(No Model.)

# W. L. & H. HEBERLING.

## ROOFER'S BENDING TOOL.

No. 471,637. Patented Mar. 29, 1892.

*Fig. 1.*

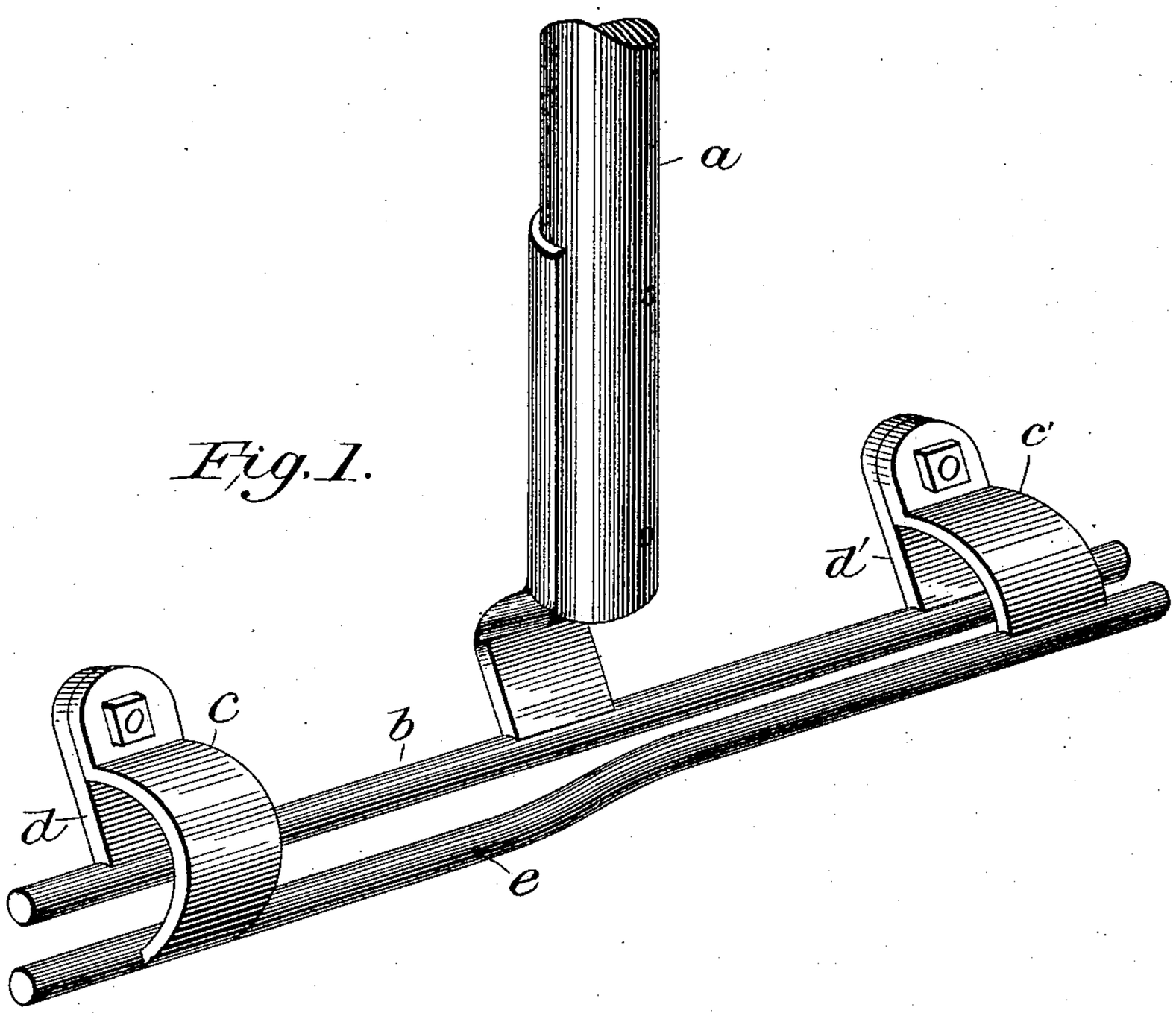



*Fig. 2.*

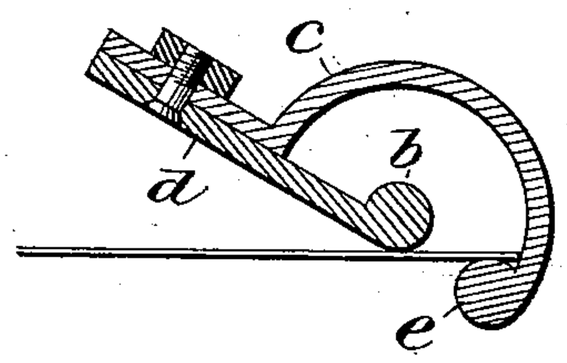
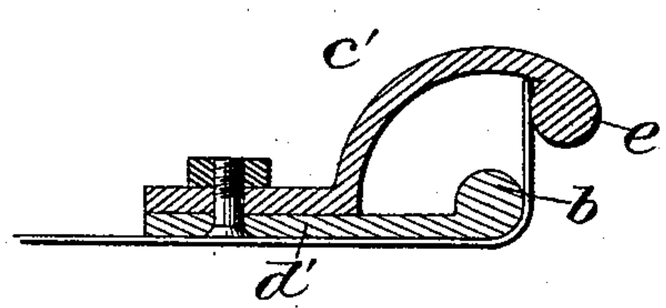



*Fig. 3.*




Witnesses
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# UNITED STATES PATENT OFFICE.

WILLIAM L. HEBERLING AND HENRY HEBERLING, OF HAVANA, ILLINOIS.

## ROOFER'S BENDING-TOOL.

SPECIFICATION forming part of Letters Patent No. 471,637, dated March 29, 1892.

Application filed June 16, 1890. Serial No. 355,635. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM L. HEBERLING and HENRY HEBERLING, citizens of the United States, residing at Havana, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Roofers' Bending-Tools; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of our invention is to provide a durable, efficient, and cheap tool for turning a round-cornered flange along the edges of metal sheets or strips for standing-seam roofing.

Our device consists of two round metal bars rigidly fixed in relation with each other and provided with gages and a handle which stands at right angles with the bars.

The operation of this device and the details of its construction will be better understood by reference to the accompanying drawings, in which—

Figure 1 shows our tool in perspective. Figs. 2 and 3 show cross-sections through it at its curved gages *c* and *c'* while in working position on the edge of a sheet of roofing.

A is the handle.

*b* is the pivotal or corner-forming bar, which is straight.

*c* and *c'* are curved gages, the inner surfaces of which form arcs of like circles which center in the axis of the corner-forming bar *b*.

E is the lower or flanging bar, which may be either straight or curved near its center partially around the bar *b*, from which it is preferably equally distant at all points.

The curved gages *c* and *c'* extend from the bar *e* and by their connection at their outer ends with the lugs *d* on the bar *b* secure the two bars in their relative positions.

The bars *b* and *e* may either or both have a projection to receive or constitute a handle or operating device.

When the tool is in operation, the corner-forming bar *b* lies upon the upper side of the metal sheet parallel with its edge, its distance from the edge being measured by the curved gages *c* and *c'*. When the corner-forming bar *b* occupies this position and the handle *a* is raised, this bar serves as a pivot on which the tool turns, and the lower or flanging bar *e* is brought in contact with the under side of the sheet at its edge, as shown in Fig. 2. Now as the handle *a* is forced farther forward in its circular course the flanging-bar *e*, already in contact with the edge of the sheet, carries a portion of it up and partially around the corner-forming bar *b*, as shown in Fig. 3.

In order to flange the edge up until it stands at right angles with the body of the sheet, it is necessary to work any ordinary tool along it twice from one end of the sheet to the other, bending it half-way up each time. We overcome this annoyance by the use of the flanging-bar *e*, curved near its center to the extent of about forty-five degrees around the bar *b*, as shown in Fig. 1, so that when the tool is fed about half its width sidewise along the edge of the sheet between each upward movement of the handle one half of it takes up the work where the other half leaves it off and completes a perpendicular flange at the next downward movement of the handle, thus accomplishing in passing the tool once along the edge of the sheet the same work which requires most other tools to be passed along it twice.

By the use of gages curved on circles which center in the axis of the corner-forming bar *b*, as shown and described, we secure an accuracy and perfection in the operation and results of our tool attained by no other of its class.

Another and very great advantage which we have secured in this simple tool over all others known to us for a similar purpose, whether they are hinged or unhinged, is its capacity for forming so perfectly and rapidly a curved or rounded corner between the sheet and its flange, instead of the sharp square corner which others make and which is so straining and damaging to the four thicknesses of metal found in the cross-locks of all properly-united roofing-sheets. This formation of the rounded corner between the sheet and its flange results from the rounded shape of the lower or bearing face of the pivotal or

corner-forming bar *b*, which face bears on the sheet metal at the point where the bend is to be made.

What we claim as new, and desire to secure by Letters Patent, is—

1. A roofer's bending-tool consisting of the bar *b*, provided with the lugs *d*, combined with the bar *e*, the curved or segmental guides *c* and *c'*, rigidly connecting the said bar *e* with the said lugs, and a handle for operating the tool, substantially as set forth.

2. A roofer's bending-tool consisting of the metallic bars *b* and *e*, the former provided with the lugs *d* and handle *a* and the said bar *e* being curved or bent near its middle, so that one portion of the same is out of line with the other portion thereof, combined with the curved or segmental guides *c* and *c'*, rigidly connecting said bar *e* with said lugs, substantially as set forth.

3. A roofer's bending-tool having two rigidly-related bending-surfaces, one of which is curved partially around or bent out of line from the other, for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM L. HEBERLING.
HENRY HEBERLING.

Witnesses:
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FRANK I. MITCHELL.