(No Model.)

A. J. WEED.

TOOL FOR BENDING BAND METAL.

No. 533,513. Patented Feb. 5, 1895.

Fig. 1

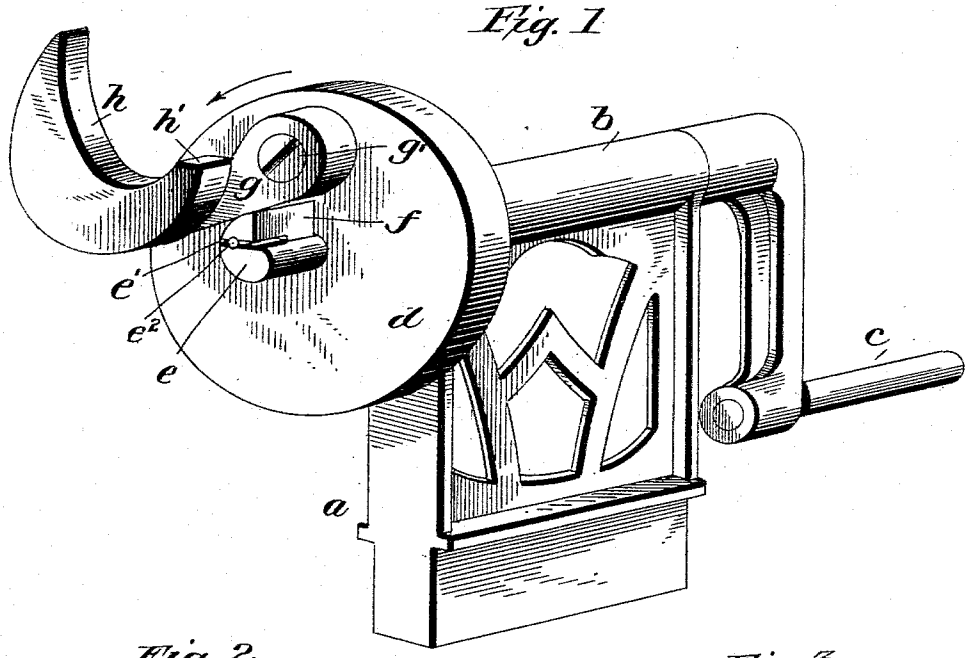


Fig. 2

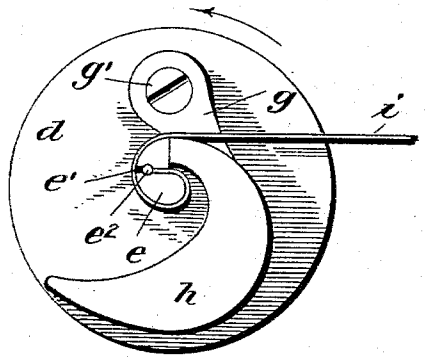
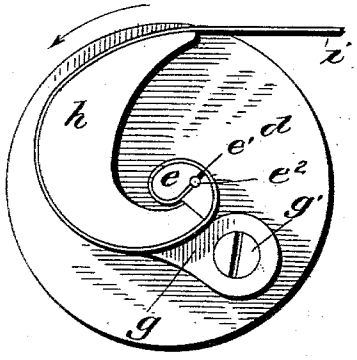


Fig. 3.



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UNITED STATES PATENT OFFICE.

ARTHUR J. WEED, OF NEW YORK, N. Y.

TOOL FOR BENDING BAND-METAL.

SPECIFICATION forming part of Letters Patent No. 533,513, dated February 5, 1895.

Application filed June 9, 1894. Serial No. 514,088. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. WEED, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tools for Bending Band-Metal, of which the following is a specification.

This invention relates to certain new and useful improvements in tools for bending band metal, and has for its object the production of a simple and economical device for bending or curving the band metal used in the manufacture of Venetian metal work, and by means of which the folds, bends or curves of the finished product will all lie in the same plane, instead of being more or less helical.

To these ends, therefore, my said invention consists in a tool having an axially arranged stud or projection, and a revoluble, independently movable, portion, adapted, at certain points in the rotation of the tool to automatically register with a portion of said stud and form a continuous forming face therewith, and in the details of construction, and arrangement and combination of parts, all as hereinafter more particularly described and pointed out in the claims.

Referring to the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1, is an isometrical perspective view of one of my improved tools showing the parts in position to receive the metal strip to be operated upon. Fig. 2, is a front elevation or face view of the forming or bending mechanism with a strip of metal in the act of being bent or curved, and showing the position of the parts upon a complete revolution of said mechanism; and Fig. 3, is a similar view showing the relative positions at the completion of the forming or bending operation.

a, is a frame or standard, which may be provided with a suitable base, or may be arranged, as shown, to be secured in a vise, or otherwise held in position for use. Said frame or standard is provided at its top with a journal or bearing *b*, through which passes a shaft, having secured at one end the crank, or other motion transmitting device *c*, and having keyed or otherwise affixed to its opposite end the disk or wheel *d*. Upon the outer face of said disk or wheel is arranged the forming or bending mechanism proper, which consists of a rotatable axial stud or projection *e*, and a revoluble, independent movable portion, to be presently described. The stud or projection *e*, is provided with the slot or recess *e'*, and the pin e^2, closing said slot and acting as a stop or guide, and is also provided with the straight or abrupt shoulder *f*. The relatively movable portion consists of the ear or shank *g*, journaled, as by a screw-shaft *g'*, to the face of the disk *d*, near the periphery thereof, and the hook-shaped portion *h*, which has the straight shoulder *h'*, adapted to abut against the shoulder *f*, of stud *e*, as shown in Figs. 2 and 3, and which is off-set from shank *g* at the point of said shoulder, as shown, to coincide and be substantially flush with the outer face of said stud.

The operation of my tool is as follows: The disk or wheel *d*, is turned to the position shown in Fig. 1, and the movable portion *g*—*h*, is thrown backwardly as shown. A strip of band metal *i*, is then inserted in the slot or recess *e'*, its inward motion being stopped and limited by the pin or stop e^2. Upon rotating the disk *d*, through its shaft and crank, or other device *c*, in the direction of the arrow, the metal *i*, to be operated upon, is bent, formed or curved about the face of stud *e*, conforming to the contour thereof, and just before the shoulder *f*, of said stud is reached by the metal, the movable portion *g*—*h*, which has been revolved by the rotation of disk *d*, swings automatically by gravity into the position shown in Fig. 2, with its shoulder *h'* abutting against the shoulder *f*, thus presenting a continuous forming face for the metal, and being held against assuming the position shown in Fig. 1, upon the further rotation of said disk, by the metal passing over and around its outer face, as shown in Fig. 3. The rotation of these operating parts may be continued until the metal *i*, has been given the contour of the entire outer faces of stud *e*, and portion *g*—*h*, as in Fig. 3, or may be discontinued at any point,

should the scroll or curve desired be smaller than would result from the completion of the operation.

Obviously many different forms, both curved and angular, may be given the metal by the use of appropriate studs and forming faces, and I have, therefore, not particularly described the contour of the parts shown in the drawings, as they form but an illustration of the application of my invention. It will also be manifest that many changes and alterations may be made in the details of construction without departing from the principle and scope of my invention, and involving merely a mechanic's skill. For example, in place of the disk *d*, a simple hub carrying the stud *e*, and an arm, affording a bearing for the movable portion *g—h*, may be employed. The stud *e* may be formed integral with the shaft, if desired, &c., but I have shown and described the construction I prefer to use, and which produces excellent results in practice.

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

1. A metal forming tool comprising a rotatable stud and a revoluble, independently movable portion adapted upon the rotation of said stud to automatically register, and present a continuous forming face therewith, substantially as described.

2. A metal forming tool comprising a rotatable stud and a revoluble, independently movable portion adapted to automatically register with a portion of said stud at a predetermined point in its rotation, and present a continuous forming face therewith, substantially as described.

3. A metal forming tool comprising a rotatable stud provided with a slot or recess; in combination with a revoluble independently movable portion adapted, upon the rotation of said stud to automatically register with a portion thereof and present a continuous forming face therewith, substantially as described.

4. A metal forming tool comprising a disk and means for rotating the same; in combination with an axial stud rotating therewith, and an independently movable portion journaled near the periphery of said disk, and adapted upon the rotation thereof, to register with a portion of said stud and present a continuous forming face therewith, substantially as described.

5. A metal forming tool comprising a disk and means for rotating the same, in combination with an axial stud rotating therewith, and provided with a shoulder; and an independently movable portion, provided with a shoulder, journaled near the periphery of said disk, adapted upon the rotation thereof to automatically register with the shoulder of the stud and present a continuous forming face with said stud, substantially as described.

6. A metal forming tool comprising a rotatable stud, adapted to impart the initial contour to the metal, and provided with a slot or recess and a stop closing the same; in combination with a revoluble, independently movable portion adapted to automatically register with said stud upon the completion of said initial operation, and present a continuous forming face therewith, and means for imparting motion to said parts, substantially as described.

Signed at New York, in the county of New York and State of New York, this 7th day of June, A. D. 1894.

ARTHUR J. WEED.

Witnesses:
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