(No Model.)

A. C. & J. L. BYERS.

EAVES TROUGH.

No. 474,442. Patented May 10, 1892.

Fig. 1.

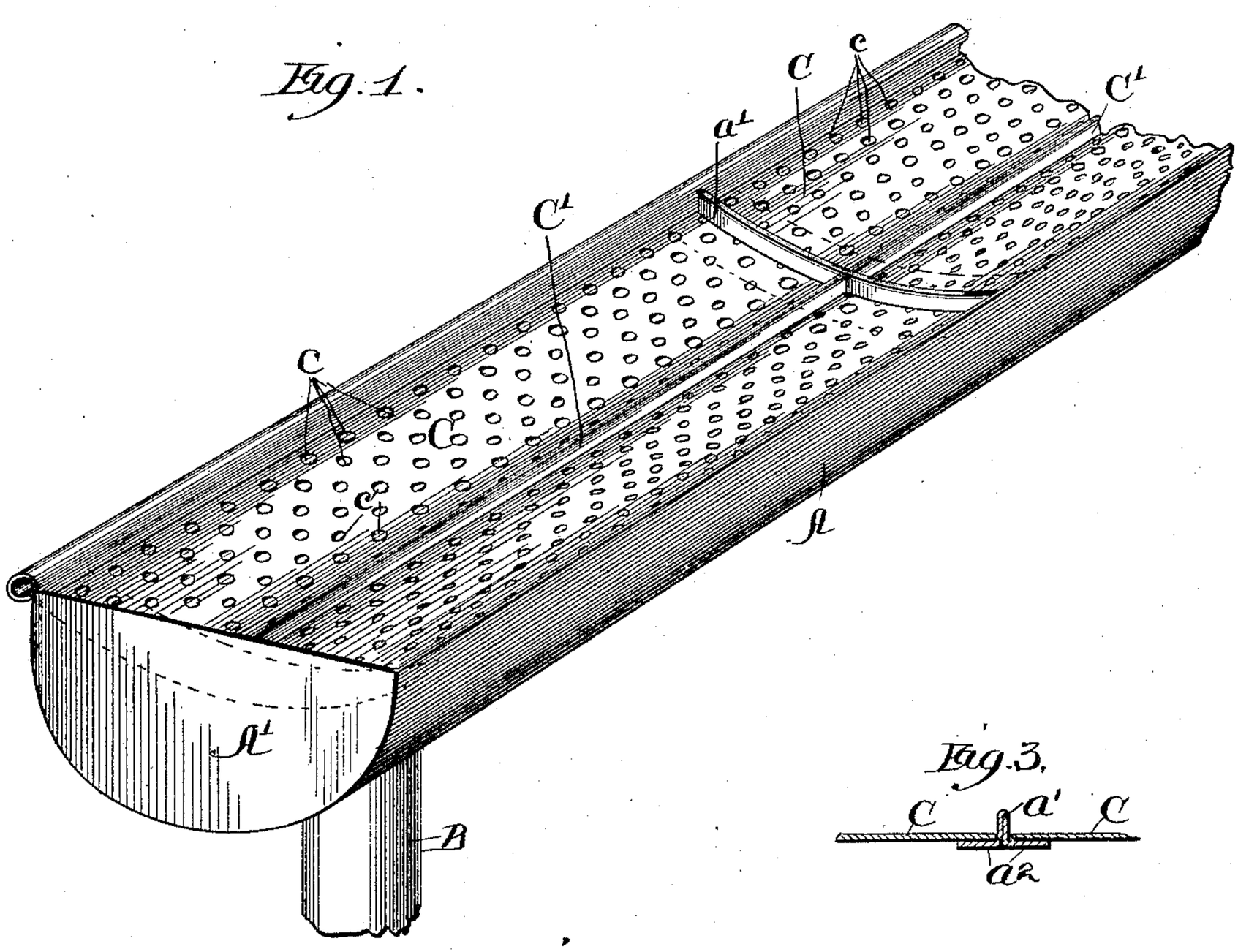
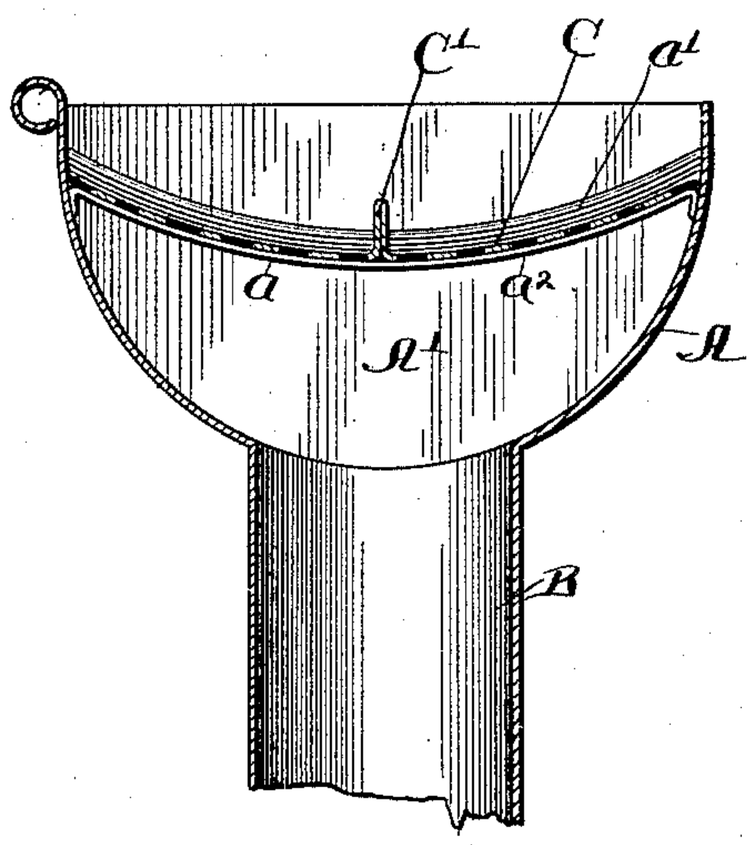


Fig. 3.

Fig. 2.



Witnesses:

Charles C. Thervey.

C. P. Smith

Inventors:

Andrew C. Byers and

Joseph L. Byers

By Wells, Greene & Bitner, Attys.

UNITED STATES PATENT OFFICE.

ANDREW C. BYERS AND JOSEPH L. BYERS, OF FORRESTON, ILLINOIS.

EAVES-TROUGH.

SPECIFICATION forming part of Letters Patent No. 474,442, dated May 10, 1892.

Application filed August 14, 1891. Serial No. 402,663. (No model.)

To all whom it may concern:

Be it known that we, ANDREW C. BYERS and JOSEPH L. BYERS, both citizens of the United States of America, and both residing at Forreston, in the county of Ogle and State of Illinois, have jointly invented certain new and useful Improvements in Eaves-Troughs, of which the following is a specification.

Our invention relates to improvements in eaves-troughs, and more particularly to straining devices adapted to be applied to such troughs for the purpose of arresting leaves, sticks, and other impurities in the water and preventing their admission to the body of the troughs and to the cisterns or other receptacles into which they enter.

The invention is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of an eaves-trough provided with our improvements. Fig. 2 is a transverse vertical section of the trough, and Fig. 3 is a transverse section of one of the ribs extending across the trough and supporting the strainer-sections.

In the views, A is an eaves-trough of ordinary form and general construction, closed at the end by a wall A′ and provided with the usual conductor-spout B for the escape of water from the trough. Near the wall A′ is a transverse and preferably curved rib *a* of any desired form, and at suitable intervals between the ends of the trough are other curved ribs, each preferably made up of a vertical web *a′* and two horizontal flanges a^2, as illustrated in Fig. 3. These ribs may be made of any suitable material and formed in any practical manner; but in practice we have found it preferable to form each of them from a piece of sheet metal doubled at its center to form the vertical web and bent outward at right angles to the web on opposite sides to form the flanges. On the transverse ribs thus secured within the eaves-trough are a series of sections C, of sheet metal, formed with perforations *c* of such size and number as to form practical and operative strainers, permitting the water received by the eaves-spout to pass through them freely, but arresting all coarse material floating in the water, which would clog the conductor-spouts and foul the cisterns if allowed to pass. These strainer-sections may, if desired, be flat pieces of perforated metal; but we have found it preferable to make them slightly concave transversely, as shown in Fig. 2, and to crimp each of them longitudinally into a web C′ in the manner shown in the drawings. This web gives the sections great stiffness, which is a material advantage when they are made of considerable length, and it also forms a convenient means for taking hold of the sections to remove them from the eaves-trough for the purpose of cleaning them. The transverse ribs, having the webs *a′* and flanges a^2, not only serve to support the ends of the strainer-sections, but also prevent longitudinal motion of the sections in the trough, and thereby render their accidental displacement practically impossible. This is important, for the reason that the displacement of any section would permit free access of the water and all impurities therein to the eaves-trough, and would thus defeat the object of our invention.

The position of the strainer-sections in the eaves-trough may be varied somewhat from that shown in the drawings; but we have found in practice that the strainer-sections placed at about the height shown in Fig. 2 give perfectly satisfactory results, and we consider it preferable to so place the strainer-sections as to leave the edges of the trough projecting considerably above the strainer, substantially as shown in the drawings.

Having now described and explained our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with an eaves-trough provided with transverse ribs, of a series of strainer-sections supported by said ribs, substantially as shown and described.

2. The combination, with an eaves-trough having a series of transverse ribs, of a series of strainer-sections of perforated sheet metal supported by said ribs, substantially as shown and described.

3. The combination, with the trough A, having a series of transverse ribs, of the strainer-sections C, of sheet metal, formed with perforations *c*, the ends of said sections being supported by the ribs in the trough, each rib which supports the ends of two contiguous sections being formed with a vertical web and lateral flanges, substantially as shown and described.

4. The combination, with the trough A, having the transverse ribs a a' a^2, of the perforated sections C, having their ends supported by the flanges a^2 and separated by the webs a', substantially as shown and described.

5. The combination, with an eaves-trough provided with transverse ribs, of strainer-sections C, resting in the trough and supported by said ribs, each of said sections being of perforated sheet metal longitudinally crimped to form a stiffening-web C′, substantially as described.

ANDREW C. BYERS.
JOSEPH L. BYERS.

Witnesses:
SAMUEL BILLIG,
SAMUEL E. BROWN.