

F. J. Emery,

Eaves Trough,

N^o 46,093.

Patented Jan. 31, 1865.

Fig. 3.

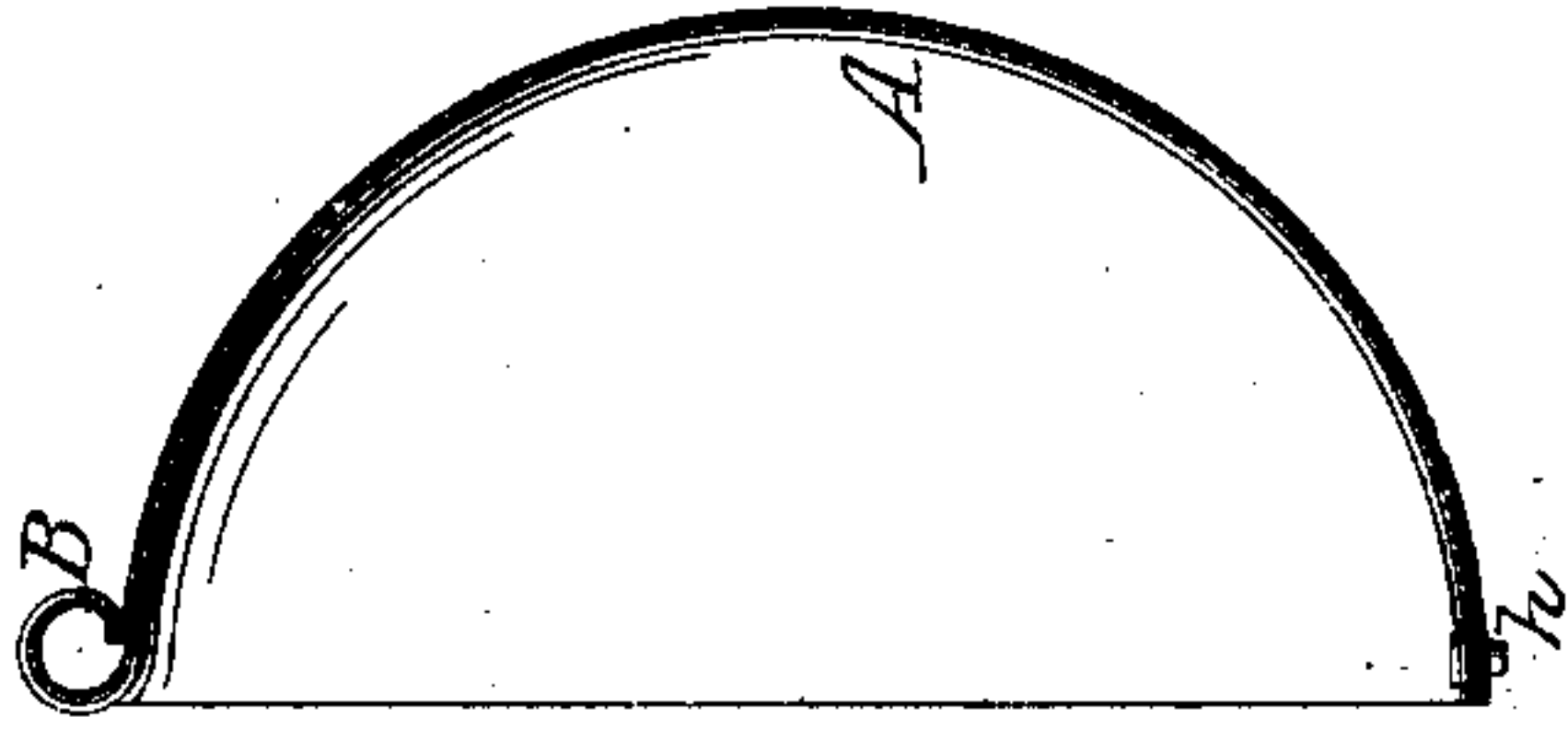


Fig. 1.

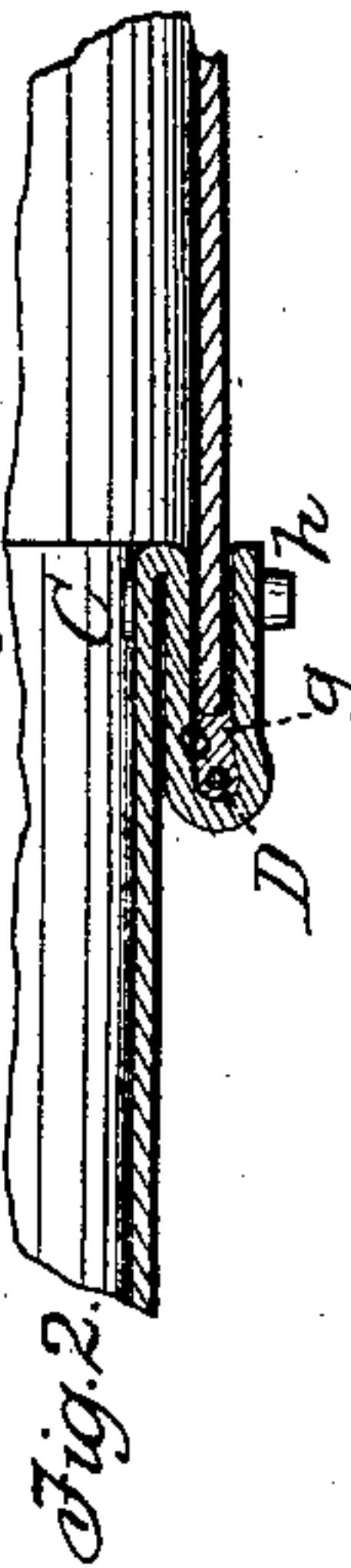
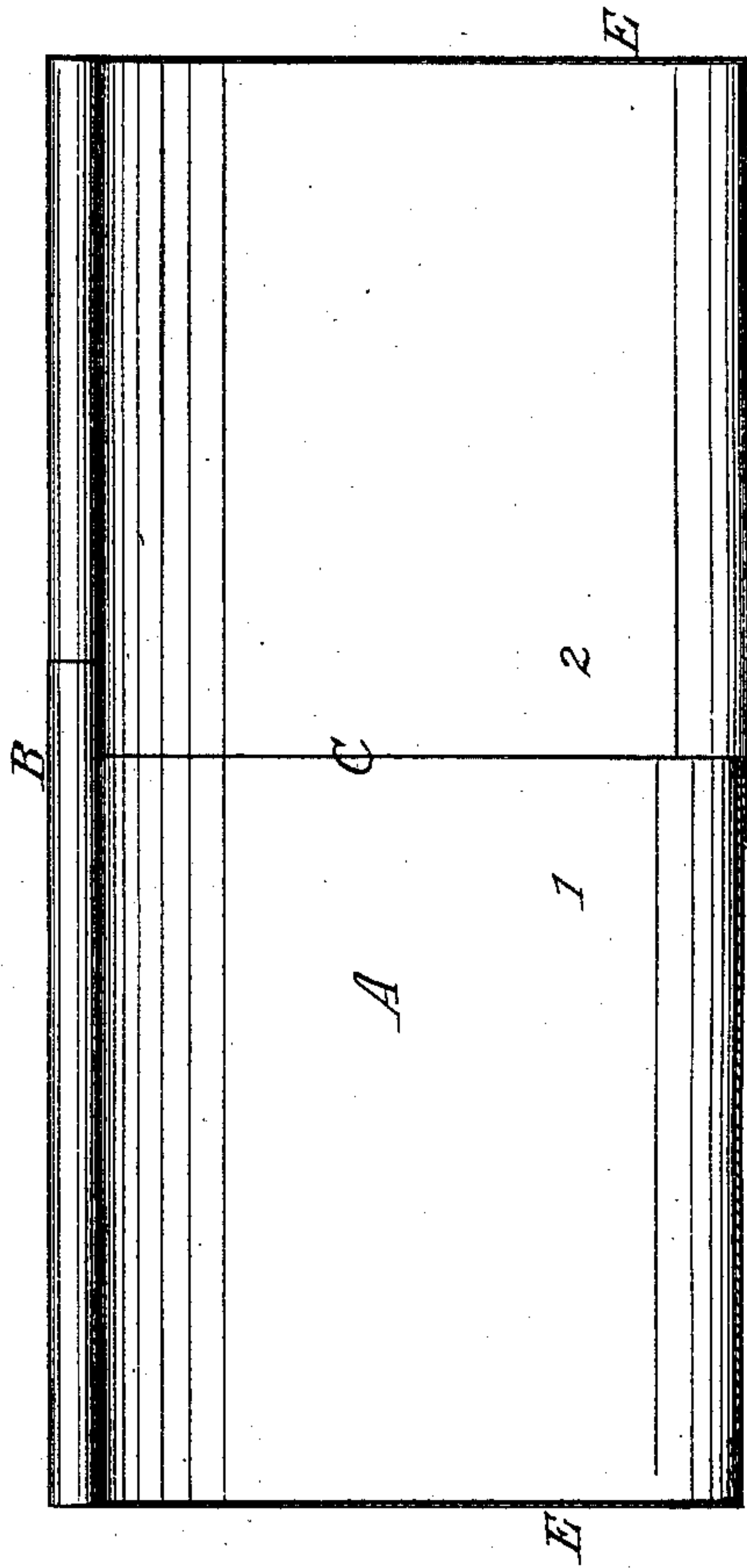
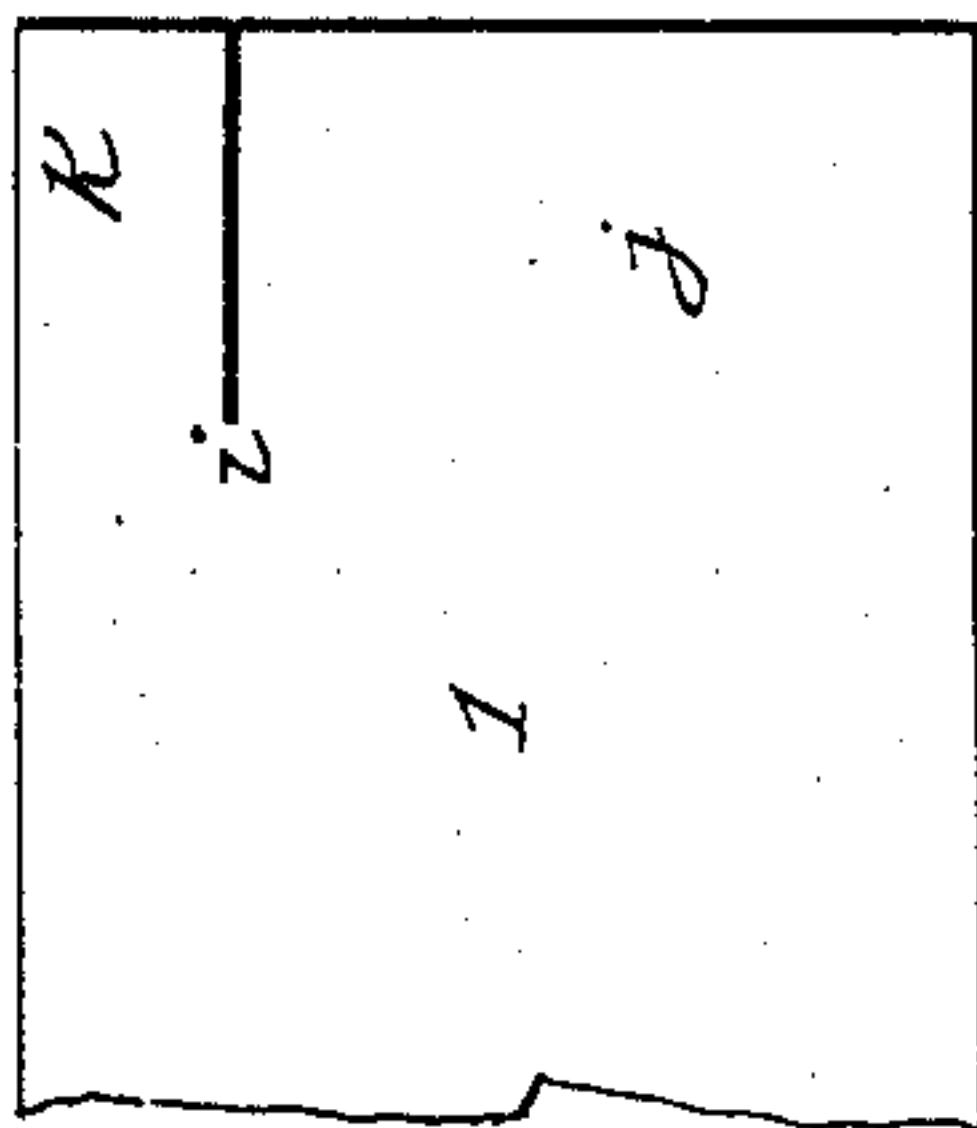


Fig. 4.



Witnesses.
W. Freun
Theo Tusch.

Inventor:
F. J. Emery.
per Munn & Co.
Attys.

UNITED STATES PATENT OFFICE.

FELIX J. EMERY, OF SPRINGFIELD, ILLINOIS.

IMPROVED EAVES-TROUGH.

Specification forming part of Letters Patent No. **46,093**, dated January 31, 1865.

To all whom it may concern:

Be it known that I, FELIX J. EMERY, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Eaves-Troughs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of an eaves-trough made after my invention. Fig. 2 is a detailed view of the joint which connects adjacent sections of the trough. Fig. 3 is an edge view of one of the sections. Fig. 4 is a plan of the blank out of which one of the sections is formed.

Similar letters of reference indicate like parts.

This invention consists in a new construction of eaves-troughs in which cross-braces are dispensed with, and the contour of the trough is preserved by means of its own strength and the stiffness of its connecting-joints.

A represents a trough made of two sections, their vertical ends being represented at E. A conducting-pipe (not shown in the drawings) is to be connected with the bottom of the trough in the usual manner to lead away the water thereout. The trough is made semicircular in shape, of tin or other sheet metal. It is to be composed of sections, which are here designated by the Figs. 1 and 2, and which are to be attached together to make a continuous trough in the following manner: The blank for section 1 is cut as shown by the line *i*, when the division *j* is bent and folded by any proper mechanical means into the shape shown at C in Fig. 1, so as to form a socket, O, to receive the edge of the adjacent section 2. The division K is then bent, as shown at B, so as to form a cylinder or tube, the edge or joint of which is to be left open, as seen in Fig. 3. The blank is then to be swaged or bent to the proper semicircular form, when the tube B will constitute the outer edge of the trough. The blank which is to compose section 2 of the trough has a like

tubular formation made on one of its sides, but of smaller diameter than the tube or section 1, so that it may be shoved into the latter as into a socket. The edge of section 2 is straight, the tubular and flat portions being on the same line. The flat edge of section 2, therefore, is passed into the socket O of the adjoining section, where it is to be secured by riveting, by a screw, or any other suitable locking device. Before the sections are joined a wire, D, is placed in the bottom of the socket O to give stiffness to the joint, and the joint is also packed with gutta-percha, in which the wire may be embedded, or which may be merely laid between the wire and the edge of section 2, which edge forces the packing snugly against the wire and holds both compactly in place. The object of this packing is to make a tight joint without the necessity of soldering.

The effect of this construction is to produce an eaves-trough which can be made and put up in sections without permanently fastening the sections together otherwise than by a rivet or screw or other locking device at *h*, so that the sections can be easily taken apart, and yet the joints between adjacent sections shall be water-tight when the sections are together.

The manner of preparing the blank of section 1 enables me to provide therein a joint, C, to receive the edge of section 2, and also to provide a tubular socket, B, for the tubular edge of that section. The joint C, being well wired, makes the trough stiff transversely, thereby enabling me to dispense with the usual inside cross braces, and the tubular socket-joint B makes it stiff in the direction of its length. The trough is to be supported under the edge of a roof by brackets beneath it in any proper manner.

I claim as new and desire to secure by Letters Patent—

The eaves-trough above described, as a new article of manufacture.

FELIX J. EMERY.

Witnesses:

PATT. CARMODY,
JOSEPH Z. TURNER.