

C. E. JOHNSON.
KEY CUTTING MACHINE.
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969,702.

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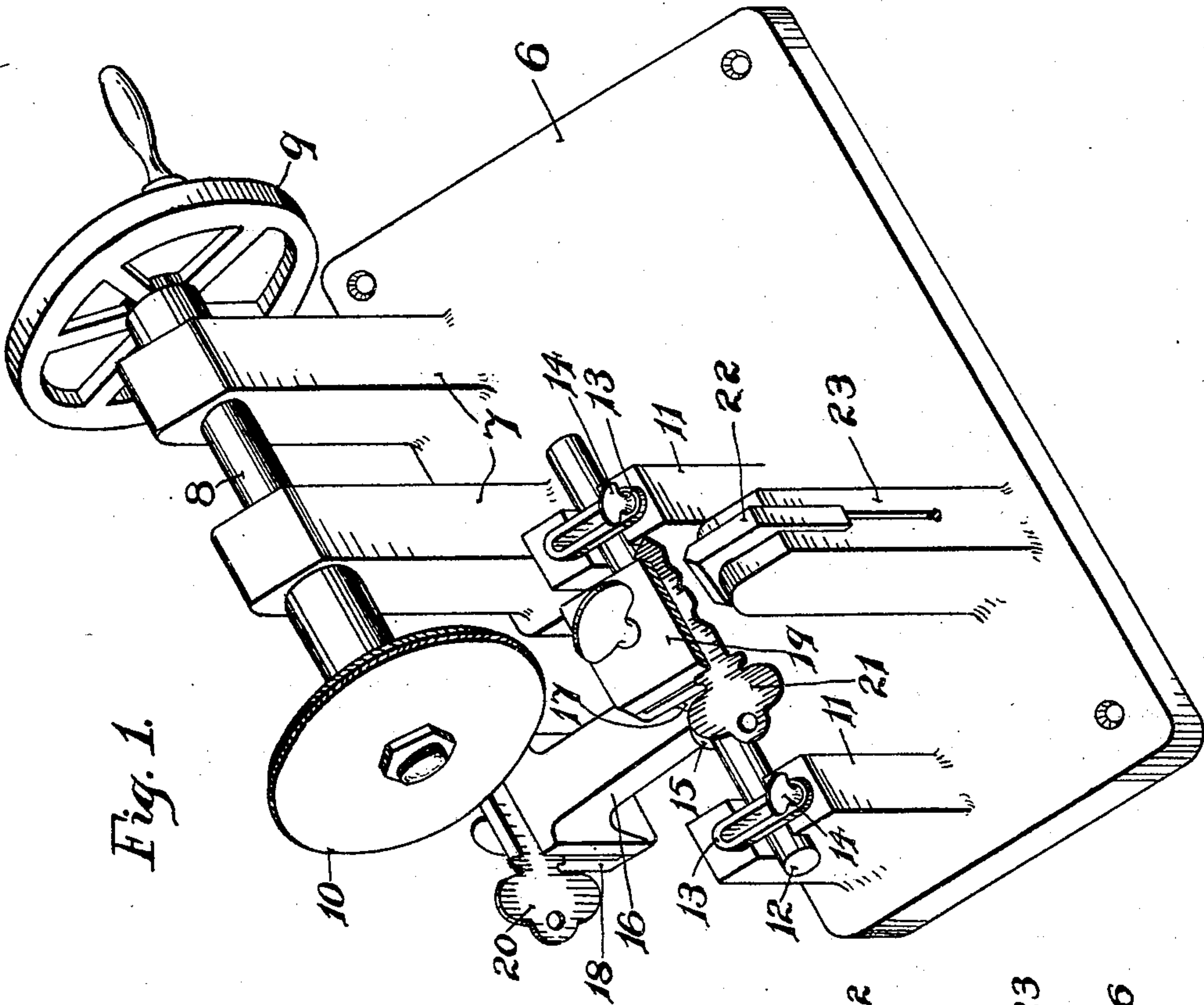


Fig. 1.

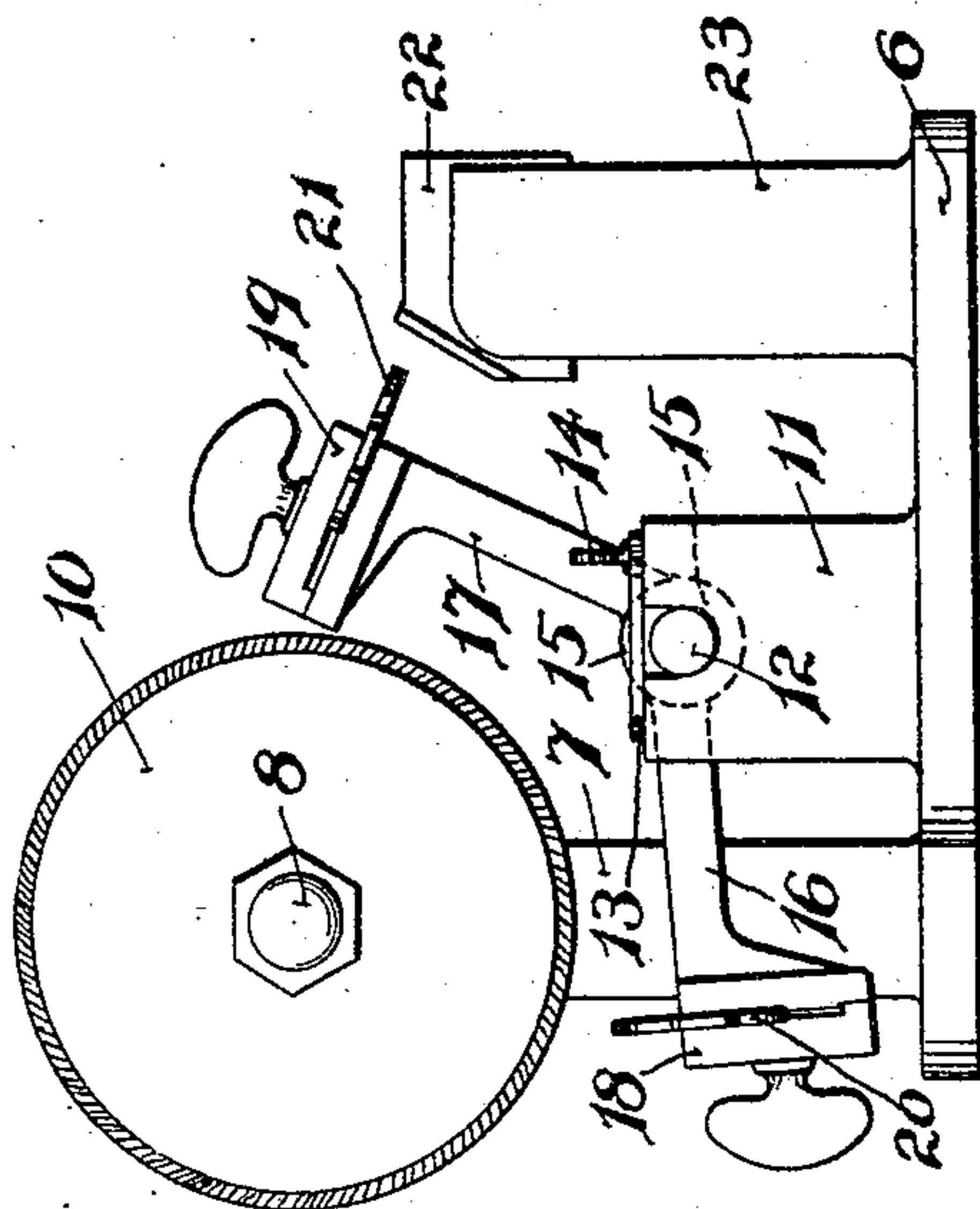


Fig. 2.

Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

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KEY-CUTTING MACHINE.

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To all whom it may concern:

Be it known that I, CHARLES E. JOHNSON, a citizen of the United States, and a resident of New Britain, in the county of Hartford and State of Connecticut, have invented a new Improvement in Key-Cutting Machines, of which the following is a specification.

My invention relates to the class of devices used for cutting notches in the edge of key blanks, more especially those used in what are commonly known as pin tumbler locks, and the object of the invention is to provide a machine of this class extremely simple in its construction and in its manner of operation, and also having other novel features of advantage and utility.

One form of device embodying my invention and in the use of which the objects sought may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a key cutting machine embodying my invention. Fig. 2 is an end view of the same.

There is a demand at the present time for a machine in which keys, more commonly those used in locks of the pin tumbler type, may be readily reproduced by those not especially skilled in such work, and it is to meet this demand and at the same time provide a machine of extremely simple construction that I have devised the present invention. Such a machine is described herein and shown in the accompanying drawings, in which the numeral 6 indicates the base of the machine, constructed of any suitable material, preferably metal, and having cutter bearing posts 7 projecting upwardly therefrom. A cutter shaft 8 is mounted in bearings in the posts 7, and this shaft is provided with any suitable means for rotating it, as a pulley 9 or handle secured thereto, as shown in Fig. 1 of the drawings. The opposite end of the shaft supports a cutter 10 in the form of a disk, the edge of which may be constructed in any suitable manner to cut the metal composing the blank from which a key is to be produced. In the preferred form of construction the edge of this cutter will be beveled from the center in opposite directions, the angle formed at the meeting line of the beveled surfaces being more acute than the angle at the bottom of the notches to be formed in the edge of the key blank.

A rocker is pivotally mounted in rocker posts 11 also rising from the base, each post having at its upper end a bearing preferably consisting of a slot extending into the end of the post. A rocker shaft 12 is located in these bearings and is removably retained therein by means of retaining bars 13 closing the mouth of the slots, these bars having slots through which screws 14 project to removably hold the shaft in place and at the same time allow for endwise movement thereof. The rocker, in addition to the shaft, includes a hub 15 rigidly secured to the shaft and having a blank supporting arm 16 and a pattern supporting arm 17 extending therefrom, these arms diverging from each other and extending to opposite sides of a diametrical line through the cutter 10. A blank clamp 18 is supported at the outer end of the arm 16 and a pattern clamp 19 is supported at the outer end of the arm 17. These clamps may be of any suitable construction to hold a blank 20 and a pattern 21. A gage 22 is supported at the upper end of a gage post 23 also rising from the base of the machine, the edge of this gage being beveled to be received in the notches in the edge of the pattern 21 and thus determine the position of the blank to reproduce thereon the edge appearing on the pattern.

It may be observed that the construction is such that the rocker shaft 12 may be readily moved endwise, and that it is therefore not essential that the pattern shall be rocked away from the gage for the formation of each notch, but that the point of the pattern may be brought into contact with the gage and the pattern then moved along the gage in contact therewith and a reproduction of its edge will be obtained on the edge of the blank.

The several posts bearing the shafts and gage are preferably integrally formed with the base, but this and other details of construction may be departed from to a greater or lesser extent, and I do not therefore limit my invention and the scope of the following claims to the foregoing description and illustration of the preferred form in which it has been embodied.

I claim—

1. A cutter with means for operating it, a rocker supported appurtenant to the cutter and having branching arms, a blank

holder supported on one of said arms and a pattern holder supported on the other arm, said holders in the cutting operation being located on opposite sides of a plane coincident with the axis of the cutter, and
5 a gage arranged to cooperate with a pattern held in the pattern holder.

2. A cutter with means for operating it, a rocker supported in cooperative relation
10 with respect to the cutter and including branching arms, a blank holder located on one of said arms and a pattern holder located on the other arm, said holders in the cutting operation being positioned in the
15 plane of the cutter and on opposite sides of a line extending diametrically therethrough, means for moving the rocker laterally of the cutter, and a gage supported in position to receive a pattern secured in the rocker.

20 3. A cutter with means for operating it, a rocker supported in cooperative relation with respect to the cutter and including a rocker shaft, arms branching from said shaft, a blank holder and a pattern holder
25 supported one on each of said arms, said holders in the cutting operation being located in the plane of the cutter and at opposite sides of a line passing diametrically therethrough, bearings in which said shaft
30 slides, means for moving the rocker shaft in said bearings laterally of the cutter, and a gage supported in position to receive a pattern held by one of said holders.

4. A cutter with means for operating it,
35 bearings for a rocker, a rocker including a shaft mounted in said bearings, arms branching from said shaft, a blank holder and a pattern holder supported one on each of said arms, said holders in the cutting
40 operation being supported by said arms in the plane of the cutter and on opposite sides

of a line passing diametrically therethrough, means for removably securing the shaft in position and arranged to permit free end-
45 wise movement thereof, and a gage supported to receive a pattern located on one of said holders.

5. A cutter with means for operating it, bearings including slots to receive a rocker shaft, means for closing the ends of the
50 slots, a rocker including a shaft located in said slots and movable endwise therein, arms branching from said shaft, holders supported on said arms on opposite sides of the cutter, and a gage supported in posi-
55 tion to receive a pattern located in one of said holders.

6. A base, posts rising therefrom, a cutter shaft mounted in said posts, a cutter sup-
60 ported on said shaft, means for operating the shaft, rocker bearing posts rising from the base and having slots in their upper end, a rocker including a shaft removably located in said slots and arms branching to
65 opposite sides of the cutter, a holder located on each of said arms and on opposite sides of the cutter one from the other, and a gage supported in position to receive a pattern located in one of said holders.

7. A cutter with means for operating it,
70 a rocker supported appurtenant to the cutter and having branching arms located in a plane passing through the cutter flatwise thereof, a blank holder supported on one of the arms and a pattern holder supported on
75 the other arm, and a gage arranged to cooperate with a pattern held in the pattern holder.

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Witnesses:

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