

2 Sheets—Sheet 1.

MACHINE FOR MAKING WHIFFLETREE BOLT BLANKS.

Patented Dec. 7, 1886.



Fig. 7.

WITNESSES:

WITNESSES:
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INVENTOR:

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J. Stracker
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(No Model.)

2 Sheets—Sheet 2.

J. STACKER.

MACHINE FOR MAKING WHIFFLETREE BOLT BLANKS.

No. 353,830.

Patented Dec. 7, 1886.

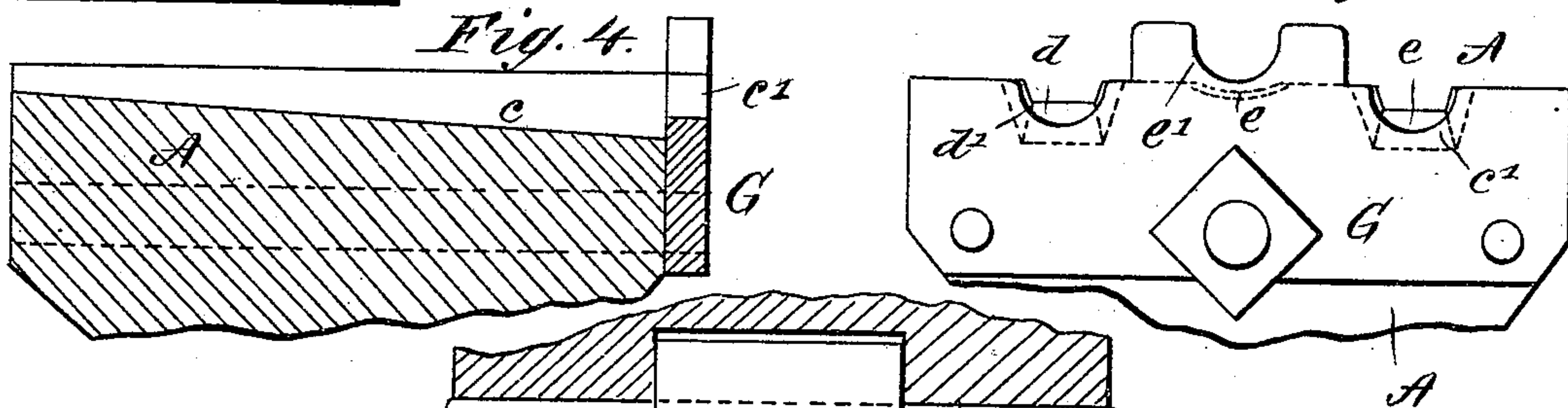
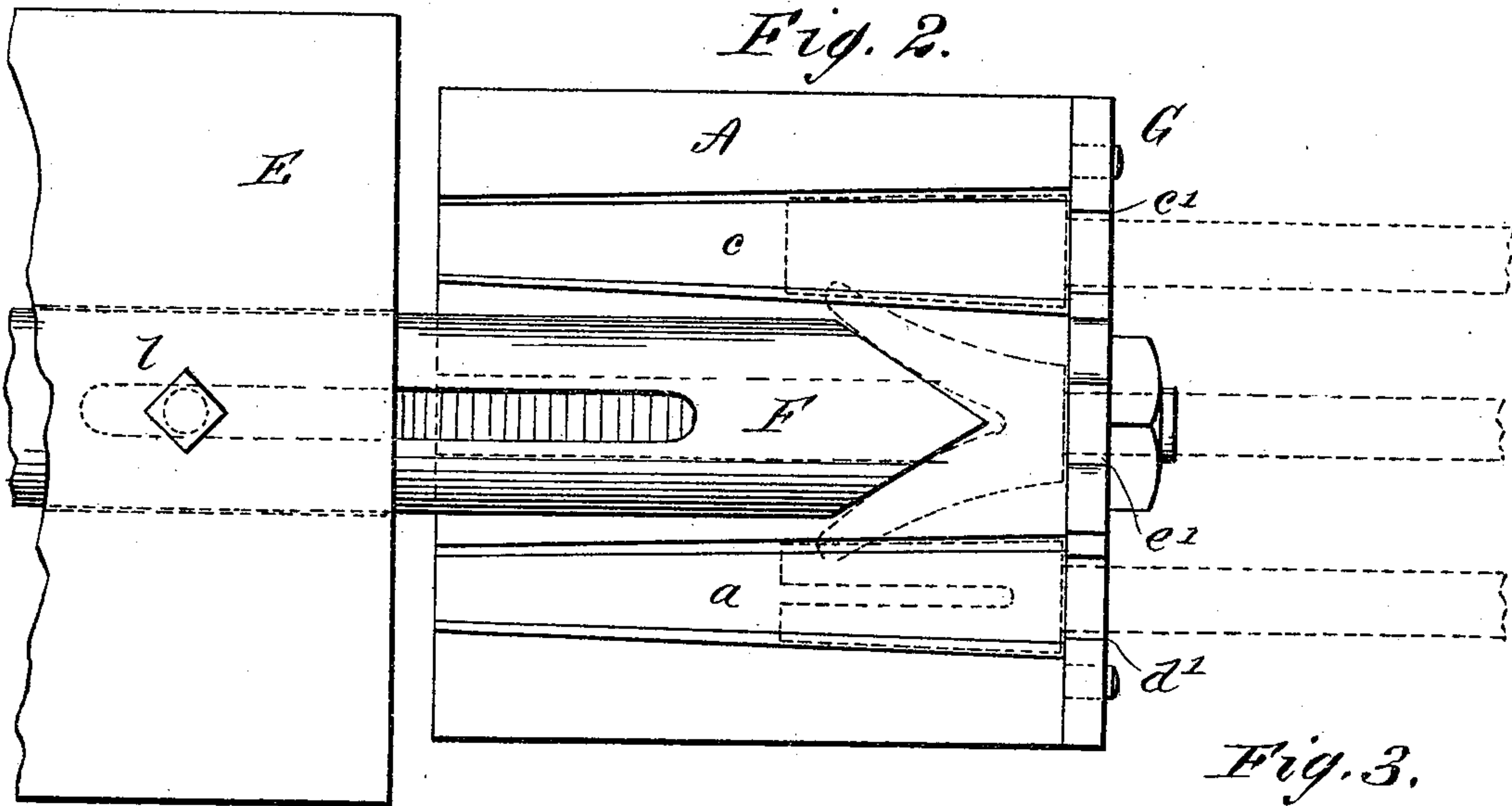


Fig. 5.

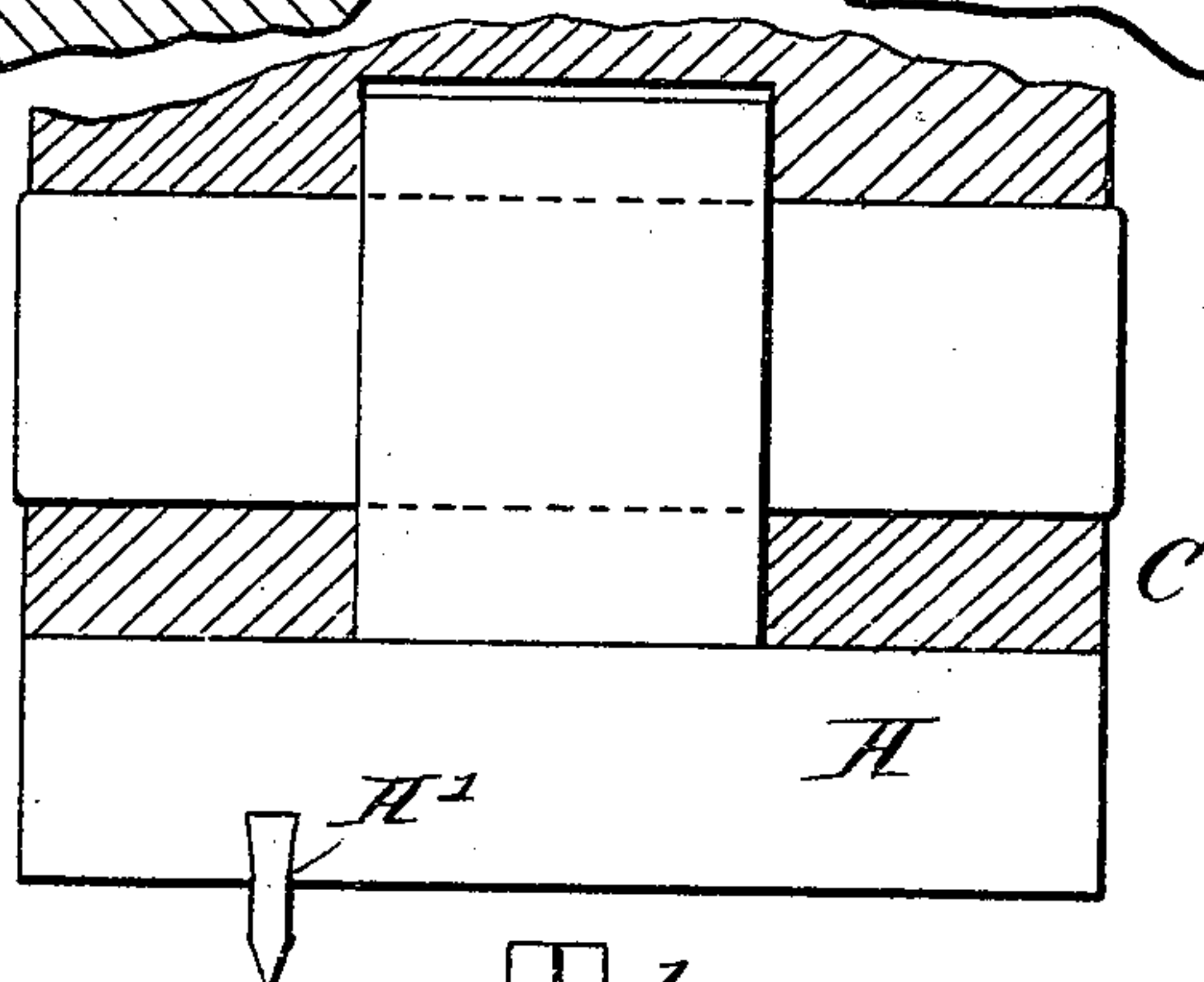
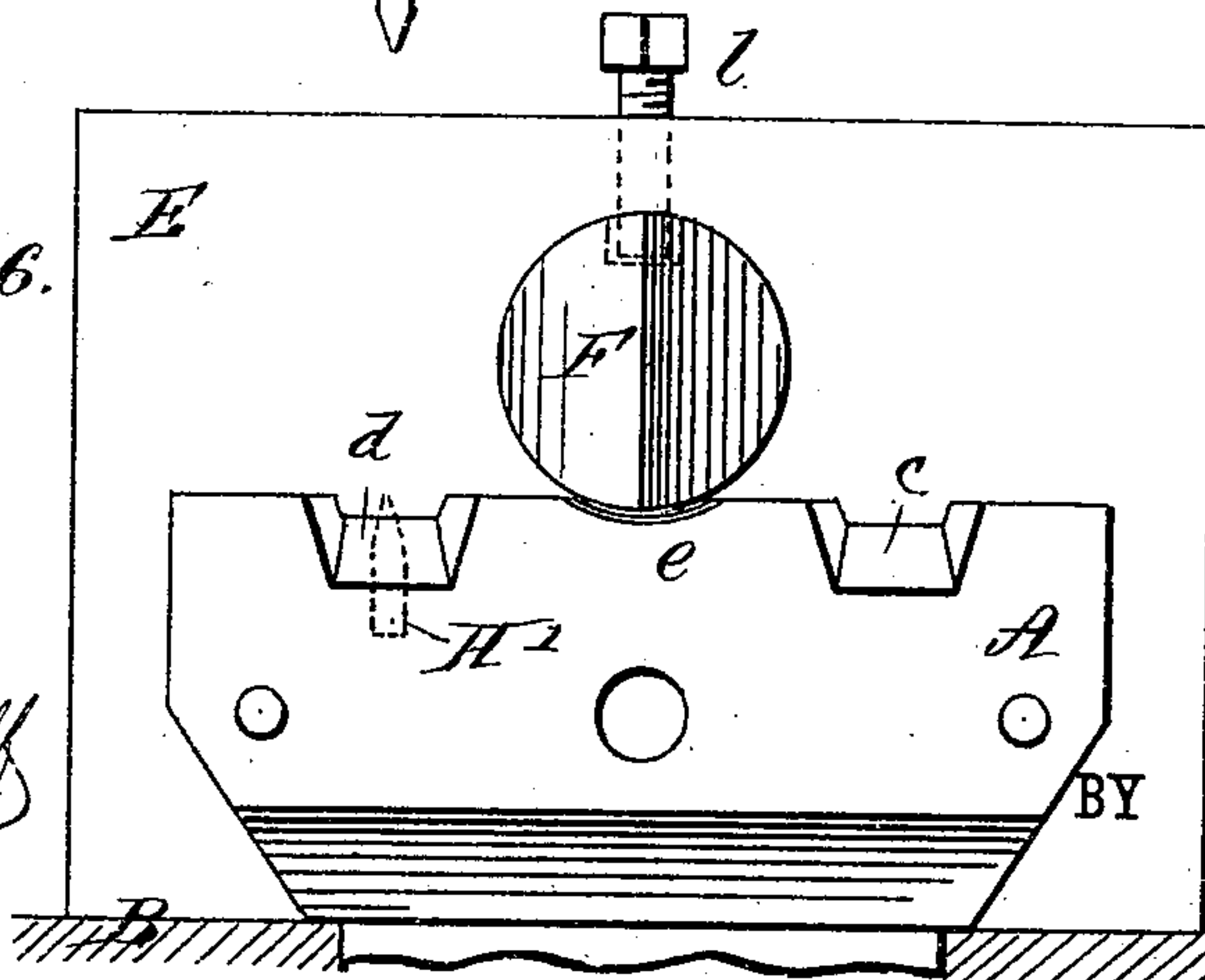


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN STACKER, OF WINSTED, CONNECTICUT, ASSIGNOR TO THE WINSTED
NORWAY BOLT COMPANY, OF SAME PLACE.

MACHINE FOR MAKING WHIFFLETREE-BOLT BLANKS.

SPECIFICATION forming part of Letters Patent No. 353,830, dated December 7, 1886.

Application filed September 16, 1886. Serial No. 213,677. (No model.)

To all whom it may concern:

Be it known that I, JOHN STACKER, of Winsted, in the county of Litchfield and State of Connecticut, have invented a new and Improved Machine for Making Whiffletree-Bolt Blanks, of which the following is a full, clear, and exact description.

My invention relates to a machine or apparatus for making the curved headed bolts used principally in the manufacture of whiffletrees; and the invention consists, principally, of the construction of a new form of anvil or die on which the heads of the bolt-blanks are flattened, split, and spread or opened.

The invention also consists of the means for splitting the bolt, and of the device for opening the same acting in conjunction with the die, so that the three operations may be accomplished with dispatch upon the same machine.

The invention also consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of an ordinary "oliver" having my invention applied thereto, parts being broken away to show the construction. Fig. 2 is an enlarged plan view of a part of the machine, illustrating the action of the opening-bar for opening the bolt after being split. Fig. 3 is a front elevation of the upper part of the die. Fig. 4 is a sectional elevation of the same. Fig. 5 is an enlarged sectional view of the hammer. Fig. 6 is a front elevation with the front die-plate, G, removed; and Fig. 7 shows the form of the bolt-blank the head of which is to be flattened, split, and opened on the machine.

A represents the die, held in a suitable recess upon the main base or anvil B, in position to be struck by the hammer C when the same is brought down by operating the treadle D. Upon the anvil B is secured, back of the die A, the block E, in which is held the opening-bar F, which is given a forward thrust by the upward movement of the hammer C, the lower end, a, of the hammer-arm C' being arranged to strike the plate or flange F', secured on the opening-bar for that purpose. The

opening-bar F is forced backward by a spring, F². (Shown in Fig. 1.) The die A is formed with an inclined seat, c, at one side, and with a similar inclined seat, d, at the other, and with a central and somewhat elevated seat, e, in which latter the opening-bar F operates for opening the split head of the bolt held on said seat, as indicated in dotted lines, Fig. 2. Bolted to the front of the die A is the plate G, formed with the recesses c', d', and e', in line, respectively, with the seats c d e, for holding the head of the bolt-blank N, Fig. 7, while being operated upon in said seats by the hammer C and the opening-bar F.

The hammer C is of about equal width with the die A, and is provided with a face-block, H, of steel, in a slot in which is secured a knife, H', for splitting the head of the blank when placed in the seat d, and the hammer is held in the rotating shaft J, which is provided with the arms J' J². The arm J' is connected by a rope, K, to the treadle D, while the arm J² is connected by the rope L to an overhead spring, (not shown,) so that by forcing downward the treadle D the hammer will be brought forcibly down upon the die A, and by removing the pressure from the treadle the hammer will be returned with considerable force by the reaction of the spring. The downward movement of the hammer permits the spring F² to force the opening-bar F backward, while the upward movement of the hammer forces the bar F forward by means of the hammer-arm C' striking the plate F', as above mentioned.

In operation, the bolt-blank N will be taken from the fire and placed upon the seat c with its head drawn back against the plate G. The hammer C will then be operated to flatten the head of the blank. This done, the bolt will be placed in the seat d and the hammer again operated, which will cause the knife H' to split the flattened head of the blank, and then the blank will be placed upon the elevated central seat, e, in front of the opening-bar F, where it will be firmly held by the plate G, so that the forward thrust of the bar will open and spread apart the members of the split blank, as illustrated in dotted lines in Fig. 2.

The forward end of the opening-bar is made wedge-shaped, as shown clearly in Fig. 2, to properly enter between and spread the parts

of the split blank, and it is held from rotation in the block E by the screw *l* entering the slot *m* in the bar, and the plate F' is made adjustable upon the bar by means of the two jam-nuts *k k*, so that the distance of movement of the bar may be regulated, and an adjustable stop-plate, *p*, may be used for limiting the backward movement of the bar caused by the action of the spring F².

10 Instead of placing the knife H' in the hammer-face H, I may place it in a slot made in the seat *d* of the die A, as shown in dotted lines in Fig. 6, and accomplish the same result.

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

1. The die A, formed with the seats *c d*, and elevated seat *e*, substantially as described.

20 2. The combination, with the die A, of the opening-bar F, substantially as described.

3. The die A, provided with seats, in combination with the plate G, provided with recesses corresponding with the seats in the die, substantially as described.

25 4. The hammer C, provided with the knife H', substantially as and for the purposes set forth.

5. The combination, with die A and hammer C, of the knife H', substantially as and for the purposes set forth. 30

6. The die A, having two side seats, *d e*, and a central elevated seat, *e*, in combination with the hammer C, having a knife attached thereto in line with one of the side seats, substantially as described. 35

7. The die A, having seat *e*, in combination with the plate G, and the reciprocating opening-bar F, substantially as described.

8. The combination, with the hammer C, held in a rotary shaft, J, of the opening-bar 40 F, arranged to be shoved forward by the upward movement of the hammer, substantially as described.

9. The die A, formed with two seats and an elevated seat, in combination with the hammer 45 C, knife H', and the opening-bar F, arranged to be forced forward by the upward movement of the hammer, substantially as described.

JOHN STACKER.

Witnesses:

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GEORGE S. ROWE.