(No Model.)

2 Sheets—Sheet 1.

E. R. DENSMORE.

EAVES OR ROOF GUTTER.

No. 472,014. Patented Mar. 29, 1892.

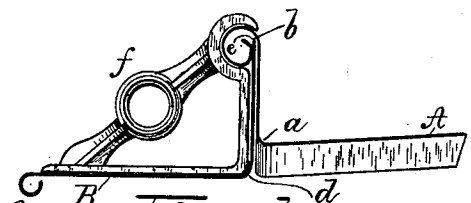

Fig. 1

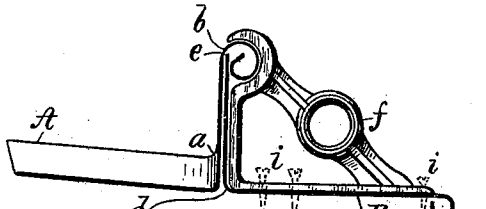

Fig. 2

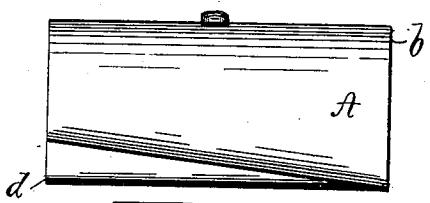

Fig. 3

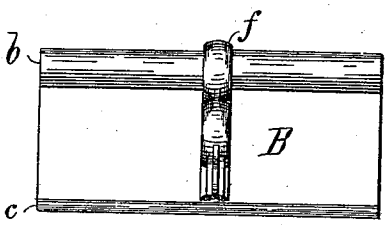

Fig. 4

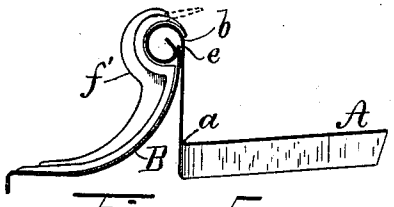

Fig. 5

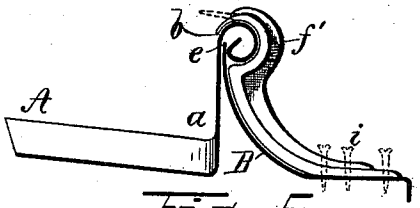

Fig. 6

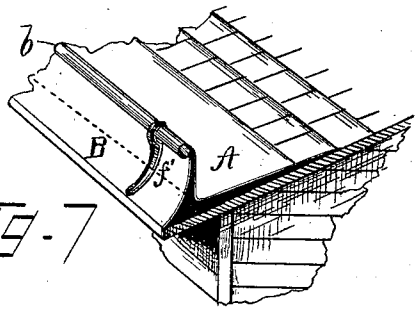

Fig. 7

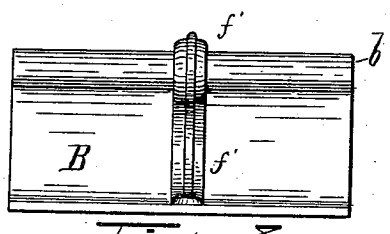

Fig. 8

Witnesses.
Henry Ford
W. A. Biddle

Inventor.
E. R. Densmore
by W. A. Bunnage Atty.

(No Model.) 2 Sheets—Sheet 2.

E. R. DENSMORE.

EAVES OR ROOF GUTTER.

No. 472,014. Patented Mar. 29, 1892.

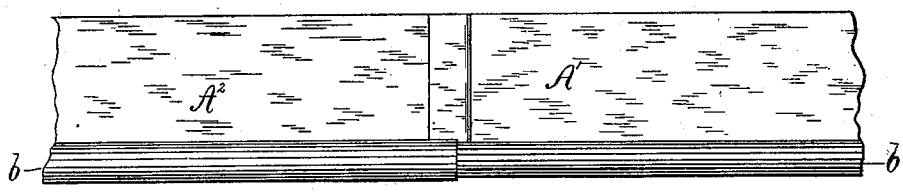

Fig. 9

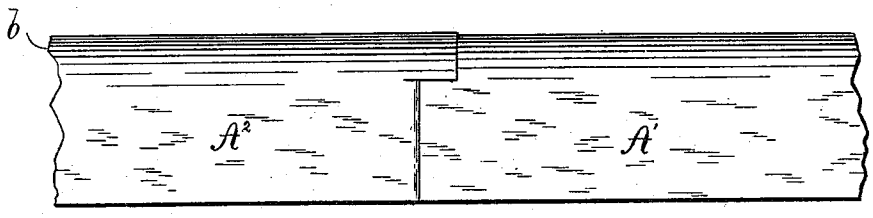

Fig. 10

Fig. 11

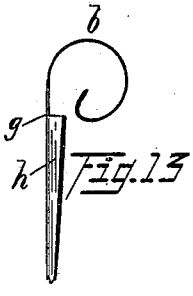

Fig. 13

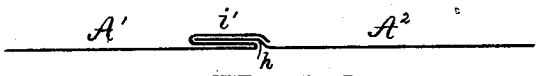

Fig. 12

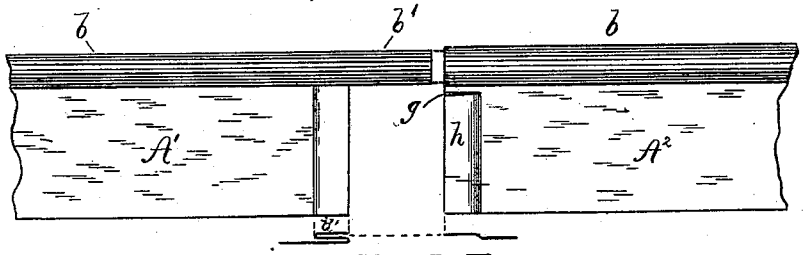

Fig. 14

Witnesses.
Henry Ford
W. A. Biddle.

Inventor.
E. R. Densmore
by W. H. Burridge
atty.

UNITED STATES PATENT OFFICE.

EDWIN R. DENSMORE, OF PAINESVILLE, OHIO.

EAVES OR ROOF GUTTER.

SPECIFICATION forming part of Letters Patent No. 472,014, dated March 29, 1892.

Application filed August 19, 1891. Serial No. 403,075. (No model.)

To all whom it may concern:

Be it known that I, EDWIN R. DENSMORE, a citizen of the United States, residing at Painesville, in the county of Lake and State of Ohio, have invented certain new and useful Improvements in Eaves or Roof Gutters, of which the following is a full, clear, and complete description thereof.

The nature of my invention relates to the construction and arrangement of a metallic eaves or roof gutter to be placed on the roof of a building near the edge thereof in place of the cumbrous and unsightly eaves-trough as ordinarily hung under the eaves.

It also relates to the mode of splicing said gutter or the manner of joining the sections thereof in forming the gutter. Heretofore the difficulty encountered in placing gutters near the edge and on the roof has been to gain the required amount of pitch or inclination of said gutter without running back on the roof or exposing to view a slanting bead or edge to the gutter, which is found objectionable. These difficulties are overcome in my improvements, as will be seen by the following specification and annexed drawings, making part thereof.

Figure 1 is an end view of a detached section of the said improved gutter. Fig. 2 is an opposite end view thereof. Fig. 3 is a view of the interior of the gutter. Fig. 4 is an exterior view of the same. Figs. 5 and 6 are end views of a distinct form of bracket hereinafter fully explained. Fig. 7 is a reduced perspective view of a section of the roof, showing the application of the gutter thereto. Fig. 8 is an exterior view of the form of gutter shown in Figs. 5 and 6, Plate 1. Figs. 9, 10, 11, 12, 13, and 14, Plate 2, are views of detached sections showing the manner of splicing, which is fully described hereinafter.

Like letters of reference designate like parts in the drawings and specification.

The said improved gutter is made of sheet metal, and consists of two or more parts besides the described brackets, as hereinafter set forth. The part A or gutter proper is bent to form the gutter at *a*, it being on an incline, as shown in Fig. 3 and by dotted lines in Fig. 7, to give the required pitch, which may be arranged more or less adapted to circumstances. The upper portion of the gutter A is formed into a straight bead *b*. A second part B, preferably of the same material, is fastened to the roof, the bead *c* extending over the edge thereof. This piece or support B is bent upward at *d*, the upper edge *e* thereof being straight and parallel with the line of the bend *d*. The bead *b* of the gutter A, Figs. 3 and 7, sets over the upper edge of the support B. Thus it will be seen that the upper edge of the gutter A is held in a straight line, while the trough or gutter at *a* is inclined.

After the two sheet-metal portions A and B (seen best in Figs. 6 and 7) are placed in position the braces *f* or *f'* are adjusted at intervals, clasping the bead *b*, pressing against the support B, and secured firmly to the roof by suitable means, as indicated at *i*, Figs. 2 and 6, thus securing the gutter firmly in place. Any suitable form of bracket or brace may be used, depending on the shape of the roof. The support where the bracket *f*, Figs. 1, 2, 3, and 4, is used should be bent at right angles, or nearly so, while that used in connection with the bracket *f'* is curved to coincide, as shown, with the portion B, Figs. 5, 6, 7, and 8.

The gutter proper A can be held in position by the brackets alone; but by the described arrangement it will be noted that without the portion B there will be a cavity or opening up under the gutter A between it and the roof, into which the storm would drive rain and snow, to the injury of the roof and gutter structure. The portion B acts as a shield as well as a support, and also materially improves the appearance of this gutter architecturally.

On a shingle roof the roof portion of the gutter A runs up under the shingles. On a flat sheet-metal roof it forms a part of the covering of the roof and is soldered thereto. Referring to the drawings on Plate 2, there will be seen the manner of splicing or joining together of the said gutter-sections. One of the sections A' is cut back at the edge of the bead *b* a sufficient distance to admit of a double fold *i'*, Figs. 12 and 14. The section A^2 is slit at *g* and a lip *h* thereby formed. The bead of the section A^2 is a trifle larger than that part of the section A' which admits of the ex-

tended end b' of the bead to enter the bore of the bead b of the section A^2. At the same time the edge h of the section A^2 will enter the upper fold of the section A′, as shown in Fig. 12, which forms a close tight joint, which may be luted or soldered, as conditions might require.

What I claim as my invention, and for which I solicit Letters Patent, is—

1. The combination, in an eaves-trough, of the sheet-metal portion B to extend along the edge of the roof and having an upwardly-extended portion back from the front edge, the said vertical part being of the same height throughout and parallel with the said front edge, the sheet-metal portion A having a vertical flange of unequal height, with a bead b at its upper edge fitting over the upper edge e of the portion B and the inclined gutter-plate a along the lower edge of the said vertical flange, and the brackets for holding the outer portion A in place, having at the upper ends the bearings for the bead of the inner portion A, substantially as described.

2. In combination, the portion A, of sheet metal, having the gutter a and the vertical flange with the bead b, and the portion B, having a vertical flange to enter the bead b and a horizontal flange to bear on the roof, the said portions A and B being formed in sections, the said sections being secured together by the interlocking beads $b\ b$ of the portion A and the interlocking edges $h\ i$ of the portion B, substantially as described.

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

EDWIN R. DENSMORE.

Witnesses:
C. H. STACKNY,
W. G. H. CALL.