

(No Model.)

H. CHILDERS.

COMBINED ANVIL, DRILL, AND VISE.

No. 326,402.

Patented Sept. 15, 1885.

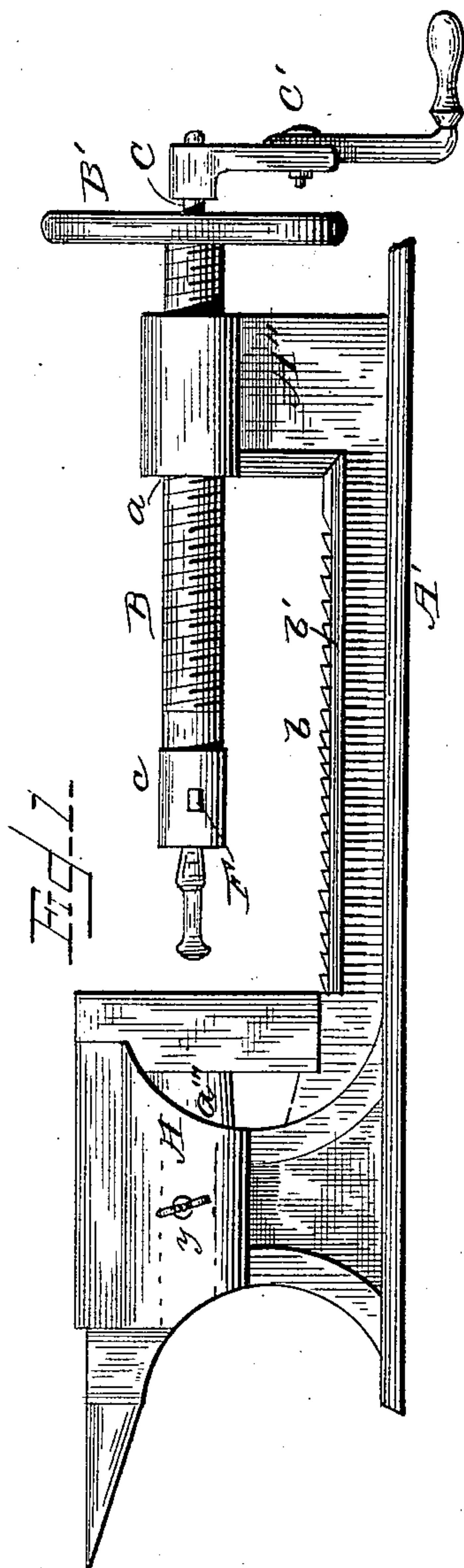


FIG. 1.

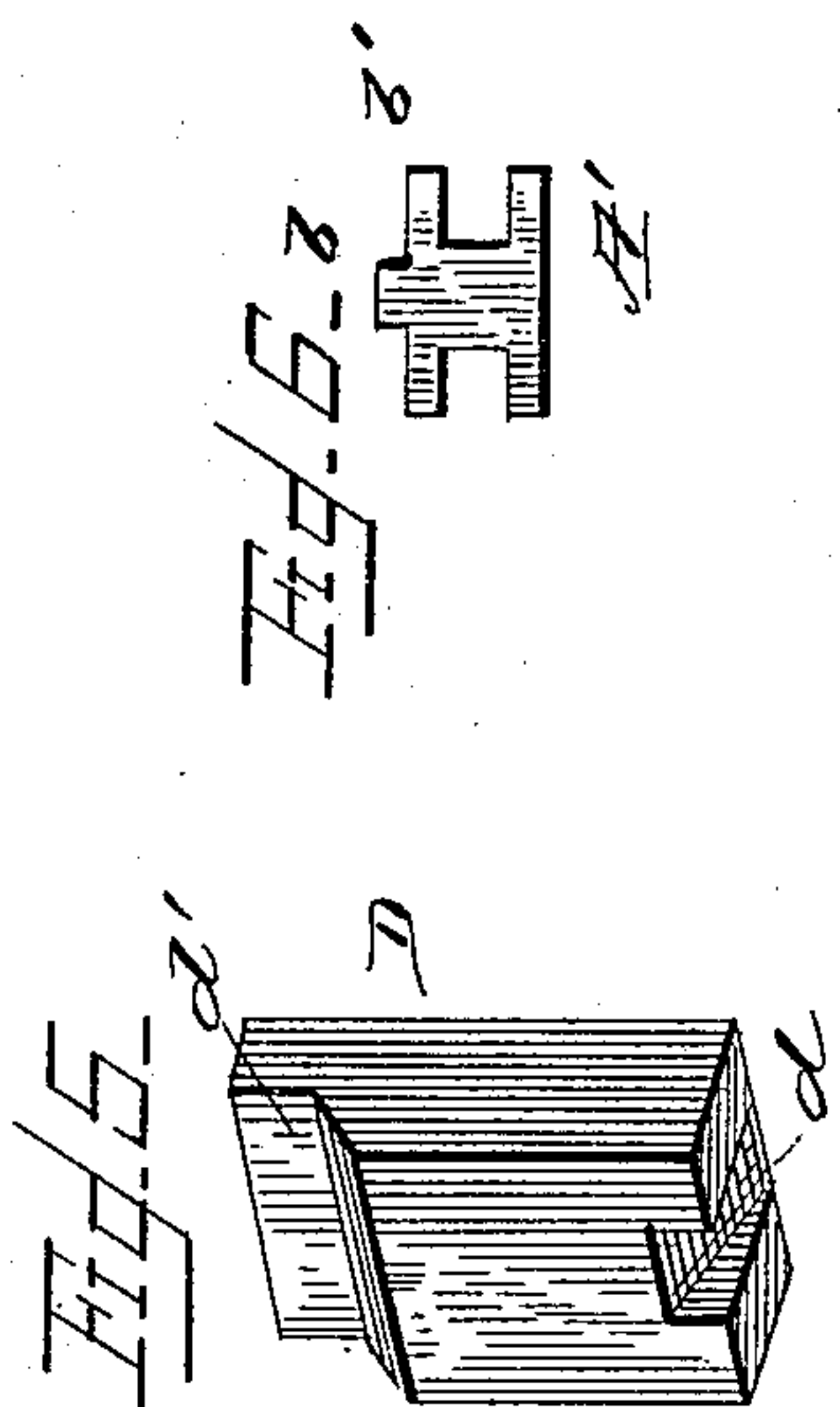


FIG. 2.

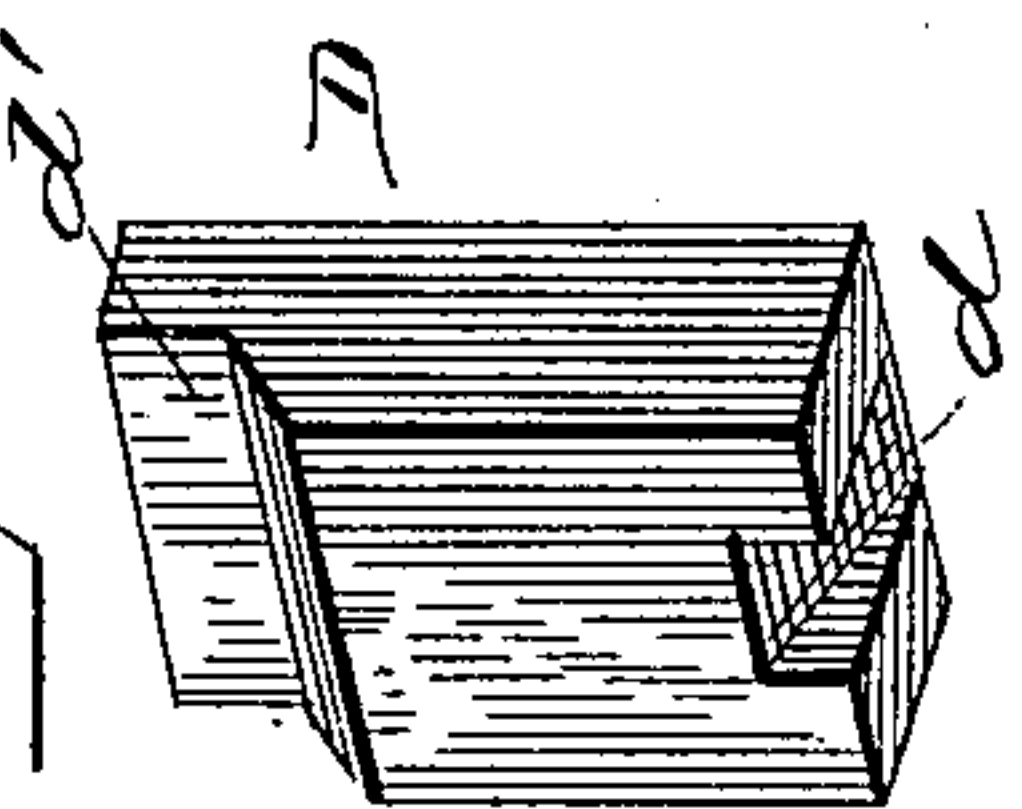


FIG. 3.

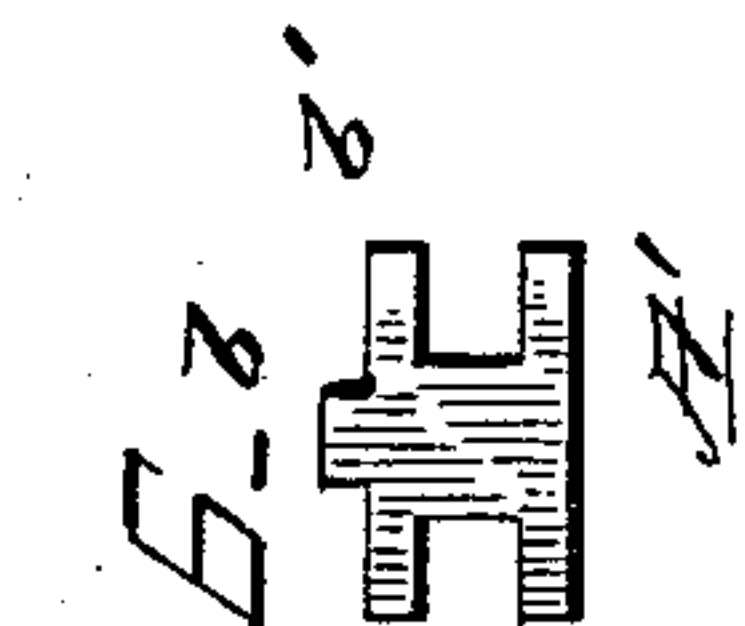


FIG. 4.

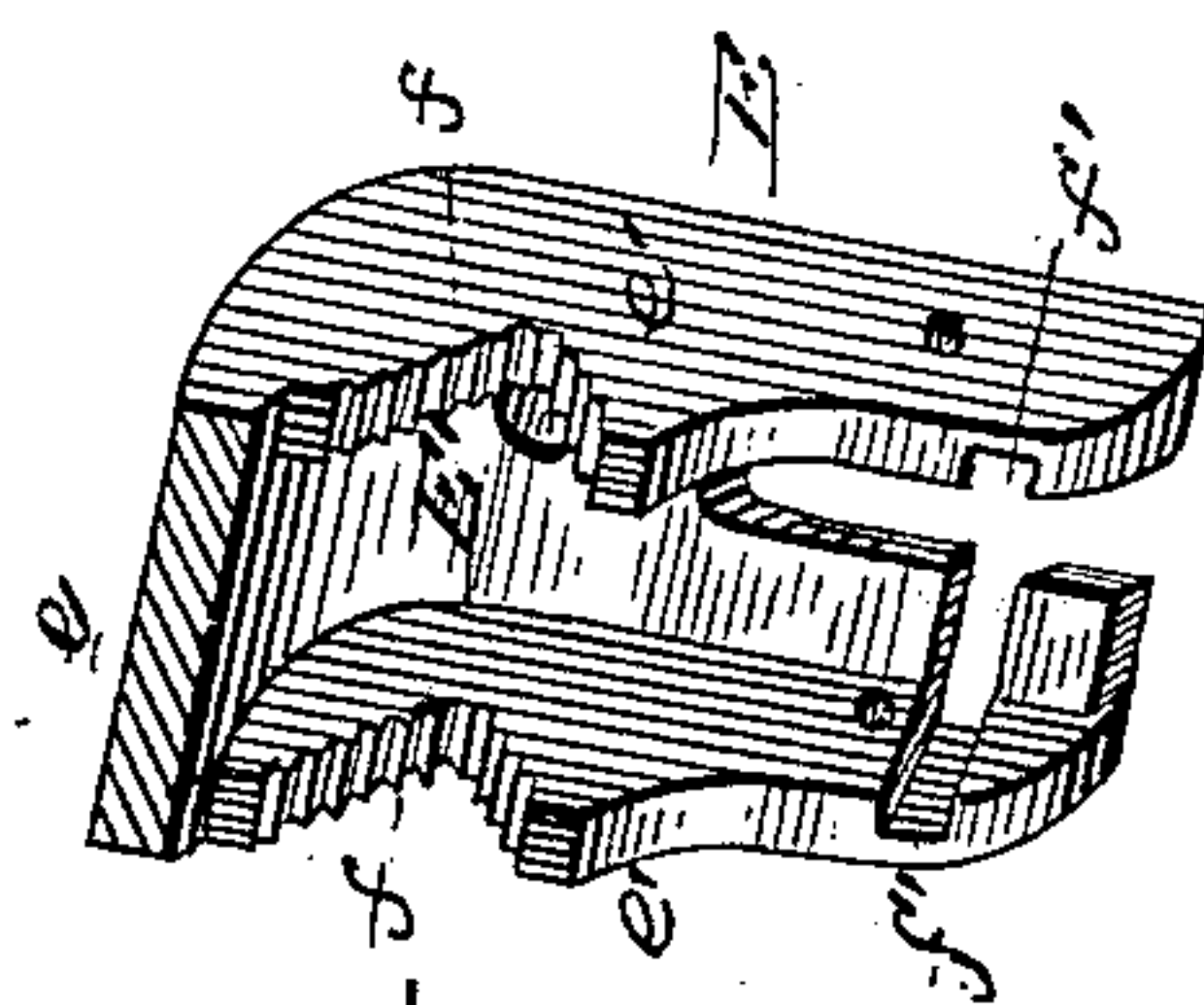


FIG. 5.

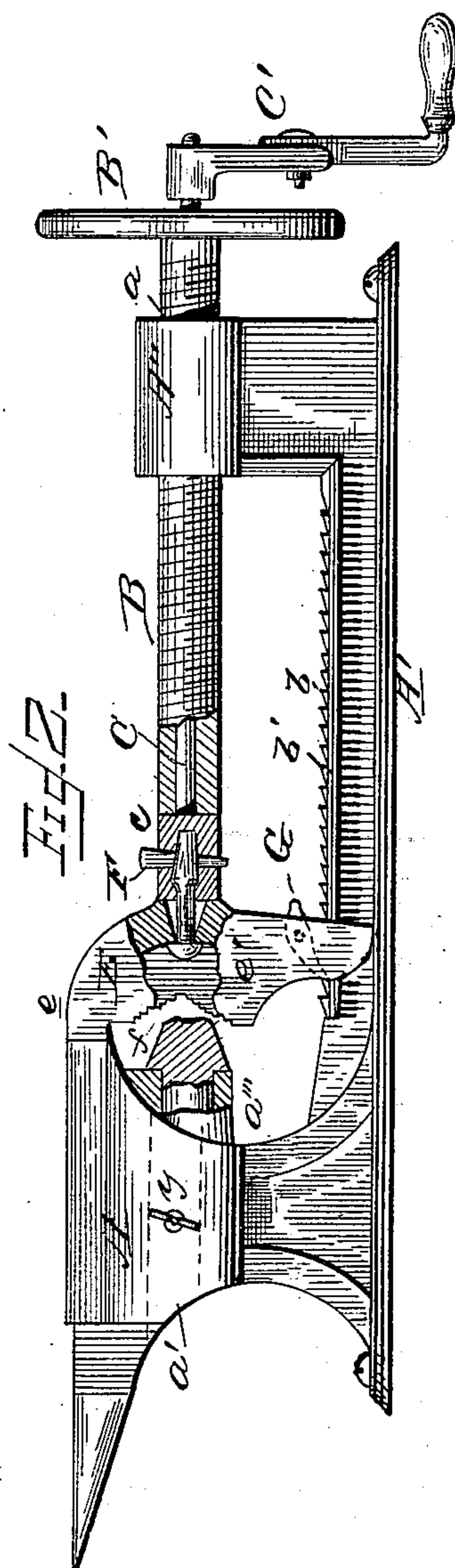


FIG. 6.

WITNESSES
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UNITED STATES PATENT OFFICE.

HIRAM CHILDERS, OF EL DORADO, KANSAS.

COMBINED ANVIL, DRILL, AND VISE.

SPECIFICATION forming part of Letters Patent No. 326,402, dated September 15, 1885.

Application filed July 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, HIRAM CHILDERS, a citizen of the United States of America, residing at El Dorado, in the county of Butler and State of Kansas, have invented certain new and useful Improvements in Combined Anvil, Drill, Vise, and Spoke-Tenoning Machine; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in attachments for anvils, whereby the same may be used as a combined anvil, vise, drill, and spoke-tenoning machine; and my invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side view of my improvement, showing the same when used as a drill or boring-tool. Fig. 2 is a side view, partly in section, showing my invention when used as a vise. Fig. 3 is a perspective view of the vise-jaw detached; and Figs. 4, 5, and 6 are detail views.

A represents the anvil, which is provided with a main bed-plate, A', which bed-plate is provided at its upper end with an upwardly-projecting portion, A'', which is enlarged at its upper end and provided with a female screw-thread, a. The upper portion of the bed-plate A' is provided with a ratchet-bar, b, the inclined faces of which are located nearest the anvil. The anvil beneath its horn has formed therein an opening, a', and the anvil on the sides of this opening is swelled slightly outward, so as to provide for the loss of strength occasioned by forming the afore-said opening. The upper face of the bed-plate, adjacent to the ratchet-bar b, is provided with side flanges, b', which terminate on a line with the heel of the anvil.

The parts of my improvement hereinbefore described are all formed integral with each other, or, in other words, are made of a single casting.

Within the upright portion at one end of the casting passes a hollow screw-threaded shaft, B, which is provided with a hand-wheel, B', for moving said shaft to and from the anvil.

Through the shaft B passes a bar, C, one end of which has attached thereto an adjustable crank-arm, C', while to its opposite end is secured a socket-head, c, having a transverse opening for the reception of a locking-pin.

When the implement is desired to be used as a drill or a boring-tool, a bit or drill is inserted and secured within the socket-head, and a block, D, as shown in Fig. 5, placed against the anvil.

The block D is provided at its lower end with a beveled recess, d, which will bear upon the upper edge of the rack-bar b, and the ends of this block will depend over the same so that the opposite side will bear against the ends of the flanges which are adjacent to said rack-bar. The upper end of the block is beveled, as shown at d', so that its upper end will bear against the heel of the anvil, while its inner side will bear against the projecting portion a''.

When it is desired to use the implement as a spoke-tenoning machine, the cutter-head is attached to the socket-head c, and the spokes are passed through the opening a' in the anvil and made fast therein by means of set-screws y y, which are located on each side of the opening.

In Fig. 3 of the drawings I have shown my improved vise attachment, which at its upper end is provided with a straight-edge, e, which abuts against the heel of the anvil. This sliding jaw E is provided with a back, E', and projecting side pieces, e'. These side pieces, e', are provided with angular recesses f, with serrated edges, and beneath the same with grooves f' f', which fit over the flanges b'. A sliding jaw is attached to the socket-head c by the pin F, and the opening through which it passes is recessed, so as to allow a certain amount of play to said jaw, and for the same purpose the grooves f' are beveled.

Between the side pieces, e' e', is pivotally attached a pawl, G, which engages with the rack-bar b and holds the lower portion of the jaw in place. H, as shown in Fig. 4, represents a pin with a serrated head and shoul-

ders *h*, which rest against the edge of the portion *a'''* of the anvil, said pin being used when it is desired to employ the implement as a pipe-wrench.

5 I am aware that prior to my invention it was not broadly new to combine with an anvil a vise and drill attachment, as shown in the patent dated January 27, 1885, said patent being numbered 311,394, and I make no claim
10 to a device constructed as shown in said patent; but

What I claim as new is—

1. The combination, with an anvil having an opening, *a'*, formed longitudinally above
15 the base of the same, a connecting-portion, *A'*, and upright portion *A''*, carrying a hollow screw-threaded bar which embraces a rotary rod having attached thereto a head with a socket which is adapted to receive implements,
20 substantially as shown, and for the purpose set forth.

2. The combination, with an anvil having an extended base, an upwardly-projecting portion, *A''*, rack-bar, and guide-flanges on the
25 upper portion of said base, the parts being formed integral with each other, said anvil having an opening, *a'*, and a body portion of increased thickness adjacent to said opening, substantially as shown, and for the purpose
30 set forth.

3. In combination with an anvil having an extended base, an upwardly-projecting por-

tion formed on said base opposite the anvil, a jaw having a pawl, *G*, recesses *f''*, and means for attaching the same to a bar which passes
35 through a hollow screw-threaded rod, said rod operating in the upper end of the projecting portion formed on the base of the anvil, so that said jaw will be adjustable, the parts being organized substantially as shown, and for
40 the purpose set forth.

4. The combination, in an anvil having an extended base on which is formed a ratchet-bar and side-extending flanges, of an upright
45 formed integral therewith, having a screw-threaded bearing near its upper end, the hollow screw-threaded shaft provided on one end with a hand-wheel, a rod which passes through said shaft, said rod having attached thereto
50 a tool-holding head, and on the other end a crank-arm, the anvil being provided with an opening, *a'*, which is located on a line with said screw-shaft, and fastening-screws which extend through the sides of said anvil into
55 the opening, the parts being combined and organized substantially as shown, and for the purpose set forth.

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

HIRAM CHILDERS.

Witnesses:

F. S. ALLEN,
DANIEL BOYDEN.