(No Model.)

# M. H. HULBERT.

## TOOL FOR MAKING CURVES OR OTHER FORMS IN VENETIAN IRON.

No. 518,816. Patented Apr. 24, 1894.

Fig. 1.

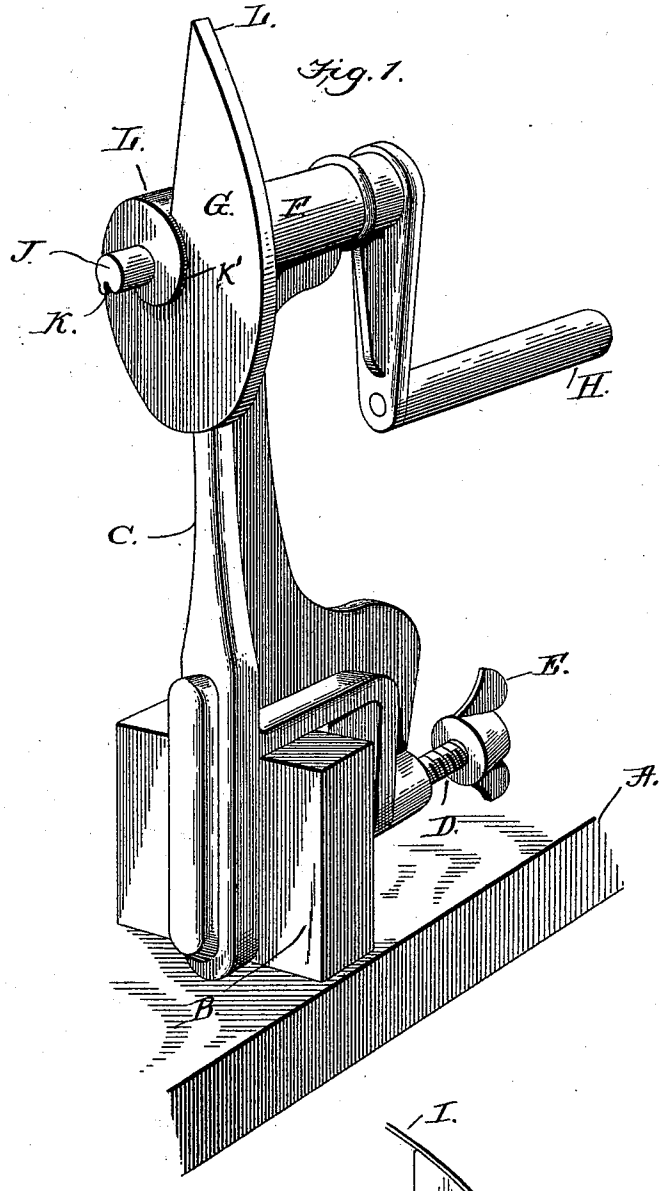
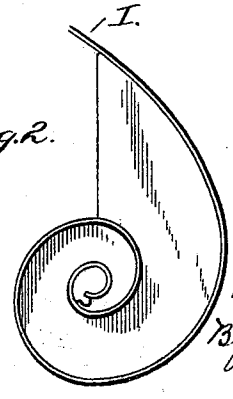



Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## TOOL FOR MAKING CURVES OR OTHER FORMS IN VENETIAN IRON.

SPECIFICATION forming part of Letters Patent No. 518,816, dated April 24, 1894.

Application filed January 2, 1894. Serial No. 495,327. (No model.)

*To all whom it may concern:*

Be it known that I, MILAN HULBERT HULBERT, a citizen of the United States, residing at 462 West Twenty-second street, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tools for Making Curves or other Forms in Venetian Iron; and I 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.

My invention relates to certain new and useful improvements in tools for making curves and other forms in Venetian iron work.

It has for its object simplicity and economy of construction and ready adaptability for variety of results. And with these ends in view my invention consists of a metallic frame or holder adapted to be secured upon a working bench or table by a suitable clamp, and provided at its upper end with a bearing to receive a rotatable shaft, upon one end of which is secured a crank or drive pulley and upon the other a former, provided with means for grasping the material to be bent into shape, as will be hereinafter and in detail described.

In order that those skilled in the art to which my invention appertains may fully understand my invention I will proceed to describe the same referring by letters of reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved forming tool secured in operative position upon a bench or table; and Fig. 2 is a side elevation of the forming block with the metal band bent thereupon.

Similar letters of reference denote like parts in both figures of the drawings.

A represents an ordinary table or bench upon which for convenience sake is secured a suitable strip or rib B upon which the tool is clamped.

C is the frame of the tool, which is preferably made of cast iron, the lower end of which is bifurcated and adapted to straddle the strip or rib B, and is provided with a clamping screw D, and means E for turning the same. The frame extends upwardly and is formed at its upper end with a bearing or journal box F to receive the shaft or journal of the forming tool G.

H is a crank secured in any suitable manner to the shaft of the forming tool, and by means of which the latter may be operated. In lieu of the crank H a drive pulley or any other suitable device may be substituted.

The tool proper, or that part which is designed to execute the work and give form to the metal band or strip I, may be formed either with a shaft adapted to take its bearing within the box F, or it may be adapted to be secured to the end of an independent shaft by a screw or key in any manner familiar to a skilled mechanic.

J is an arm or stud projecting from the side of the tool proper, coincident with its axis of motion, and formed with a radial slot or recess K designed to receive one end of the metal strip which is to be bent into form. The side of the tool G is routed out, or so cast or forged, as to present the form (whether curved, rectangular or otherwise) that it may be desired to impart to the strip of metal to be operated upon, as is clearly shown at Fig. 1, the forming face or edge of the tool proper starting from a point on the arm or stud J, recedes so as to leave a projection K′ which will receive one edge of the metal strip being operated upon, this projecting edge or shoulder gradually merging into the face proper or edge L of the tool.

With a tool such as shown in the drawings a great variety of shapes or designs may be made by alternately operating upon one end and then the opposite end of the metal strip and accordingly as the tool is turned to a greater or less extent.

I wish it to be understood that I do not confine myself to any exact configuration or direction of the forming faces of the tool as that may be varied to any extent without departing from the spirit of my invention, the gist of which rests in the idea of providing a rotatable tool or former having an axially projecting arm or stud provided with means for interlocking with the end of a metallic strip to be operated upon, and with a projecting shoulder or face merging with the stud or projection and with the terminal face of the tool.

The frame C may be formed with any suitable clamping device in lieu of the bifurcated base, and thumb screw, and if the latter is used, it may be adapted to be secured upon the horizontal edge of the bench in lieu of the rib or strip B.

From the construction shown it will be seen that when the end of the strip of metal to be operated upon is placed within a recess K in the stud J, and the tool rotated, the edge of the strip lies against the flat disk face or side of the tool and that the shoulder produced by the receding plane of the tool constitutes a forming shoulder which gradually leads the strip upon the forming edge in such manner that when the form is complete the strip has not been led in an axial direction to any appreciable extent, and consequently the same is capable of use in flat work, which would not be the case if it were bent or formed upon a cone shaped tool having helical forming face.

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

The flat forming tool G provided with an axial stud J having a slot or recess K, and having its side retreating to constitute a forming shoulder, K′ merging at one end with the stud J and at the other into the forming face or edge L of the tool, substantially as hereinbefore set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MILAN HULBERT HULBERT.

Witnesses:
H. N. HODGDON,
JAMES E. WORTHINGTON.