

(No Model.)

M. MOSLER.

METHOD OF BENDING ANGLE IRON.

No. 283,136.

Patented Aug. 14, 1883.

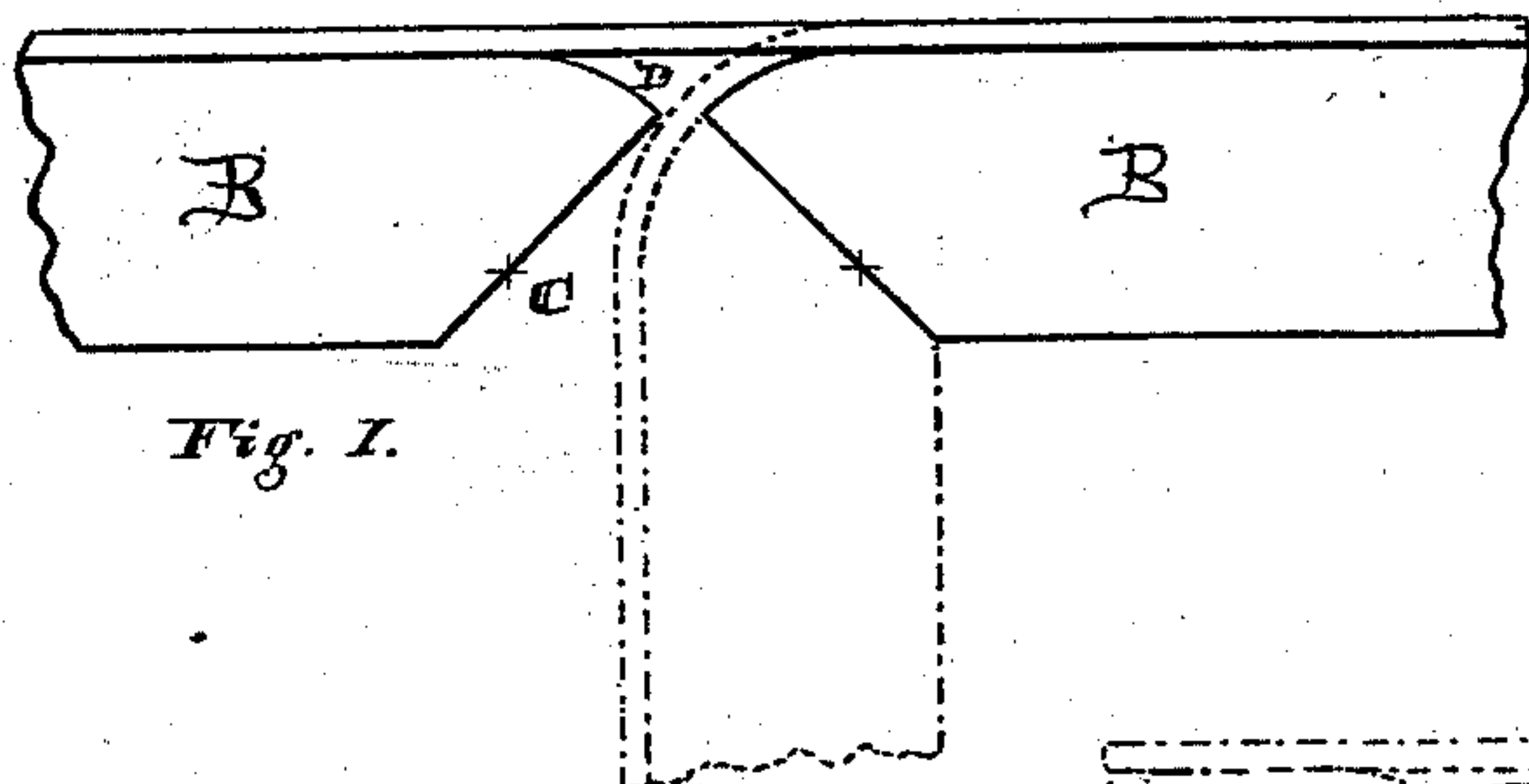


Fig. 1.

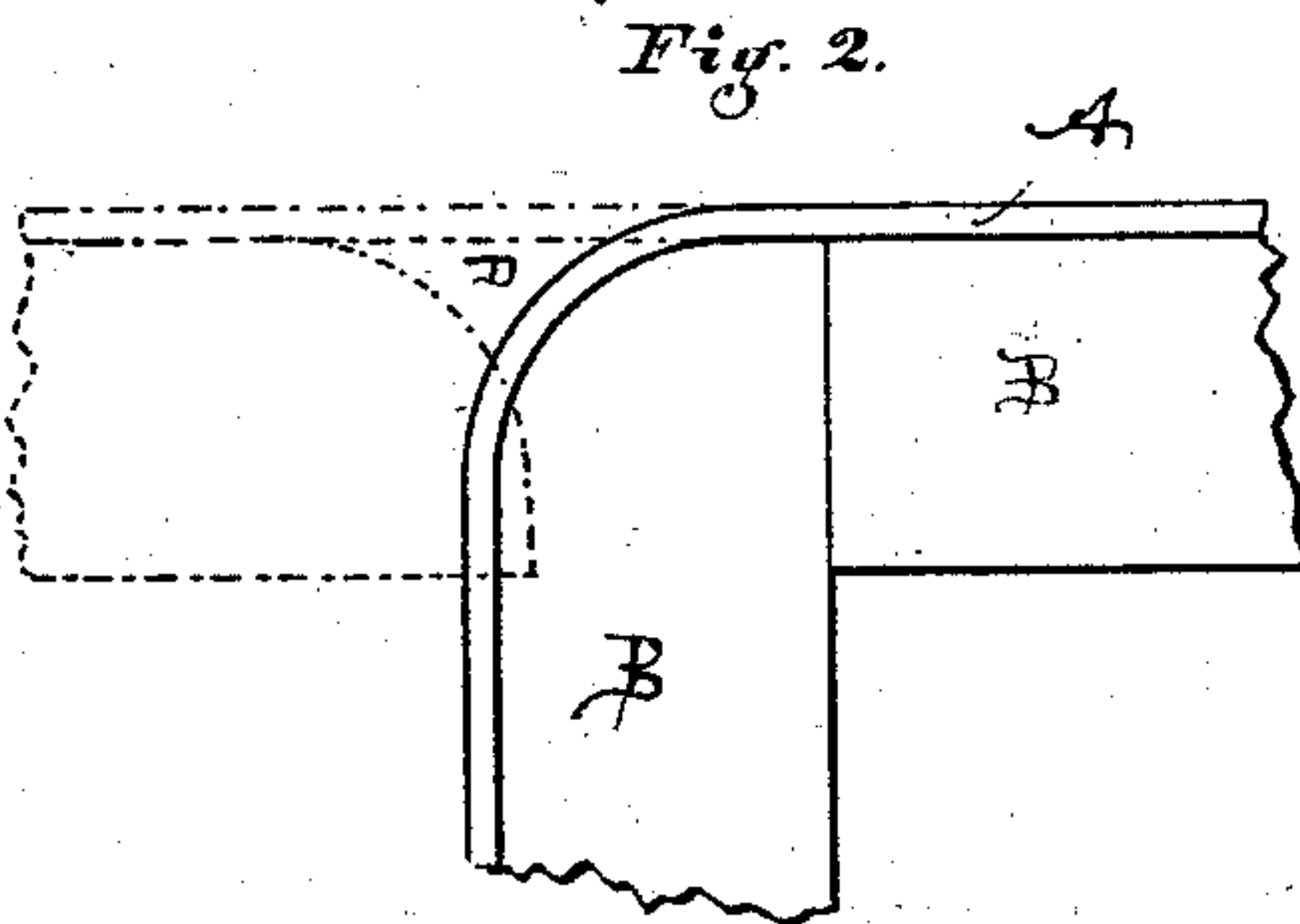


Fig. 2.

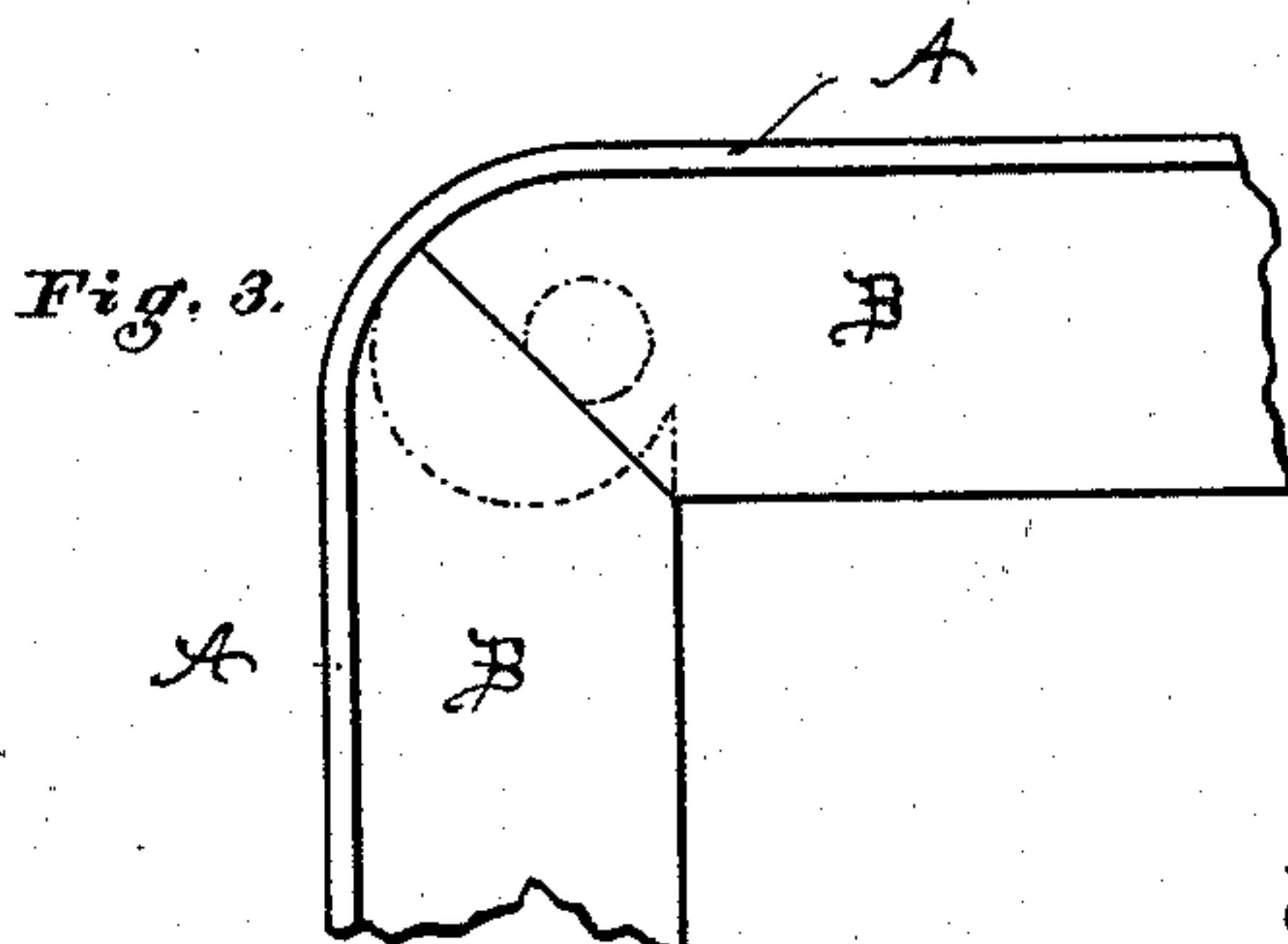


Fig. 3.

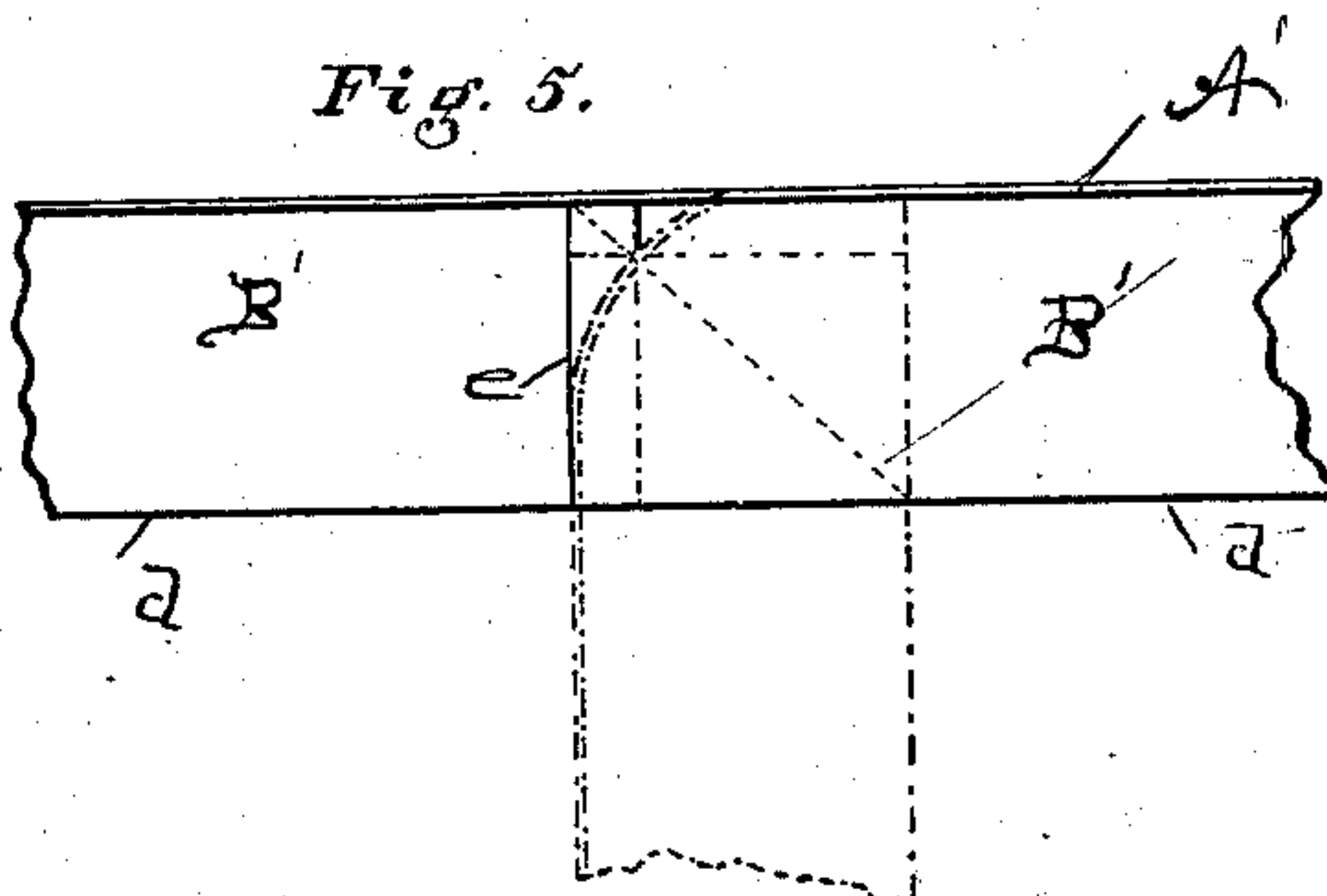


Fig. 5.

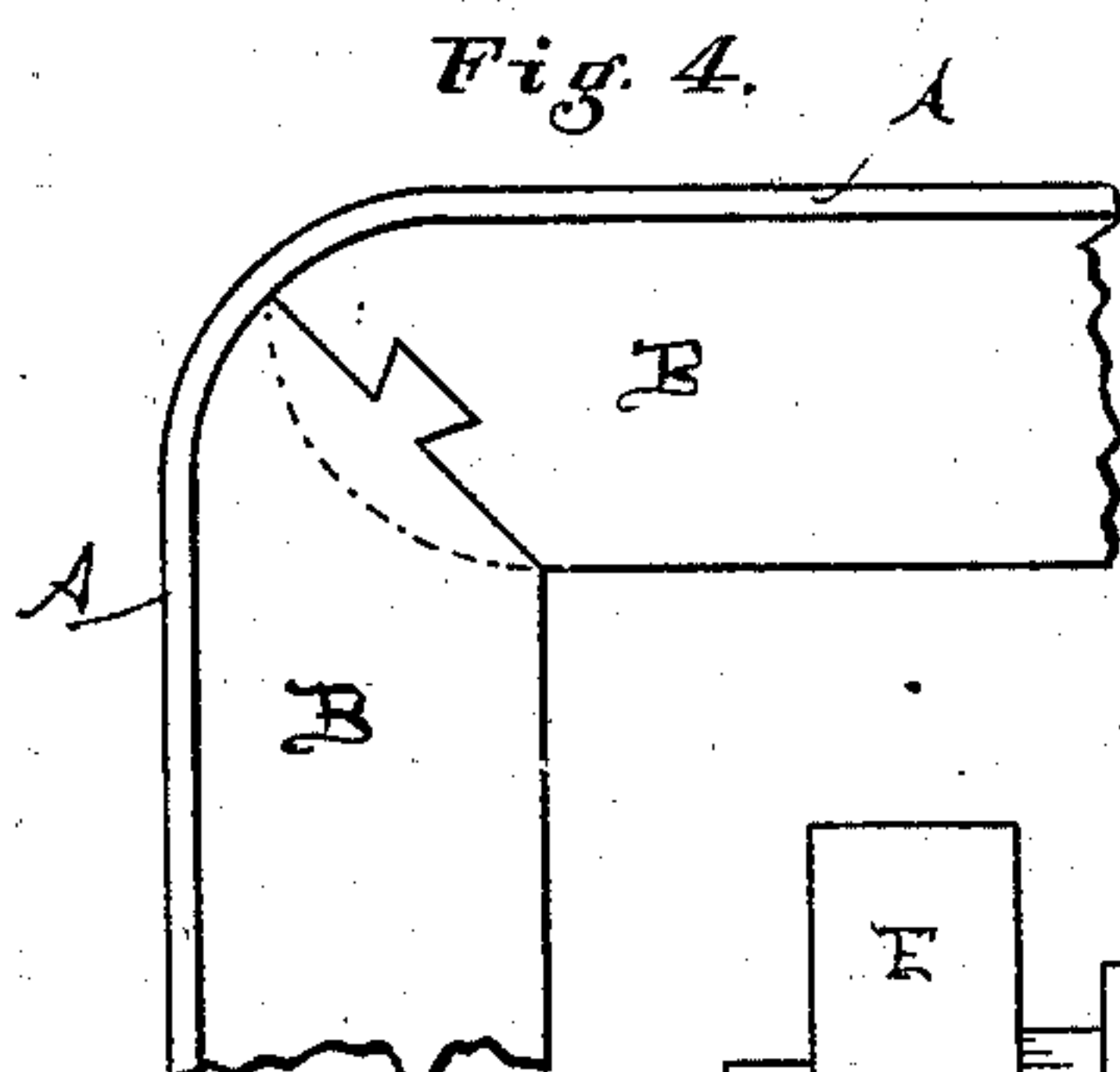


Fig. 4.

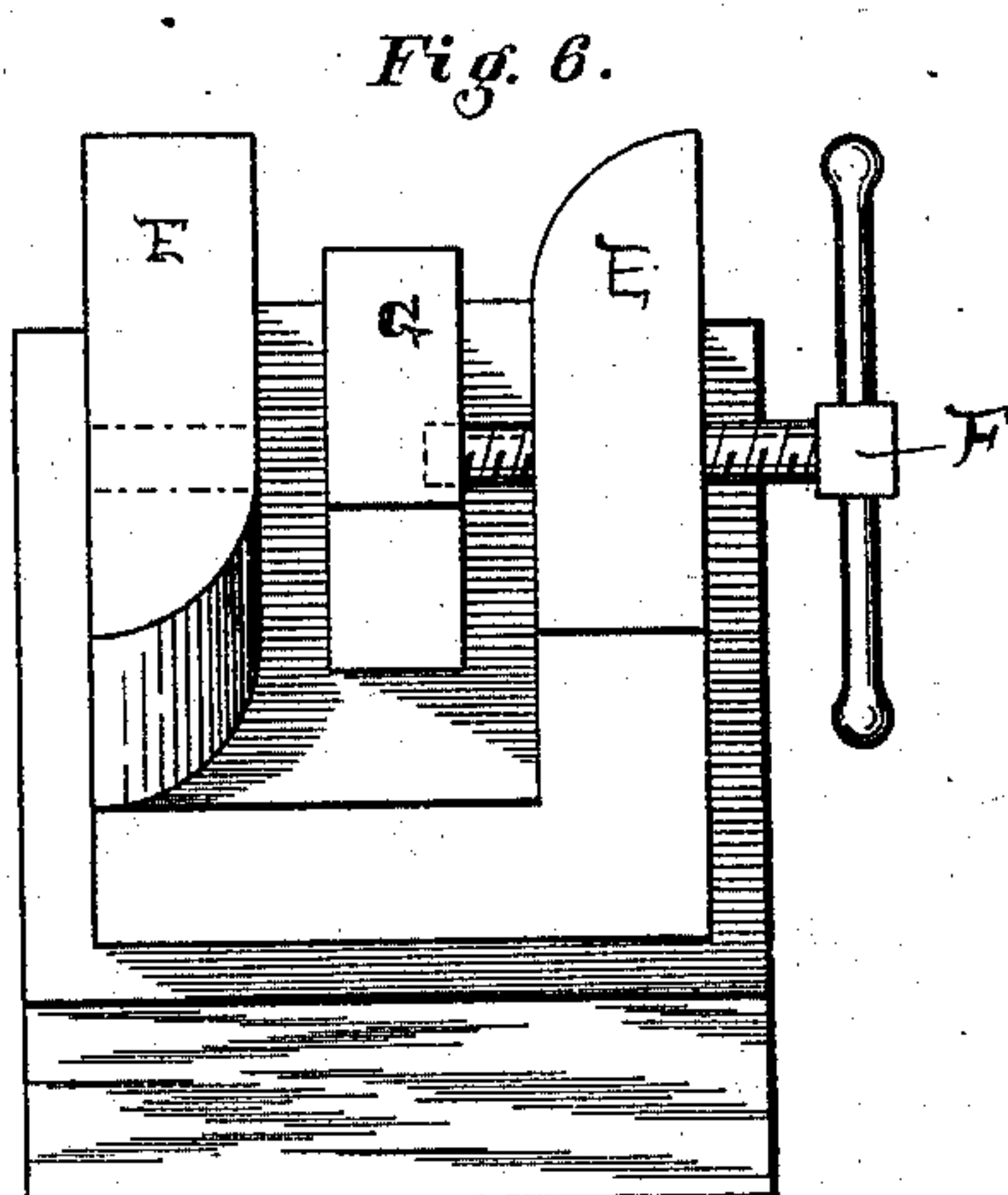


Fig. 6.

Attest:

See below

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METHOD OF BENDING ANGLE-IRON.

SPECIFICATION forming part of Letters Patent No. 283,136, dated August 14, 1883.

Application filed December 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, MOSES MOSLER, a citizen of the United States, residing at the city of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Bending Angle-Irons, of which the following is a specification.

This invention relates to a means for bending angle-bars. It consists in cutting away one web of the angle-bar opposite that portion of the uncut web which is to be bent to form a round corner, so as to permit the uncut web to bend freely and the severed edges or portions to abut against each other when the angle-bar is bent.

In the accompanying drawings, in which similar reference-letters indicate like parts wherever they occur, Figure 1 is a plan view of an angle-bar having one of its sides cut out to permit the uncut side to bend around the bar or corner, when bent being represented in dotted line. Figs. 2, 3, and 4 show in plan view different forms of openings or notches in one side of the angle-bar, which will permit the bar to bend and leave a close joint between the abutting edges as they are brought together to form a round cornered frame. Fig. 5 represents a templet of card-board or thin sheet metal which I use to determine about the shape and size of the notch or cut which it is necessary to make to admit of the bar being bent to any desired angle and to make a corner of any desired curve. Fig. 6 represents, in perspective, a simple device which I use to bend the bar to the desired shape.

A represents the uncut web, and B the cut web, of a right-angled angle-bar. The web B is cut away by a punching-tool of suitable shape in front of that portion of web A which is to be bent. As represented in Fig. 1, the outer opening, C, is made by lines at angles of forty-five degrees to the edge of the web, so that when the bar is bent the edges of this opening meet each other in a true miter. The inner opening, D, which permits the bar to bend, has a dovetailed shape bounded by curved lines described from points upon the miter-line and the face of the uncut web A. The curved ends of the web B abut against the uncut side when the bar is bent, as represented in dotted

line, Fig. 1, and in full line, Fig. 3, thus making a close joint.

Fig. 2 represents a corner formed by severing the web B with a cut, one edge of which is at right angles to the edge of the web, and the opposite edge by a circular cut, which is the same curve as the inner curve of corner, that portion of web B between these lines and web A cut away to permit the bar to bend, and the edge of web B upon side of the opening to be brought against the cut at right angles to edge upon the opposite side.

It is evident from an inspection of Figs. 3 and 4 that the shape of the opening or cut-away portions of web B may be varied at will, so long as the meeting line or lines be not extended beyond the space bounded by the rounded corner and the edge-lines extended to web A. The miter-line being taken as the central dividing-line, whatever shape is cut away from web B upon one side of this line the counterpart must be left upon that part of the web upon the other side. If, for instance, the small circular projection shown in dotted line, Fig. 3, be left upon one side of the miter-line, a corresponding circular opening must be cut out of the web upon the opposite side of the line in this case as well as in the form shown in full line, Fig. 4. The projecting piece must be bent back until the other parts are brought together, when it is driven into the opening and locks the bar firmly together. I have shown in dotted line, Fig. 4, another form of joint similar to the one shown in Fig. 3.

The templet shown in Fig. 5 is a thin sheet-metal or card-board angle-piece. One web of this I sever by a cut, *e*, at right angles to the edge *d* of one web. The two webs are severed at their junction for some distance upon each side of this line or cut *e*. Now, by bending the web B' so that the cut edges will pass each other the templet may be bent around to any curve desired and to any angle, the corners of the severed web passing underneath the uncut side and one part of web B' overlapping the other. When the templet is bent to the proper angle and the corner of the size desired, it is secured in position, while the web B' is severed on a line with the inner curve of the corner, and another cut from the inner an-

gle of the edges through the overlapping parts of the templet to any part of curved corner of web A'. When the templet is again straightened it will disclose the proper shape of opening or of the punch to cut out angle-bars of the same width as the pattern to be bent to the desired angle.

The angle-bars cut out as described may be bent to the proper form by the machine represented in Fig. 6. In this E represents a metal block having upwardly-projecting sides screw-tapped to receive clamping-screw F. The opposite corners of the block are rounded to fit the inner curve of the desired corner. G is a loose block of iron, between which and the side of block E the uncut web A is clamped by screw F; the other web, B, resting on the block, the cut-away part over the rounded corner; by force applied to the projecting end of the bar it is bent around until the severed edges meet in a close joint.

The angle-bar herein shown is not claimed here, as it is the subject of a pending application.

What I claim herein, and desire to secure by Letters Patent, is—

The herein-described process of bending angle-irons, which consists in cutting away a portion of one web by a cut which severs the two webs at their junction for a distance equal to the arc of the corner to be bent, and removes sufficient of metal in front of the single part of the uncut web to permit the same to bend to the desired angle and to insure the edges of the opening meeting to form a close joint as the bar is bent, substantially as shown and described.

MOSES MOSLER.

Witnesses:

GEO. J. MURRAY,
JOHN CRANE.