

(No Model.)

H. B. TODD.
METAL CUTTER.

No. 447,849.

Patented Mar. 10, 1891.

Fig. 1.

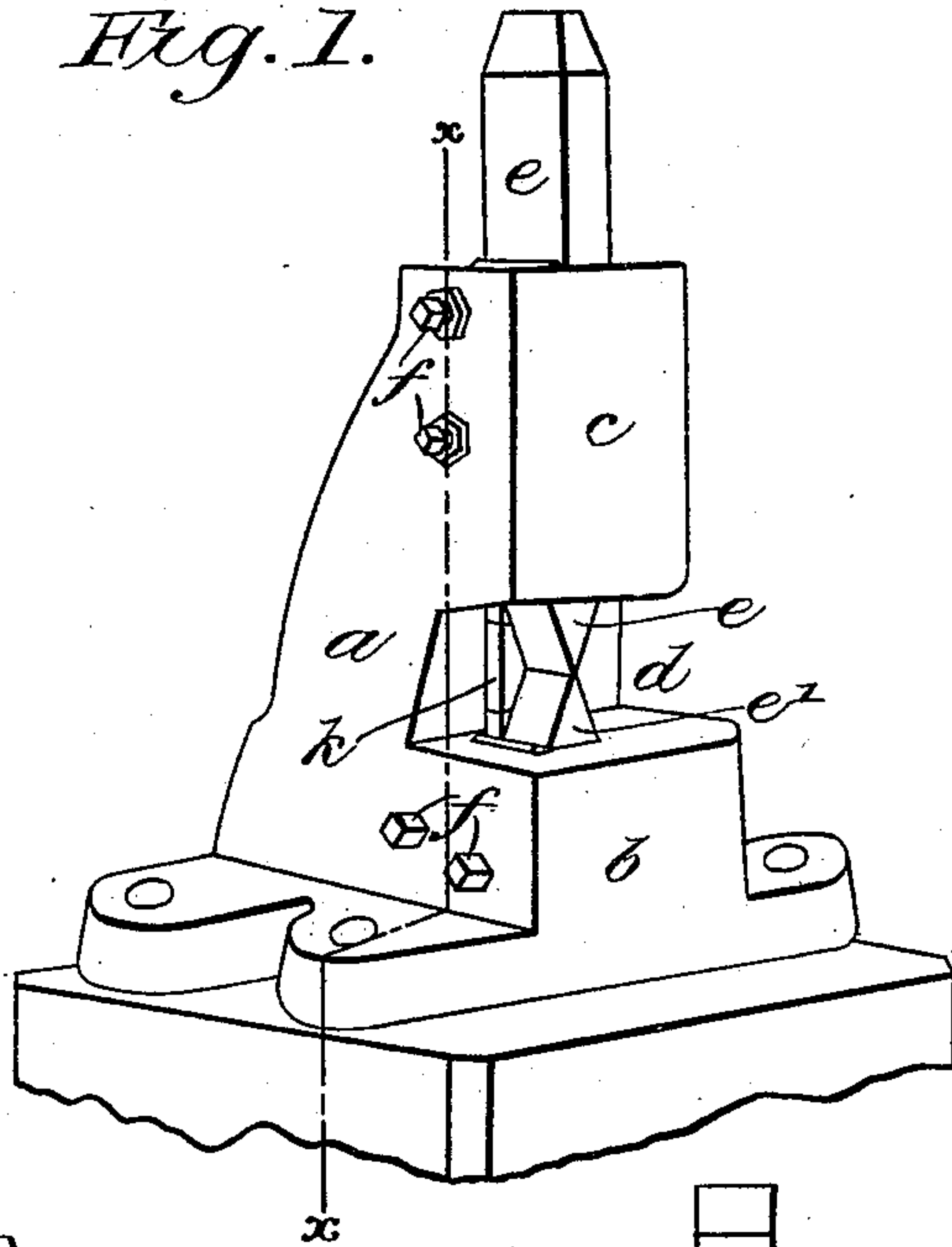


Fig. 2.

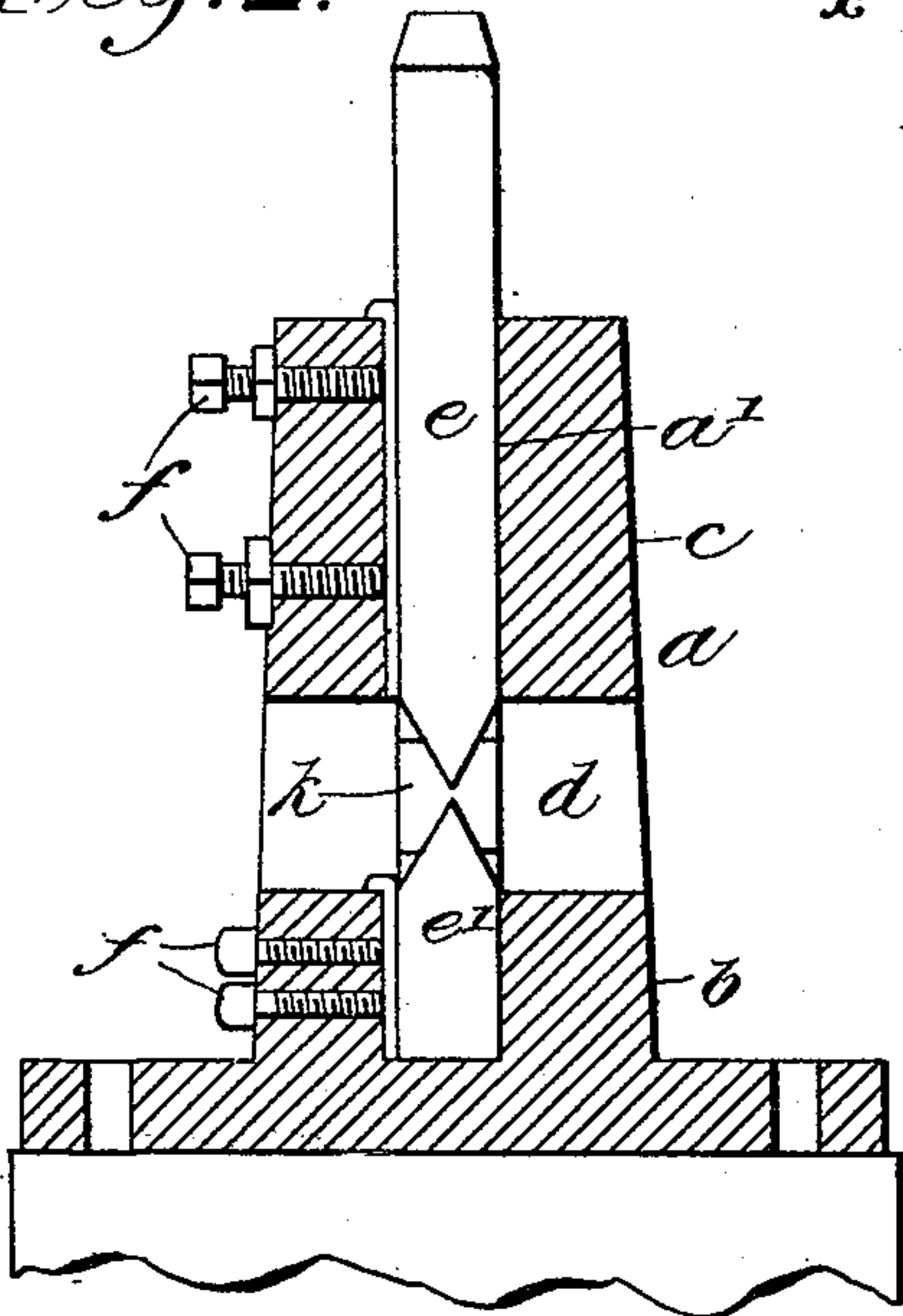
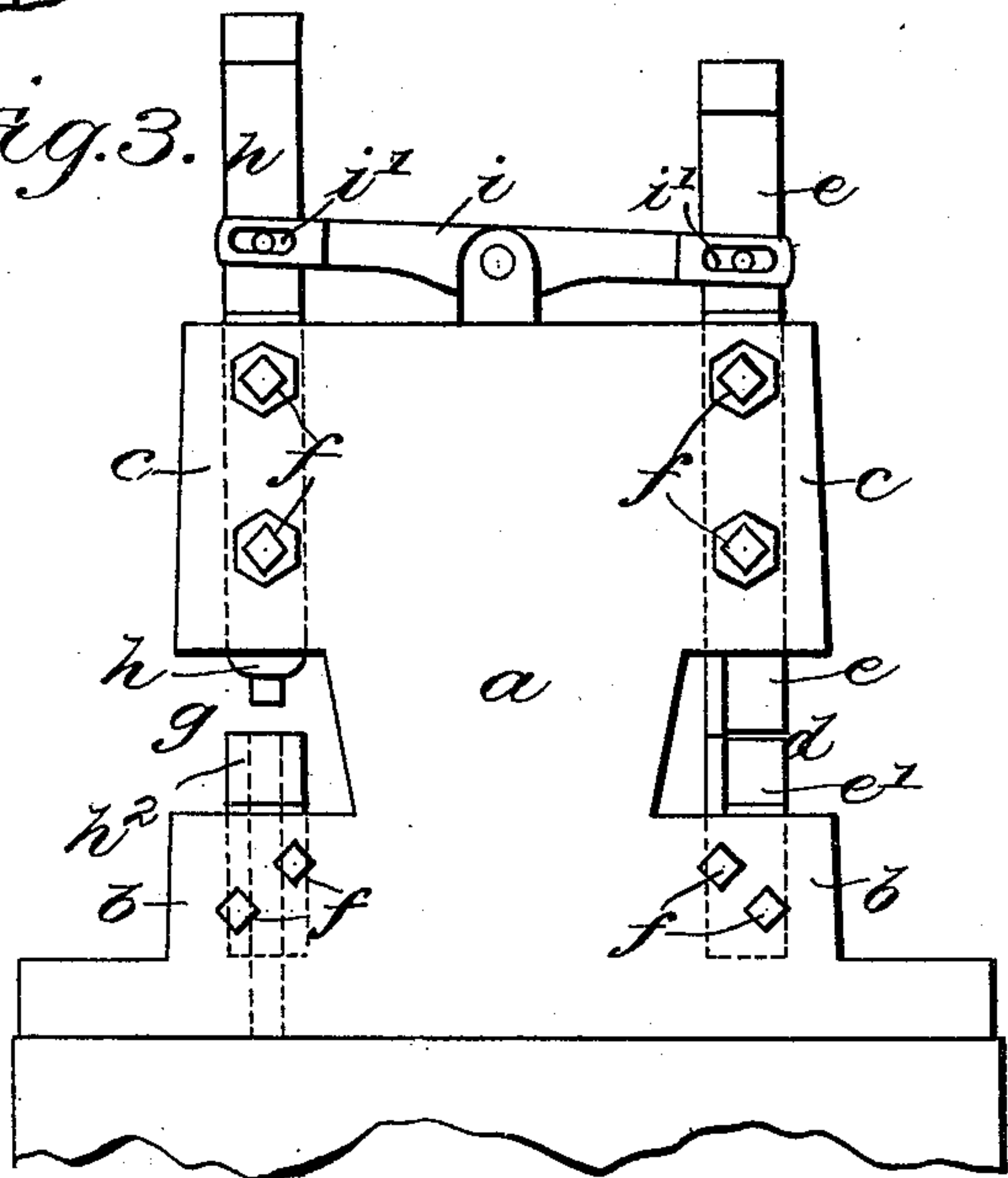


Fig. 3.



WITNESSES:

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HENRY B. TODD, OF MERIDEN, CONNECTICUT.

METAL-CUTTER.

SPECIFICATION forming part of Letters Patent No. 447,849, dated March 10, 1891.

Application filed January 10, 1891. Serial No. 377,324. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. TODD, of Meriden, in the county of New Haven and State of Connecticut, have invented certain
5 new and useful Improvements in Metal-Cutters, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

The object of my invention is to provide a
10 machine by means of which a piece of metal, as a rod, bar, or strip of sheet metal of a thickness too great to be cut by the ordinary cutters or pinchers in common use, may be readily and quickly cut; and to this end my
15 invention consists in the combination of the devices by means of which this result may be accomplished, and in details of the several parts of the machine, as more particularly hereinafter described, and pointed out in the
20 claims.

Referring to the drawings, Figure 1 is a detail perspective view of one form of my metal-cutting machine. Fig. 2 is a detail view in vertical section on plane $x x$ of Fig. 1. Fig.
25 3 is a detail view in side elevation of a machine combining two forms of cutting implements.

In the accompanying drawings the letter a denotes the frame of the machine, having a
30 base b and an upright part c . This frame is preferably of cast metal, made in one piece, and with a recess d on one edge of the upright part, the lower floor of the recess forming a cut or base, and the overhanging part
35 of the frame having a vertical socket a' , in which a cutting-tool e is supported. In case the machine is to be used as a cutting-off tool the lower cutter e' is secured in a socket formed in the floor of the recess, and it may
40 be held in this socket by means of the clamp-screws f , that are located in threaded sockets in the body of the frame.

Directly opposite to the lower cutter, and with its cutting-edge in the same horizontal
45 plane, is arranged the upper cutter e , that is capable of longitudinal movement in its socket. This cutter is fitted so as to have proper freedom of movement within the socket, and is adjusted to the proper vertical plane, as by
50 means of a thin shim of metal slipped into the said socket, and the movement of the cutter may also be controlled by means of

clamp-screws, the ends of which project into the socket and against the side of the cutter or a shim that is located between the side of
55 the cutter and the ends of the screws. The frame of the machine is made sufficiently strong to withstand the shock of a comparatively heavy blow delivered upon the head of the cutting-tool e , as by means of a hammer
60 or like implement, and to hold the chisel or like cutting-tool against any sidewise movement under the shock of the blow. By means of this device an accurate adjustment of the two cutting-tools with respect to each other is
65 insured, and the upper cutter is also held so that in cutting it enters the metal without any rocking movement or sidewise play, such as follows when a cold-chisel or the like is held in the hands of a workman, and as a result
70 of this improved means an efficient and durable metal-cutting implement is provided.

In the form shown in Fig. 1 the two cutting-edges are directly opposed to each other; but the cutting implements may be provided with
75 a chisel-edge, so as to give a shearing cut, or a punch may be used that gives also a shearing cut, and in any event the mechanism is comparatively cheap, simple, and strong in construction.

The frame or body a of the machine may be so constructed as to provide for a recess g on the side opposite to that in which the cutting-off tool works, and on this side a punch h is arranged in a vertical socket, the female die
85 h' being secured in a socket in the floor of the recess in proper alignment with the reciprocating punch h . A lever i is pivotally supported on the frame of the machine, and is connected to the punch h by a pin passing
90 through the punch and a slot i' made in the forked end of the lever. The outer end of the lever may be left free, or it may in like manner be attached to the chisel, the object of the lever being to provide means for with-
95 drawing the punch from the work after a hole has been made by driving the punch through the material, as with a hammer.

In the use of most cutting tools or chisels usable in this machine, a stop device of some
100 kind to prevent the contact of the opposing cutting-edges in use is desirable. One form of stop k is shown in Fig. 1, and it consists of a shoulder formed near the cutting-edge or

point of the chisel, preferably on both tools, and a block, that may or may not be integral with the chisel, arranged to come into contact with the opposite shoulder and keep the cutting-edges slightly apart. In the preferred form the shoulders are made on both the opposing tools, and the stop-block is a separate piece.

I claim as my invention—

10 1. In combination with a supporting-frame, a cutting-tool held in a socket in the frame and a reciprocating cutting-tool supported in a socket in alignment with the lower tool and having its outer end adapted and arranged
15 to receive a blow from a hammer or like tool, all substantially as described.

2. In combination, a tool-supporting frame, a work-holding table or base, a reciprocating cutting-tool arranged in a socket in the frame
20 and adapted to receive on its upper end a blow from a hammer or like tool, all substantially as described.

3. In combination, a tool-supporting frame, a work-holding table or base, a reciprocating

cutting-tool arranged in a socket in the frame 25 and adapted to receive on its upper end a blow from a hammer or like tool, and a stop device that limits the downward movement of the cutting-tool, all substantially as described. 30

4. In combination, a tool-supporting frame, a work-holding table, a metal-working tool supported in a socket in the table, and a reciprocating cutting-tool supported in a socket in the frame in line with the lower tool, all 35 substantially as described.

5. In combination, a tool-supporting frame, a reciprocating punch with its opposing die arranged on one side of the frame, a reciprocating cutting-off tool arranged in a socket on 40 the opposite side of the frame, and a punch-withdrawing lever pivotally supported on the frame, all substantially as described.

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Witnesses:

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JNO. B. HALL.