

H. S. HOELLER.
Sheet-Metal Elbows.

No. 133,989.

Patented Dec. 17, 1872.

Fig. 1

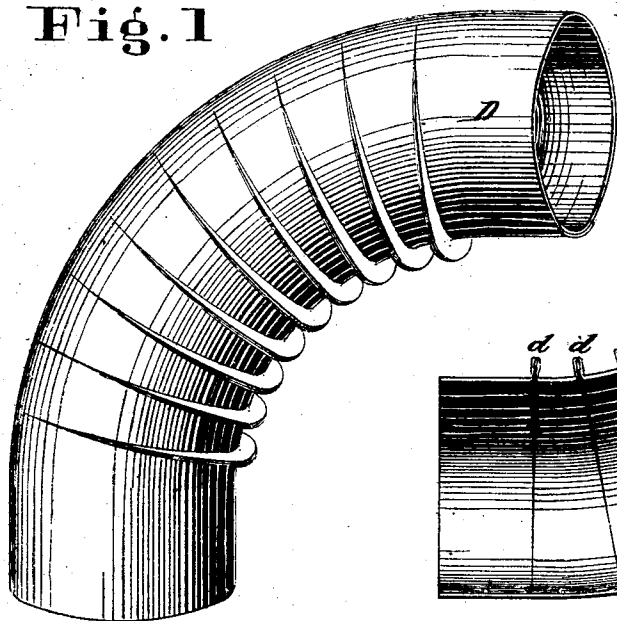


Fig. 2

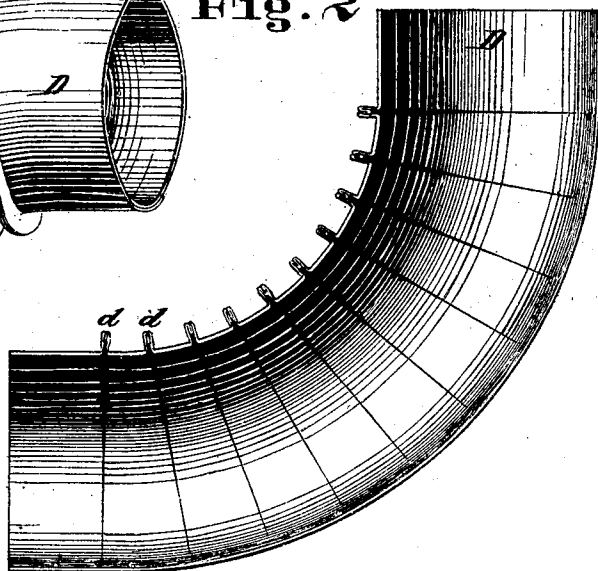
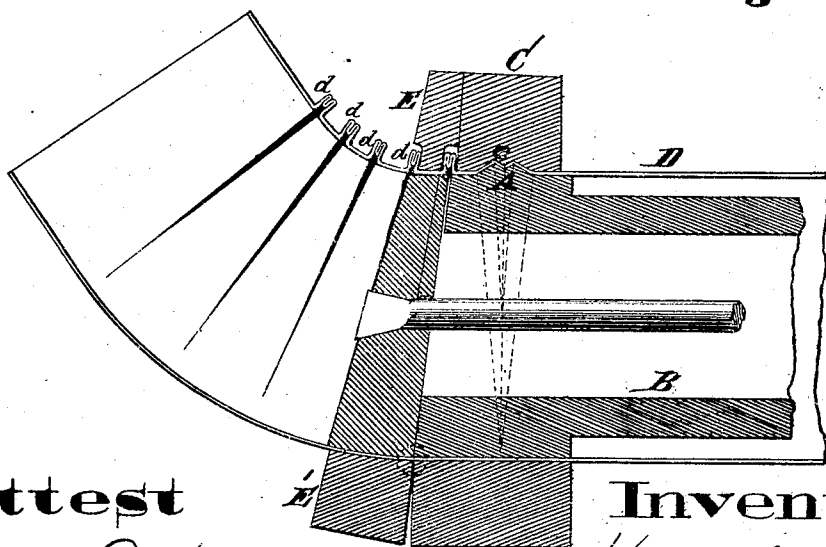


Fig. 3



Attest

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UNITED STATES PATENT OFFICE.

HENRY S. HOELLER, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND
CHARLES HOELLER, OF SAME PLACE.

IMPROVEMENT IN SHEET-METAL ELBOWS.

Specification forming part of Letters Patent No. 133,989, dated December 17, 1872.

To all whom it may concern:

Be it known that I, HENRY S. HOELLER, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Sheet-Metal Elbows, of which the following is a specification:

Nature and Objects of Invention.

My invention is an improvement upon the sheet-metal elbow for which Letters Patent No. 128,146 were granted to myself and Charles Hoeller, June 18, 1872; and consists in such a formation of the crimps that the iron is trebly folded, making a double crimp at each closing up of the iron, so that each crimp has four thicknesses of iron; the object being to make the turn of the elbow either with less number of crimps or less projection of crimps.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of my improved elbow complete. Fig. 2 is an axial section of the same. Fig. 3 exhibits sufficient portions of the machine for making the elbow to show the manner of producing the double crimp.

General Description.

The machine for making this improved form of elbow may be constructed in all its parts similar to the machine for which Letters Patent were granted to Charles and Henry S. Hoeller, March 28, 1871, except the devices for producing the preliminary crimp. These devices I prefer to make as follows: A is a bead extending around the head B of the mandrel for a distance equal to the required length of crimp. The swinging clamps C C' are grooved at c in a manner corresponding with the bead B, so that when the tube of sheet metal D is compressed between the clamps C C' and the beaded head B a preliminary crimp is produced in the metal, as clearly shown in Fig. 3. In the construction

is grooved, as shown, and the bottom of the groove is beaded, so that the metal is creased in five places, two for the bases of the crimp and three for the folds, to produce the double crimp.

When the tube is moved along so as to bring the preliminary crimp between the clamps C C' and the clamps E E', which operate in a manner substantially as described in the Letters Patent of C. and H. S. Hoeller, of March 28, 1871, the preliminary crimp is forced into the folded crimp shown at d in such a way that four thicknesses of metal are laid together in each crimp, as shown in Figs. 2 and 3. In this way more metal is taken up at each crimp than is possible with a crimp with a double thickness of metal having the same projection. For this reason the present improvement is adapted for the construction of elbows with shorter bends, or with less number of crimps for the same curvature, or less projection of crimp with the same curvature and same number of crimps.

The machine for making these elbows may be so constructed that the crimps upon the inner circle of the elbow will touch each other, or nearly so, and the elbow may be made from one tubular piece of metal or two half-tubes. If made of two pieces, seams will be made upon both the inner and outer arcs. If made of one piece, the seam is preferably upon the inner arc.

Claim.

A sheet-metal crimped elbow, made in one or more pieces, in which the projecting crimps or ridges are made by closing together four thicknesses of metal, substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY S. HOELLER.

Witnesses:

FRANK MILLWARD,
J. L. WARTMANN.