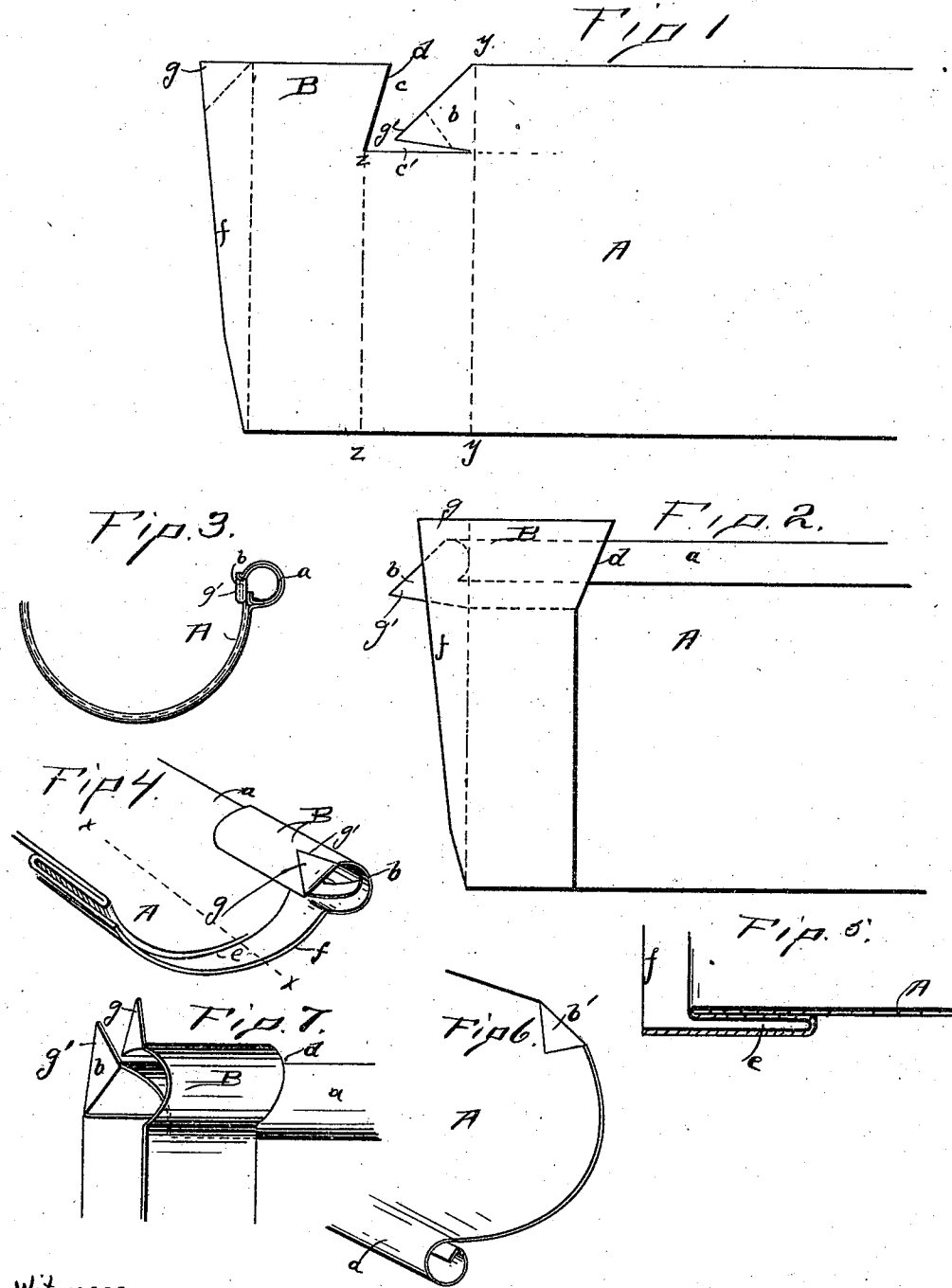


(No Model.)

L. S. BONBRAKE.
EAVES TROUGH.

No. 503,940.

Patented Aug. 29, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS S. BONBRAKE, OF DECATUR, ILLINOIS.

EAVES-TROUGH.

SPECIFICATION forming part of Letters Patent No. 503,940, dated August 29, 1893.

Application filed May 1, 1893. Serial No. 472,500. (No model.)

To all whom it may concern:

Be it known that I, LEWIS S. BONBRAKE, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Eaves-Troughs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1, is a view showing a portion of the sheet from which a section of eaves trough is made or formed, showing its construction before any folding is done. Fig. 2, is a view showing a portion of the sheet from which a section of eaves trough is formed, and illustrating the sheet partially folded, and the bead formed. Fig. 3, is an end view of the joint end of the section. Fig. 4, is a perspective view showing a portion of the eaves trough properly finished. Fig. 5, is a longitudinal section of the joint through line $x-x$ Fig. 4. Fig. 6, is a view showing a portion of the eaves trough, and illustrating the raw end of the section. Fig. 7, is a view illustrating the position of the joint end of the bead, showing the same partially constructed.

The present invention has relation to eaves troughs, and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the sheets or sections of metal from which the eaves trough proper is formed, and are formed in sections of any desired length. Upon one side of the section A, is formed the bead or roll a , said bead being formed in the ordinary manner, as hereinafter described. One end of each of the sections A, is provided with the lip or extension b , which lip or extension is formed by cutting the openings or notches c and c' , which openings or notches are located and arranged substantially as shown in Fig. 1; which openings or notches also leave upon the bead edge of the section A, the extension B; the inner edge of said extension B, being

provided with the inclined edge d . The grooved end of the section A, is cut at an angle; or in other words is cut diagonally across the end of the section, substantially as illustrated in Fig. 1, and is so formed for the purpose of providing a guide for entering the raw end of a section designed to be received into the groove e , which groove is formed as hereinafter described. The groove e is formed by bending a portion of the sheet or section A, over and upon itself, at a point on line $y-y$, Fig. 1, and then giving to said bent over portion a second fold on line $z-z$, Fig. 1, which folds form the groove e , and the flange or guide f . It will be understood that by providing the extension b and forming the same as shown in Fig. 1, when the bead a , is formed, said extension will assume the position illustrated in Fig. 4, when the joint end of the trough proper is finished.

By providing the extension B, and locating the same as illustrated in Fig. 1, it will be brought into proper position to be folded over the bead a , as illustrated in Fig. 4, thereby giving double strength to the bead proper at its joint end.

For the purpose of securely holding the end of the bead a , and the extension B, in close contact, and at the same time preventing the extension B, from springing out of its proper position, the lips g and g' , are bent over the open end of the extension B, as illustrated in Fig. 4, which completes the grooved end of the trough; and for the purpose of holding the opposite end of the extension B, in close contact with the inner faces of the trough, it may be soldered to the section A.

It will be understood that by folding the lips g and g' , as illustrated in Fig. 4, and providing the extension b , and forming the same as illustrated, it will act as a guide for entering the end of the bead formed upon the section, to be attached to its adjacent section. By giving a double thickness to the bead proper, at the point where the joints are formed, and entering the adjacent bead within that portion of the bead having a double thickness of metal, a very rigid connection will be formed at the joints of the eaves trough. For the purpose of assisting in entering the opposite side of the section, from that pro-

vided with the bead, a portion of the entering end of the section A, is bent down upon itself, as illustrated at *b'*, Fig. 6.

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

1. The combination of the sheets or sections A, provided with the lip or extension *b*, and the extension B, the bead *a*, the groove *e*, the flange or guide *f*, and the lips *g* and *g'*, bent over the extension B, substantially as and for the purpose specified.

2. The combination of an eaves trough, provided upon one side thereof, with a bead or roll, the extension B, located upon the outer side and around the bead *a*, the lip or exten-

sion *b* the groove *e*, the guide or flange *f*, and the bent over portion *b'*, substantially as and for the purpose specified.

3. The combination of a section of eaves trough as A, provided upon one end thereof with a groove and guide, the extension B, located around the bead or roll, the extension *b*, and the lips *g* and *g'*, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEWIS S. BONBRAKE.

Witnesses:

M. C. HERMAN,

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