G. ECKEL.

Eave-Trough Former.

No. 203,433. Patented May 7, 1878.

Fig. 1.

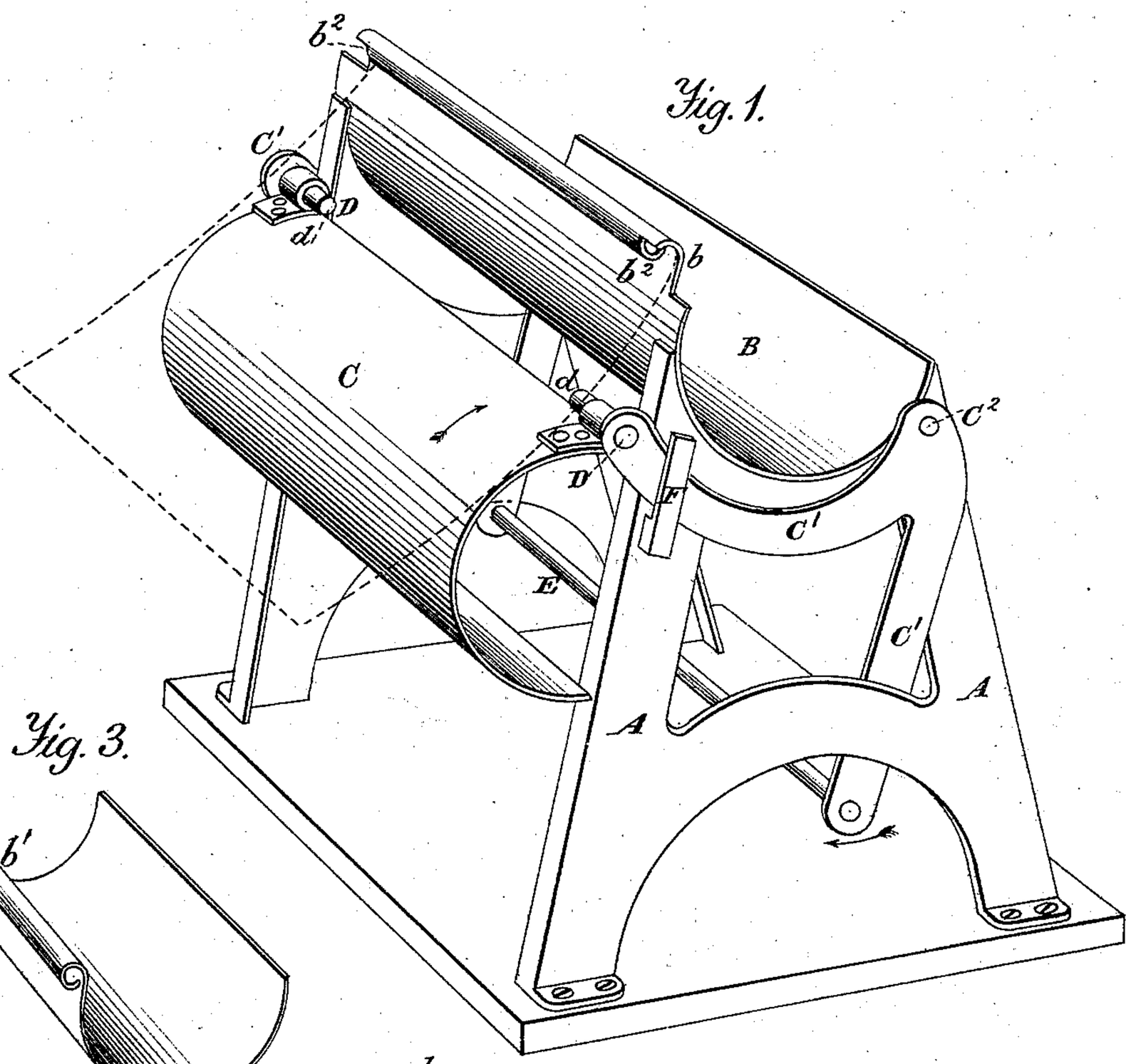
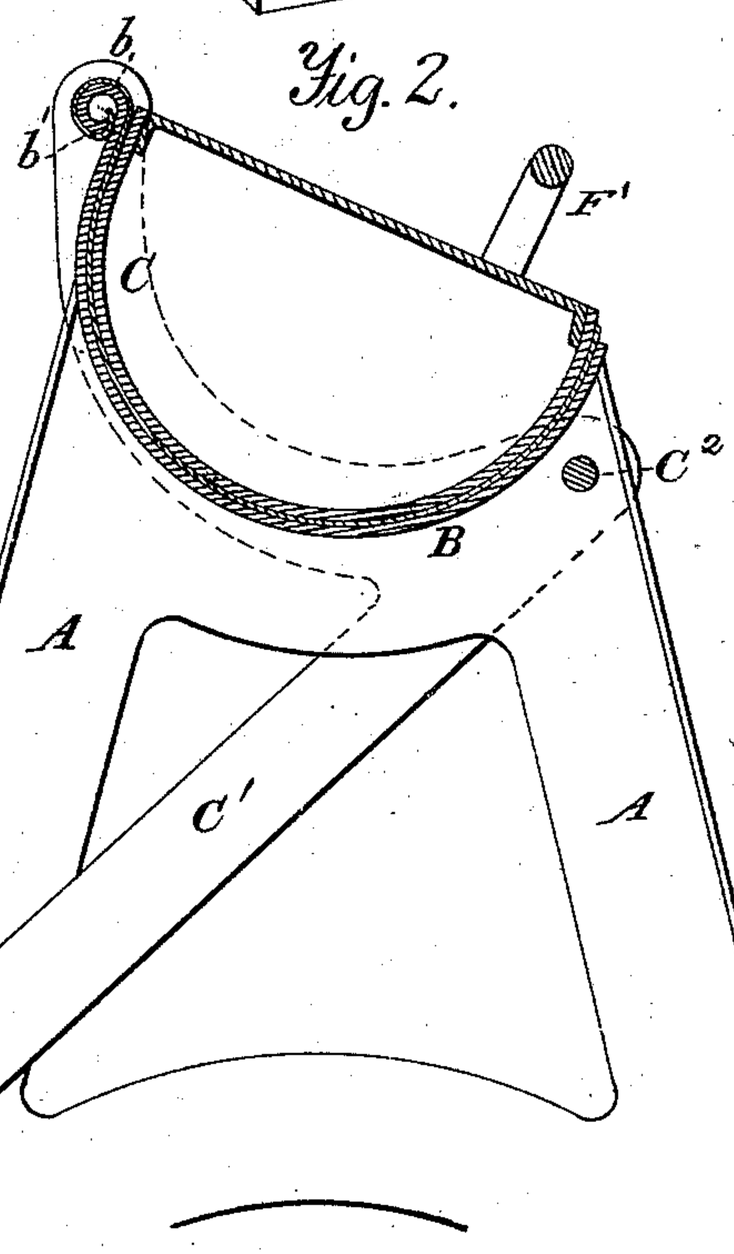


Fig. 3.

Fig. 2.



Witnesses.

A. Ruppert

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UNITED STATES PATENT OFFICE.

GEORGE ECKEL, OF RICHMOND, INDIANA.

IMPROVEMENT IN EAVES-TROUGH FORMERS.

Specification forming part of Letters Patent No. **203,433,** dated May 7, 1878; application filed February 21, 1878.

To all whom it may concern:

Be it known that I, GEORGE ECKEL, of Richmond, in the county of Wayne and State of Indiana, have invented a new and useful Improvement in Eaves-Trough Formers, of which the following is a specification:

This invention relates to that class of machines in which the sheet metal is bent into any required form by means of a form and presser, the presser swinging on arms pivoted to the main frame, while the form is rigidly attached thereto.

In the annexed drawings, making a part of this specification, Figure 1 is a perspective view of the machine. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a perspective view of the trough when made.

The same letters are employed in all the figures in the indication of identical parts.

A is the main frame, which supports the form and presser. B is the form, secured rigidly to the main frame. One edge of this form is made with a volute edge, as shown at *b*, Fig. 1, in order to form the bead on one edge of the trough for the purpose of giving it stiffness. This bead is shown at b^1, Fig. 3.

C is the presser or former, made to fit into the form B. It is suspended by swinging arms C^1, which are pivoted to the frame at C^2.

The presser C is also made to turn independently of the arms, being hinged or pivoted to them at D. The lower ends of the swinging arms C^1 are connected by a cross-bar, E, extending from one side of the frame to the other, thus compelling the arms to swing simultaneously. As the presser is swung up on the pinion of the pivots C^2, the pinion of the pivots D is engaged beneath the voluted edge of the form B, a small portion of the lower side of which being cut away for this purpose, as shown at b^2, Fig. 1, thus allowing the presser to be turned immediately over and upon the stationary form.

On the sides of one of the uprights are placed small brackets F, which receive the upper parts of the arms C^1, and permit them to only fall that distance whenever the presser is removed from the form.

F′ is a handle attached to the upper side of the presser C, by means of which the presser may be turned over after the pinion *d* of the pivot D has been engaged under the edge of the volute.

The mode of operating the machine is as follows: The piece of tin or other sheet metal being cut the required length, one edge is inserted under the voluted edge of the form B. The lower part of the arms, being connected by a rod, E, are then moved forward, forcing the sheet metal upward, thus bending the edge and forming a bead, at the same time causing the pivots D to be engaged under the volute. The presser is then turned, forcing the metal into the form, thus making it conform to its shape.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A concave die or former having a volute edge on one side, whereby the metal to be bent may be beaded in the operation of forming guttering, substantially as set forth.

2. In combination with the concave die B, having a volute edge, the swinging convex former, having its axis in the line of the center of the volute, for forming the gutter by compression, substantially as set forth.

3. The combination of the concave die B, the swinging convex former C, and the levers C^1, to which the former is pivoted in such manner as to swing with the levers until the axis of the former coincides with the volute, and then swinging forward on pivots attached to the levers in line with the volute, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE ECKEL.

Witnesses:
DAVID NORDYKE,
JOEL STOVER.