(No Model.)

# W. STINE.

## EAVES TROUGH HANGER.

No. 398,468. Patented Feb. 26, 1889.

Fig. 1.

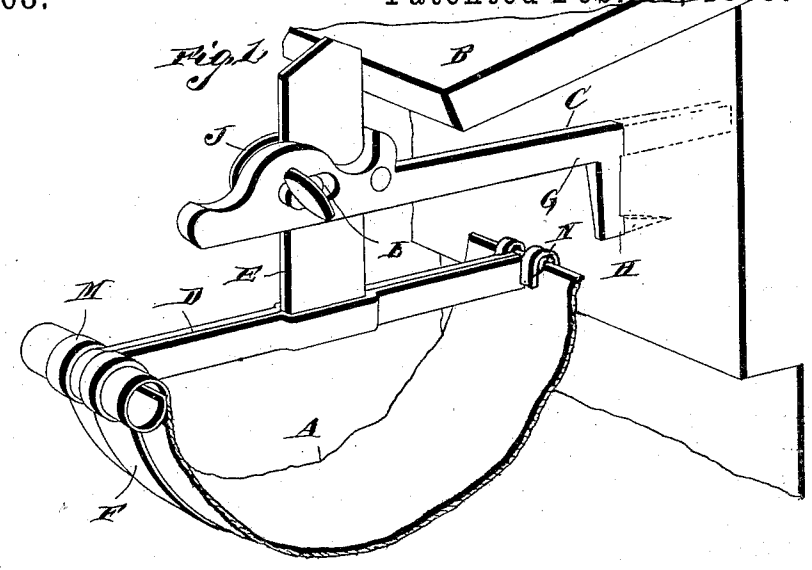



Fig. 2.

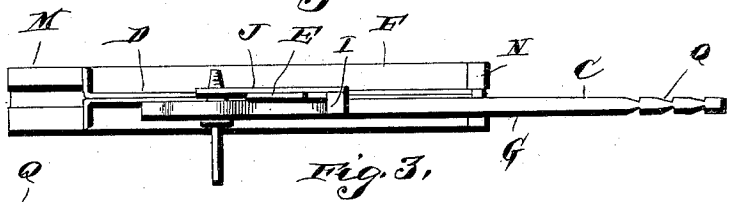



Fig. 3.

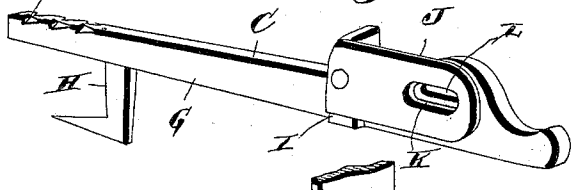
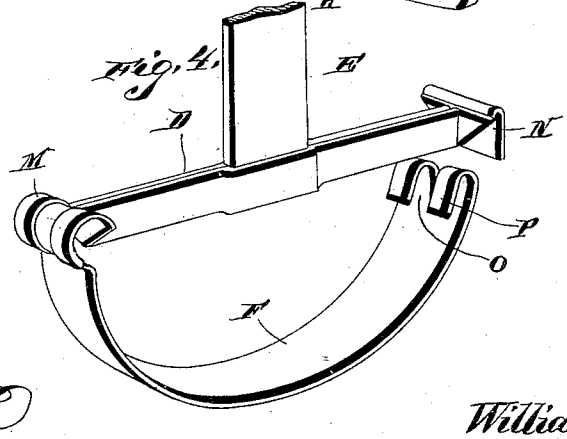



Fig. 4.




Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM STINE, OF ELMORE, OHIO, ASSIGNOR OF ONE-HALF TO GODFREY JAEGER, JR., OF SAME PLACE.

## EAVES-TROUGH HANGER.

SPECIFICATION forming part of Letters Patent No. 398,468, dated February 26, 1889.

Application filed May 12, 1888. Serial No. 273,715. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM STINE, a citizen of the United States, residing at Elmore, in the county of Ottawa and State of Ohio, have invented new and useful Improvements in Eaves-Trough Hangers, of which the following is a specification.

My invention relates to improvements in eaves-trough hangers; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a portion of an eaves-trough, showing my improved hanger in connection therewith. Fig. 2 is a plan view of the same. Fig. 3 is a detail perspective view of the spike. Fig. 4 is a view of the cross-bar and supporting-loop before being applied to the trough.

Referring to the drawings by letter, A designates the trough, and B a portion of the eaves or roof.

My improved hanger consists, essentially, of the spike C, the cross-bar D, the standard E, rising from the cross-bar and connected to the spike, and the suspension-loop F, secured to the cross-bar and passing beneath the trough. The spike consists of the body or bar G, having the depending angular projection H near its inner end, the said projection having a sharpened point, as shown, which, when the spike is in position, serves as a brace or support for the same. The end of the spike is tapered, and is provided with a series of notches or barbs, Q, which engage the material into which the spike is driven and prevent withdrawal of the same. Near its outer end the body of the spike is provided on one side with a vertical rib or shoulder, I, to which the clamping-plate J is permanently secured. In the outer end of this clamping-plate I provide the perforation K, which aligns with a similar opening, L, in the body of the spike, a wedge or other locking device being inserted transversely through the aligned openings K L to secure the standard between the clamping-plate and the body of the spike. The standard is inserted upward between the clamping-plate and the body of the spike, with one edge resting against the shoulder I, and the wedge or other fastening device is inserted through the aligned openings, so as to bear against the outer edge of the standard, thereby clamping the standard against the shoulder of the spike.

In the present instance I have shown the locking device as consisting of a screw inserted transversely through the aligned openings and bearing against the edge of the standard. This method of fastening will be found very advantageous, as the screw-threads engage the edges or walls of the openings, and thereby serve to draw the clamping-plate toward the spike, and thereby clamp the standard, while at the same time the tapered or wedge-like formation of the body of the screw forces the standard against the shoulder of the spike.

The cross-bar is composed of two or more metal plates of suitable size securely fastened together and doubled on itself along the medial longitudinal line. The ends of the cross-bar are slightly expanded, and one of them is provided with the open circular loop M, which receives the bead of the trough, the other end of the cross-bar being provided with a hook, N, adapted to engage over the inner edge of the trough. The suspending loop is secured at its outer end to the loop M and depends therefrom. It is formed of sheet metal, and is adapted to be passed under the trough and drawn tightly against the bottom of the trough, its free end being provided with a longitudinal slot or notch, O, thereby providing the tongues P, which are adapted to be bent over the edge of the trough, and the hook N to secure the free end of the loop to the smooth edge of the trough.

From the foregoing description, taken in connection with the accompanying drawings, the application and advantages of my improved device are thought to be apparent. In use the hangers are first secured to the trough and the trough is carried to its position, the spikes being driven into the cornices. The spikes are secured to the standards, so that their outer ends will project beyond the standards and form a surface, which may be struck by a suitable tool—as a hammer—for driving them into the cornices. The standards are arranged so that their upper ends

will extend above the spikes, the said ends being then bent down to prevent the standards falling away from the spikes.

The trough is arranged so that its outer beaded edge will pass through the open loops on the outer ends of the cross-bars, while its inner smooth edge will engage the hooks on the inner ends of the cross-bars, as clearly shown. The suspending loop is drawn tightly across the bottom of the trough and its notched or slotted end is bent over the hook, the tongues passing downward on opposite sides of the cross-bar. It will be observed that the standards can be secured to the spikes at any desired height, thus permitting the trough to be arranged at any desired inclination. The slotted construction of the end of the loop permits the adjustment of the same to troughs of different depths, so that my device can be readily applied to any desired trough. It will be seen that I have provided a very simple and efficient hanger, by which the trough will be firmly supported.

I wish it to be understood that I do not limit myself to the exact construction herein shown and described, as it is obvious that many changes may be made in the details of the device without sacrificing the advantages or departing from the principles of my invention.

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

1. The eaves-trough hanger comprising a spike, a standard adjustably secured to the spike and depending therefrom, and a cross-bar secured to the standard and supporting the trough, as set forth.

2. An eaves-trough hanger comprising a spike, a clamping-plate permanently secured to the side of the spike, a standard inserted vertically upward between said plate and the spike and adjustably secured between the same, and a suspending loop carried by the standard, as set forth.

3. An eaves-trough hanger comprising a spike having a vertical shoulder on its side and an opening beyond said shoulder, a clamping-plate secured to the spike and having an opening aligning with the opening in the spike, the standard inserted between the spike and the clamping-plate, a cross-bar secured to the standard and supporting the trough, and a wedge-shaped fastening device inserted through the aligned openings in the clamping-plate and the spike, as set forth.

4. An eaves-trough hanger comprising a spike, a standard adjustably secured thereto, a cross-bar at the lower end of the standard, having an open loop at one end to engage the bead of the trough, and a hook at the other end to engage the smooth edge of the trough, and a suspending loop depending from the open loop and adapted to engage the hook, as set forth.

5. An eaves-trough hanger comprising a spike, a standard adjustably secured to the spike, a cross-bar at the lower end of the standard, having a hook at its inner end, and a suspending loop secured to the outer end of the cross-bar and provided at its free end with tongues adapted to be bent over the hook and pass down on opposite sides of the cross-bar, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM STINE.

Witnesses:
H. N. ALDRICH,
THOMAS HEARLEY.