(No Model.)

J. H. HORAN.

RAIN GUTTER FOR HOUSES.

No. 559,942. Patented May 12, 1896.

Fig. 1.

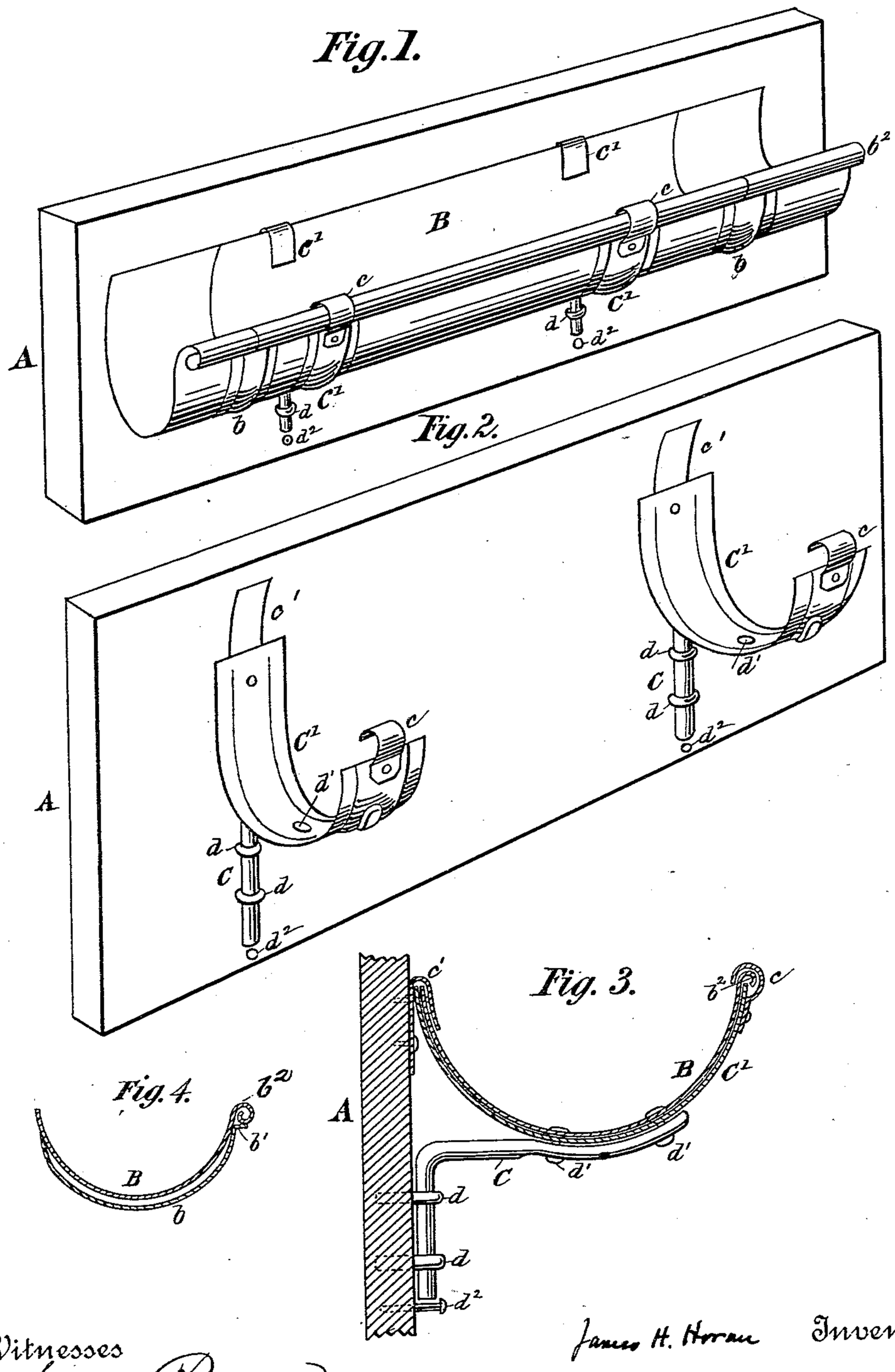

Fig. 2.

Fig. 4.

Fig. 3.

Witnesses
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RAIN-GUTTER FOR HOUSES.

SPECIFICATION forming part of Letters Patent No. 559,942, dated May 12, 1896.

Application filed October 12, 1895. Serial No. 565,464. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. HORAN, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Rain-Gutters for Houses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the gutters or eaves-troughs designed to catch and carry off the rain-water that drips from the eaves of houses.

The object of my invention is to provide a strong well-supported gutter or eaves-trough the bed of which is free from all obstructions calculated to prevent the passage of leaves or other solid matter that may accumulate in the water-trough and hinder the cleansing or the painting of the inside of it, and which may easily be put in place. I accomplish this object by the means illustrated in the accompanying drawings, described in the specification, and specifically set out in the claims.

In the drawings, Figure 1 is a perspective view of a section of my gutter or eaves-trough in position for receiving the rain-water. Fig. 2 is a perspective view of two of my eaves-trough supports attached to the house, illustrating my method of supporting the trough. Fig. 3 is a side view showing one of my supporting-brackets in position and the gutter-holder and the gutter-trough and house-wall in cross-section. Fig. 4 is a transverse sectional view of my improved gutter-trough through one of the blocked strengthening-strips.

Eaves troughs or gutters are usually made of roofing-tin lapped and soldered together at the joints and strengthened by strips of similar metal soldered across the inside of the trough to the opposite sides, at the joints, and sometimes between them. Troughs so constructed lack rigidity and strength, are hard to keep in perfect draining-line, are liable to flatten out and lose shape when the cross-straps are broken loose, and are difficult to handle when being put in place. The cross-straps obstruct the passage of leaves or other trash that may gather in the gutter and hinder the painting or cleaning of the inside, and when ice is formed in the trough they are liable to be broken loose. I get rid of this obstruction in my improved gutter-trough and give it the necessary strength and rigidity by substituting for these strengthening cross-straps on the inside of the gutter a wide strip of metal blocked out or raised to within a short distance of its edges and ends and soldered over each joint on the outside of the gutter, giving a triple strength to the joint. This strip has, where it bears against the head, a flange which is firmly soldered to the lower surface of the head across the joint. This construction makes the gutter strong and rigid and gets rid of the obstructing cross-straps on the inside.

Eaves troughs or gutters are usually supported in position under the eaves by strips of metal fastened on the top of the roof at the eaves and extending to and fastened to the outer bead of the gutter. They are also sometimes supported by iron wires or thin iron rods fastened under the eaves at one end and tapped to iron braces at the other end, which braces extend across and are fastened to the inside of the gutter. The unbeaded inner side of the gutter is generally fastened to the house by nails driven through the metal. Fastening from above to the eaves injures the edge of the roof and produces rotting, and the straps passing from the eaves to the outside of the gutter furnish tracks for rain-water and cause a constant dripping outside the gutter as long as the rain lasts.

I support my improved gutter-trough by brackets attached to the house below the trough and hold the inner edge of the trough against the house without piercing it with nails, as hereinafter described.

Similar letters refer to similar parts throughout the several drawings.

In the drawings, A represents a portion of the wall or cornice to which a length of my improved gutter or eaves trough B, having its joints reinforced by the blocked or bossed strips b and their flanges b' and a rolled bead b^2 along its outer edge, is attached.

C is a supporting-bracket adapted to be fastened to the house by staples d d and a pro-

jecting arm adapted to support a gutter stay or band C′, fastened to the arm by rivets d', adapted to embrace the outer surface of the gutter-trough and having riveted to its outer end a storm-clamp c of flexible steel adapted to be folded over the bead of the gutter-trough and hold it against winds. The stay C′ is preferably slightly bossed or blocked out in its middle portion, and it and the bossed reinforcement b are preferably pierced by a small hole at their lowest point to allow the exit of any moisture or sweat that may collect in them. The upper inner end of the gutter-stay C′ is held firmly against the house-wall by a nail, which is also driven through a strip of tin c', projecting beyond the end of the stay and adapted to be folded down over the inner edge of the gutter, as shown in Fig. 2, and hold it close to the wall. The use of this strip c' obviates the necessity of driving nails through the trough itself to hold it to the wall. These strips c' instead of being placed at the end of the stays, as shown in Figs. 2 and 3, may be nailed to the walls at any intervals desired.

d^2 represents a nail or spike adapted to serve as a stop or rest for the stem of the bracket C. The stem of C may also be fastened to the house by eyed spikes or in any method most suitable to the material of which the house is built.

With the stays, supports, and fasteners in place, as described, the bottom of the prepared gutter-trough is laid in the stays, the clamp c bent down over the outer beaded edge and the strips c' over the edge next the house, and the gutter is firmly in place.

One man can easily handle and put in the supports described forty feet of my improved gutter-trough, which is rigid and strong, and, once placed in position, preserves a perfect drainage-line.

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

1. A metal gutter or eaves-trough, having a raised or blocked strip of tin provided with a flange at one end, soldered over each joint of the trough on the outside and the flange bearing against the bead of the trough and soldered to it, substantially as described.

2. In guttering for houses, an eaves-gutter reinforced at its joints by a raised or blocked strip of tin, covering the joints on the outside, having a flange pressing against the bead of the trough and firmly soldered to the trough, in combination with a bracket C carrying a stay C′ having a clamp c at its outer end adapted to fit over the bead of the trough and a strip c' adapted to fit over the inner edge of the trough and hold it to the house, substantially as described and for the purposes specified.

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

JAMES H. HORAN.

Witnesses:
HORTENSE HORTON,
M. E. FORMAN.