

(No Model.)

J. M. VAN HORN.
EAVES TROUGH OR GUTTER SHIELD.

No. 546,042.

Patented Sept. 10, 1895.

Fig. 1.

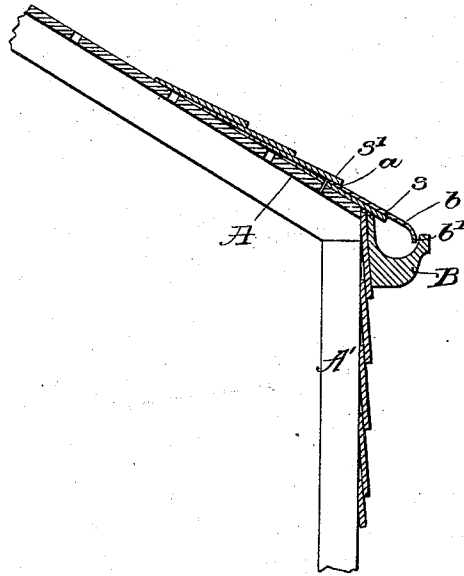


Fig. 2.

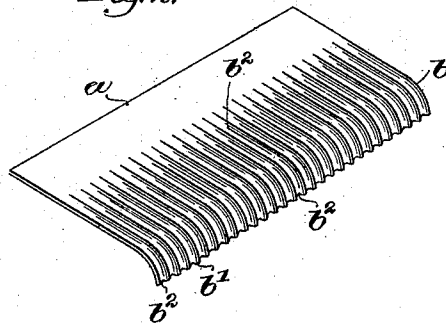


Fig. 3.

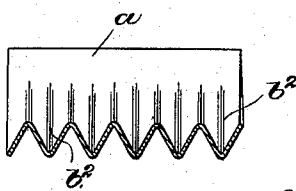


Fig. 4.

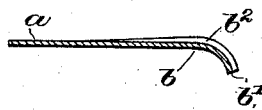


Fig. 5.



Witnesses.
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JAMES M. VAN HORN, OF CAMBRIDGE, MASSACHUSETTS.

EAVES TROUGH OR GUTTER SHIELD.

SPECIFICATION forming part of Letters Patent No. 546,042, dated September 10, 1895.

Application filed January 19, 1895. Serial No. 535,492. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. VAN HORN, of Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Eaves Trough or Gutter Shields, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Householders frequently experience great annoyance and inconvenience from overflowing eaves troughs or gutters, caused by their becoming choked or filled with dirt, leaves, snow or ice, &c., and the only means of relief is the frequently dangerous one of cleaning out the gutter or trough from the roof or the top of a ladder.

My invention has for its object the production of a simple, cheap, and efficient device for protecting the trough or gutter without interfering at all with the free flow of water from the roof, thus obviating the annoyance set forth.

In accordance therewith my invention in trough or gutter shields consists in a metallic plate having a plane base to be secured to the roof of a building and a rigid outer portion to project over the trough and within its outer wall, substantially as will be described.

Other features of my invention will be hereinafter described, and particularly pointed out in the claims.

Figure 1 represents in end elevation and section a portion of the end of a building with one form of my invention applied thereto to protect the eaves-trough. Fig. 2 is an enlarged perspective view of a length of shield embodying my invention. Fig. 3 is a longitudinal section thereof on a larger scale. Fig. 4 is a transverse sectional view thereof, and Fig. 5 represents in section a modified form of corrugation for the shield.

Referring to Fig. 1, I have shown a portion of a roof A protected by slates or shingles, and an eaves-trough or open roof-gutter B of any desired or usual construction is secured to the wall A' adjacent the eaves. To protect the trough or gutter from the entry of leaves, snow, &c., I employ a shield of thin sheet metal—such as copper, zinc, galvanized iron, &c.—of suitable length, having a plane portion or base *a*, (see Figs. 1 to 4,) inserted preferably

between the last two courses *s* and *s'* of slates or shingles, and tangent to the preferably convexed outer portion *b*, of sufficient width to extend over the trough B, the outer edge *b'* of the shield approaching closely to the outer wall of the trough or gutter, but permitting the flow of water between it and the shield into the body of the gutter. The water runs off from the roof onto the shield, over the outer portion and into the trough, while the shield acts as a cover for the trough or gutter. In order to bring the edge of the shield and the wall of the gutter as closely together as possible without interfering with the flow of the water, I corrugate the convexed portion *b* and part of the tangent base *a* of the shield, as clearly shown in Figs. 2 and 3, to form water-courses *b²*, the corrugations preferably gradually increasing in depth from the plane base *a* of the shield to its outer edge *b'*, as shown in Fig. 4. The corrugations strengthen the shield, as does the convexing, and also prevents the water from flowing over in an interrupted sheet, which might be objectionable in a heavy rain.

In Fig. 5 I have shown the corrugations *b^x* as rectangular in cross-section, while in Figs. 2 and 3 they are more undulating or V-shaped; but any desirable form or size of corrugation may be used without departing from the spirit of my invention. It is equally well adapted for application to houses already completed as to those in course of erection, as the plane portion of the shield can be readily secured in place on a finished shingle or slate roof as described.

I claim—

1. A protective shield for open eaves-or roof-troughs, consisting of a metallic plate having a plane base to be secured to the roof of a building, and a rigid outer portion to project over the trough and within its outer wall, substantially as described.

2. A protective shield for open eaves-or roof-troughs, consisting of a metallic plate having a plane base to be secured to the roof of a building, and a transversely corrugated rigid outer portion to project over the trough and within its outer wall, substantially as described.

3. A protective shield for open eaves-or roof-troughs, consisting of a metallic plate having

a plane base adapted to be inserted and secured between contiguous rows of slates or shingles, and a transversely corrugated convex outer portion to project over the trough
5 and within its outer wall, the corrugations increasing in depth from the base to the outer edge of the shield, substantially as described.

4. A protective shield for open eaves- or roof-
10 a plane base to be secured to the roof of a building, and a convex outer portion to project over the trough and within its outer wall, substantially as described.

5. A protective shield for open eaves- or roof-

troughs, consisting of a metallic plate having
15 a plane base to be secured to the roof of a building, and a transversely corrugated convex outer portion to project over the trough and within its outer wall, substantially as described.
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In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES M. VAN HORN.

Witnesses:

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MARY J. SHERIDAN.