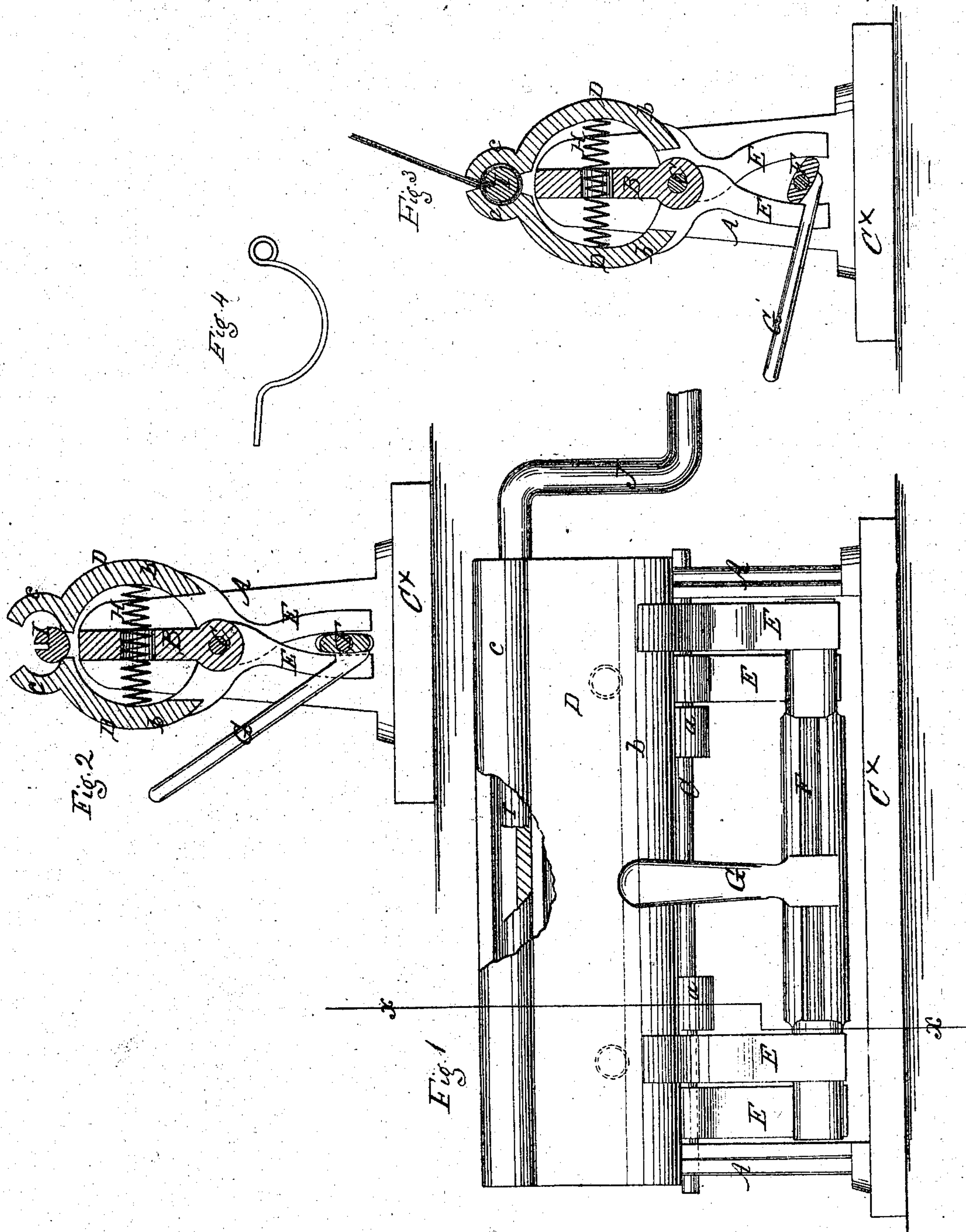


O. W. Stow.

Forming Beads on Sheet-Metal Gutters.

N<sup>o</sup> 75487

Patented Mar. 10, 1868.



Witnesses  
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# United States Patent Office.

O. W. STOW, OF PLANTSVILLE, CONNECTICUT.

*Letters Patent No. 75,487, dated March 10, 1868.*

## IMPROVED MACHINE FOR FORMING TUBULAR BEADS ON SHEET-METAL GUTTERS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, O. W. Stow, of Plantsville, in the county of Hartford, and State of Connecticut, have invented a new and improved Machine for Forming Beads on Sheet-Metal Gutters for Roofs; 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 front view of my invention.

Figures 2 and 3, transverse vertical sections of the same, taken in the line *x x*, fig. 1.

Figure 4, a transverse section of a gutter, drawn with a view of showing the bead formed by my invention.

Similar letters of reference indicate like parts.

Sheet-metal gutters for roofs are constructed of thin metal plates, (most generally tinned sheet iron,) bent in semicircular shape, with a tubular bead formed on the outer edge, in order to stiffen the gutter and keep it in proper shape.

My invention relates to a new and improved machine for forming the tubular beads on the edges of the sheet-metal plates; and it consists in the peculiar operation of the cam-lever, in combination with the pivoted jaws, by means of which the jaws are closed before forming the bead.

A A represent two standards or uprights, connected by a cross-piece, B, at their upper ends, the standards and cross-piece being all cast in one piece. The standards are secured by bolts to a suitable base, C\*, and the lower edge of the cross-piece B has pendent ears, *a*, to serve as supports or bearings for a horizontal rod, C, the ends of which pass through the standards A A. D D represent two jaws, which extend the whole length of the machine, and are provided with pendent arms, E, one near each end, said arms extending down nearly to the base, C\*. These jaws are of curved form transversely, the lower parts, *b*, being a portion of a hollow cylinder, of such dimensions that they may enclose the cross-piece B of the standards A, the upper parts, *c*, being a portion of a smaller cylinder, and above said cross-piece, as shown in figs. 1 and 3. The rod C passes through the arms E of these jaws, the former serving as a fulcrum for the latter, and between the lower parts of the arms E of the two jaws, a cam-shaft, F, is fitted, said shaft having its bearing in the standards A A. This cam-shaft is provided with a lever or treadle, G. H represents springs, two or more, of spiral form, and placed between the lower parts, *b*, of the jaws. These springs pass through openings in the cross-piece B, and they have a tendency to keep the jaws D D distended or forced apart. I is a metal shaft or arbor, the diameter of which corresponds to the internal diameter of the bead to be bent or formed in the sheet-metal plates. This shaft or arbor is bent at one end, to form a crank, J, and it has a groove, *e*, made longitudinally in it, and extending its whole length.

The device is used as follows: The shaft or arbor is placed between the upper parts, *c c*, to enclose the shaft or arbor. The edge of the sheet-metal plate is then inserted in the groove of the shaft or arbor, the upper edges of *c c* not covering it, and the shaft or arbor is then turned one revolution, and the tubular bead thereby formed on the plate, (see fig. 3.) The treadle or lever is then released, and the springs H force apart the jaws, and the shaft or arbor, with the edge of the plate wound upon it, lifted out from between the parts *c c* of the jaws, and the shaft or arbor then drawn out from the tubular projection.

The device, it will be seen, is extremely simple, very compact, and may be manufactured at a small cost, the parts being all of cast iron, with the exception of the shaft C and the shaft or arbor I, and put together without any trouble or difficulty whatever. The inner surfaces of the upper parts *c c* of the jaws are milled out, in order to render them true or smooth, and that is the only after-work required, with the exception of putting the parts together.

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

The combination of the cam-lever F G with the pivoted jaws D D, whereby the jaws are closed to form the bead, substantially as described for the purpose specified.

O. W. STOW.

Witnesses:

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