trough-holder and locking-key detached. Fig. 7 is a detail perspective view illustrating the method of attaching the securing-band to the outer end of the trough-holder. Fig. 8 is a perspective view illustrating a modification. Fig. 9 is a sectional view thereof. Fig. 10 is a perspective view illustrating another modification.

Corresponding parts in the figures are denoted by the same letters of reference.

Referring to the drawings, A designates a vertical support or stationary member provided at its upper end with a long and short integral prong or spike a a', respectively, projecting upwardly from the rear edge of the support at an angle to conform to the pitch of the roof. The prongs a and a' are designed to be respectively driven between the cornice and roof and into the cornice, and to facilitate setting of the support a serrated boss a^2 is provided at the front edge thereof opposite the prongs, upon which a hammer may be struck to drive the prongs in place. The support A is further provided with a centrally-located longitudinal slot a^3, extending approximately from end to end, and at one side of said slot the face of the support is provided with a series of serrations or teeth a^4, which continue throughout the entire length of the support.

B designates the trough-holder, which may be of semicircular or other form, and is provided at its rear edge with an extended plate B'. The latter is provided with a slot b, coinciding with the slot a^3 in the support, and with corresponding serrations or teeth b', opposing the serrations upon the support A. The teeth of the support and holder are designed to intermesh when the holder is secured, and to prevent vertical play of the latter the plate B' is provided at its outer edge with a shoulder b^2, which abuts against the outer edge of the support.

For securing the trough-holder to the support, I have provided a key C, which consists of a thumb-piece c, having a tenon c' projecting from the base thereof and carrying a cross-bar c^2. The projecting members of the latter are beveled upon opposite sides, forming cam-faces, as shown. The cross-bar of the key is inserted through the slots of the support and holder, the latter having been previously adjusted and the thumb-piece partially turned, the beveled members of the cross-bar serving to securely bind the holder and support together and against displacement.

The trough D is placed in the holder and is held firmly in place by a downturned hook d, provided at the rear edge of the holder and which embraces the adjacent edge of the trough, and by means at the outer end of the holder, which will now be described.

E designates an outwardly-projecting T or

anchor-shaped stud, the members of which extend in a transverse plane to the trough-holder, with which it is formed integral. To this stud is adapted to be locked a plate E′, formed of sheet metal, and to this end it is provided with a longitudinally-disposed elongated slot *e* at its outer end of a length and breadth slightly in excess of the dimensions of the stud. In practice the plate E′ is held in a horizontal position, so that its slot will receive the stud when the plate is turned upwardly to a vertical plane, thus locking the plate upon the stud. The free portion of the plate is then bent down into the trough and secured to the latter.

In Figs. 8 and 9 I have shown a modified construction, in which the trough-holder is adapted to be adjusted horizontally as well as vertically. To effect this, I provide an elongated horizontally-disposed arm or member S, having at its rear end a broadened plate *s*, which is provided with a slot *s′*, teeth s^2, and a shoulder s^3, said arm or member being adapted to be adjusted and secured upon the support after the manner of the trough-holder before described. The arm S is also provided with a longitudinally-located slot S^4 and with serrations or teeth S^2. In the employment of this arm or member the construction of the trough-holder remains substantially the same, except that the securing-plate B′ is provided centrally at the outer side in lieu of at the rear edge, corresponding keys being employed to secure the member S to the support and the trough-holder to said member.

Where the hanger is used upon buildings roofed with slate, I prefer to employ means other than that described above for securing the support A to the building. In this instance the prongs or spikes are omitted and in lieu thereof two downwardly-extending wings T T are provided at the side edges of the plate, said wings being provided with securing perforations *t*. The position of the plate in this construction is also changed to a plane at right angles to that previously described, or, in other words, in a plane with the front of the building, and the plate designed to be adjusted and secured thereon is arranged to coincide therewith.

I claim as my invention—

1. In an eaves-trough hanger, the combination, with a stationary support, of a trough-holder adjustably connected therewith and provided with a downturned hook at its inner end for engaging the adjacent edge of the trough and with a T-shaped stud at its outer end and at right angles thereto, and a securing plate or strip provided at its outer end with a longitudinally-disposed elongated slot adapted to receive said stud and be locked thereon in the manner described, the free portion of said plate being adapted to be bent over and secured upon the interior of the trough, substantially as set forth.

2. In an eaves-trough hanger, the combination, with a trough-holder provided at one end with an inwardly and downwardly turned hook and at the opposite end with an outwardly-projecting T-shaped stud disposed at right angles to the holder, of a flat plate provided at one end with a longitudinally-disposed elongated slot for the reception of said stud, said plate being adapted to be bent down over the trough and secured thereto, substantially as set forth.

3. In an eaves-trough hanger, the combination, with a vertically-disposed stationary support provided with a longitudinal slot and a vertically-adjustable trough-holder provided with a registering slot, of a locking-key comprising a thumb-piece, a tenon projecting therefrom, and a cross-piece carried at the end of the tenon and having its projecting members beveled, said cross-piece being adapted to be inserted through said slots and when turned bind the holder to the support, substantially as set forth.

4. In an eaves-trough hanger, the combination, with a stationary support provided with a longitudinal slot and with a corresponding series of serrations or teeth at one side thereof, of an adjustable trough-holder provided with a coincident slot and series of serrations or teeth and with a shoulder adapted to bear against the adjacent face of the support, and means for securing the holder to the support, substantially as set forth.

5. In an eaves-trough hanger, the combination, with a stationary support provided with a longitudinally-disposed slot and an adjustable trough-holder provided with means for securing the trough and with an elongated slot registering with the slot in the support, of a key provided with a T-head having cam-faces, said key being adapted to engage said slots to bind the holder to the support, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN BINGMAN.

Witnesses:
C. L. ANSORGE,
IRENE M. DAY.