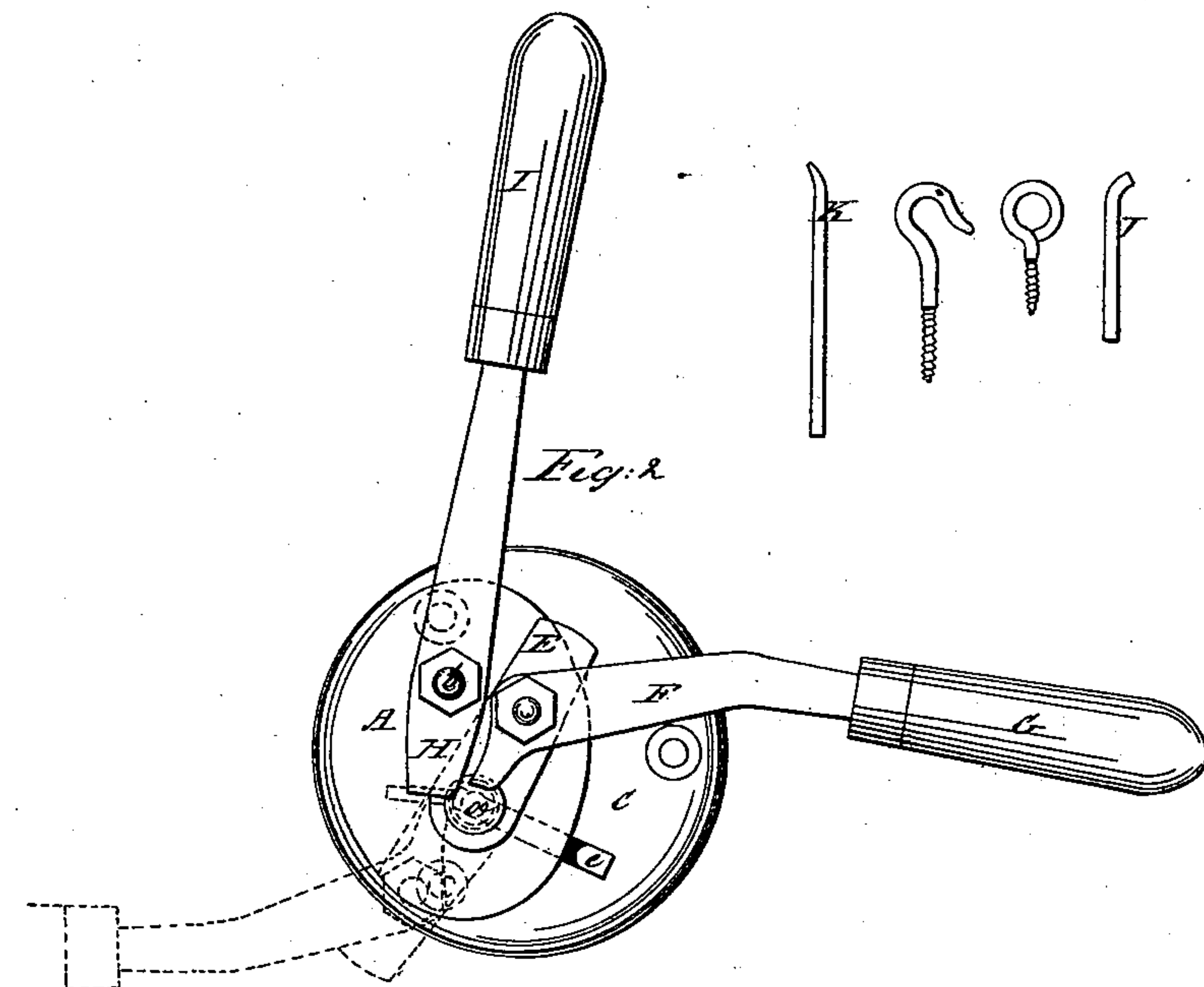
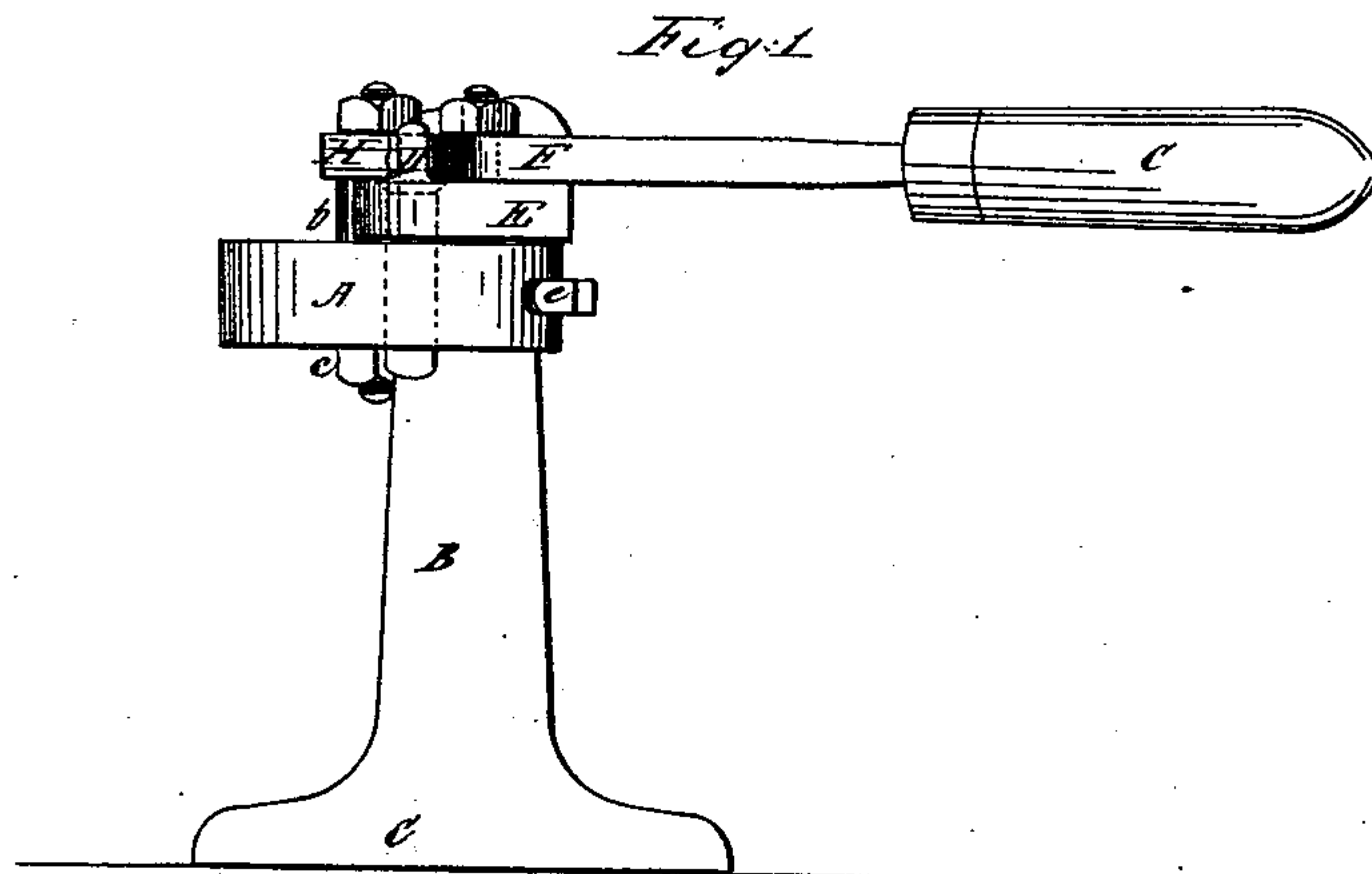


Making Hooks and Staples.

Patented Nov. 19, 1861.



Witnesses
James Laird
Richardson Gawley

Inventor
 Simon Brooks.

UNITED STATES PATENT OFFICE.

SIMEON BROOKS, OF CHESTER, CONNECTICUT.

IMPROVEMENT IN MACHINERY FOR BENDING HOOKS AND STAPLES.

Specification forming part of Letters Patent No. 33,733, dated November 19, 1861.

To all whom it may concern:

Be it known that I, SIMEON BROOKS, of Chester, in the county of Middlesex and State of Connecticut, have invented a new and Improved Machine for Bending Hooks and Staples; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a plan of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention is designed for bending hooks and staples, such as are used in hanging picture-frames, mirror-frames, and other similar articles; and it consists in the device for holding the blank while the eye is being formed; also in the manner of hinging the set, whereby only one operation is required to bend and finish a hook or staple.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the bed-piece or table of the machine upon which the working parts are arranged, supported upon a column or post B and pedestal C, which latter is secured to the floor to retain the machine rigidly in a certain position by screws passing vertically through it.

D represents one of a number of spindles of different sizes made to suit the different sizes of hooks and staples, which spindles are secured one at a time in an upright position in the table.

E is an arm hinged to that portion of the spindle which projects above the table, so as to have horizontal rotary movement.

F is a set or tool provided with a handle G and attached to the upper surface of the hinged arm by a pivot *a*, which means of attachment admits of the point of the tool being adjusted radially to bend a larger or smaller staple, as may be desired.

H is a clamping-lever and I its handle, which lever is attached to the bed-piece or table by a stud-shaft *b*, so as to bring its bottom side a trifle above the upper surface of the hinged arm, over the end of which it is when brought in contact with the blank to clamp and hold it while the eye of the staple or hook

is being formed. Both the clamping-lever and tool have a semicircular groove formed in their ends, which grooves serve to retain the blank in a horizontal position while being bent. The stud-shaft, which forms the fulcrum of the clamping-lever, passes vertically through a hole in the bed-piece, and is fastened from the under side by a nut *c*, fitted upon its end. The spindles around which the hooks and staples are bent are also fitted in a hole in the table or bed-piece and secured by a set-screw *e*, passing horizontally into the bed-piece against the periphery of the neck or shank of the spindle.

The operation is as follows: The wire is first cut up into suitable lengths to form the size of hooks or staples desired to be produced. At the same time a slight crook is put into one end of the blank, as shown at J. The clamping-lever and tool being now placed in the position shown in Fig. 2, the blank is introduced between the end of the former and spindle and allowed to project a sufficient distance beyond to form the eye of the hook or staple when bent around. Pressure is now brought to bear upon the clamping-lever, which holds the blank rigidly in position while the tool bends the end around the spindle. The handle of the tool is first drawn toward the handle of the clamping-lever, which causes the point of the tool to move on the opposite side of the spindle, when by following the wire around the spindle it is made to conform thereto and the eye of the hook or staple thereby produced.

In forming the eyes of staples the tool and end of the clamping-lever come together when the operation is nearly finished and act as a swage to make a square and close joint.

To bend hooks or staples of a larger or smaller size from the same number of wire it is only necessary to change the spindle to suit the size of hook or staple desired.

In bending hooks the blanks are pointed as well as bent, as shown by K, and a like operation gone through as with the staples, the only difference between the two being that in the latter the set or tool only travels partly around the spindle, while in the former it travels entirely around and acts as a swage to form a close joint.

The set or tool in bending hooks is arrested at the proper time by a stop, which may be a

pin introduced into a hole in the table or any other suitable device.

Having thus described my invention, what I claim as new herein, and desire to secure by Letters Patent, is—

The bed-piece A, spindle D, hinged arm E, pivoted set or tool F G, and clamping-lever

H I, when combined, arranged, and operating in the manner and for the purposes described.

SIMEON BROOKS.

Witnesses:

JAMES LAIRD,

RICHARDSON GAWLEY.