

(No Model.)

J. HECKEL.  
HEEL CUTTING DIE.

No. 574,902.

Patented Jan. 12, 1897.

Fig. 1.

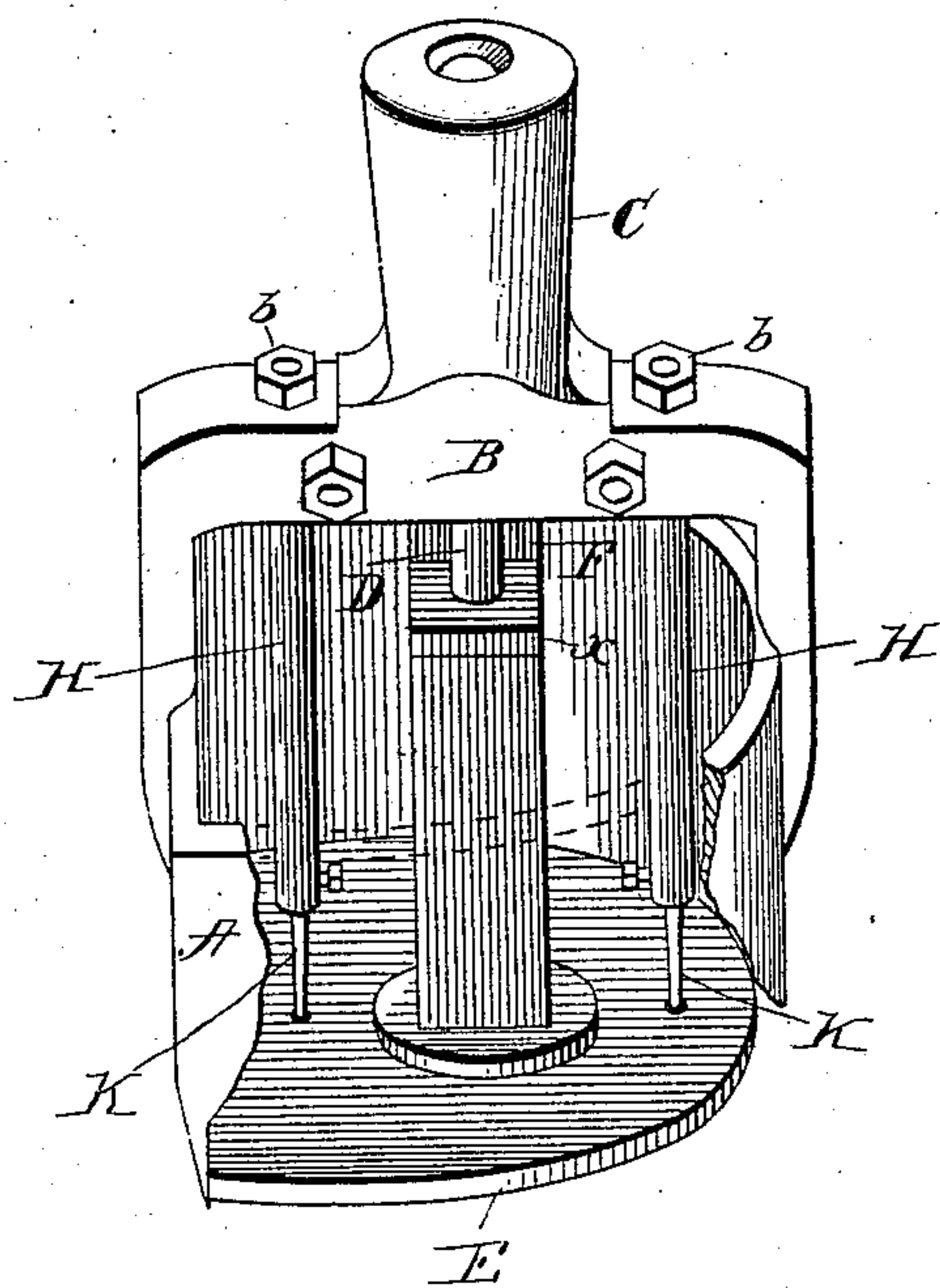


Fig. 2.

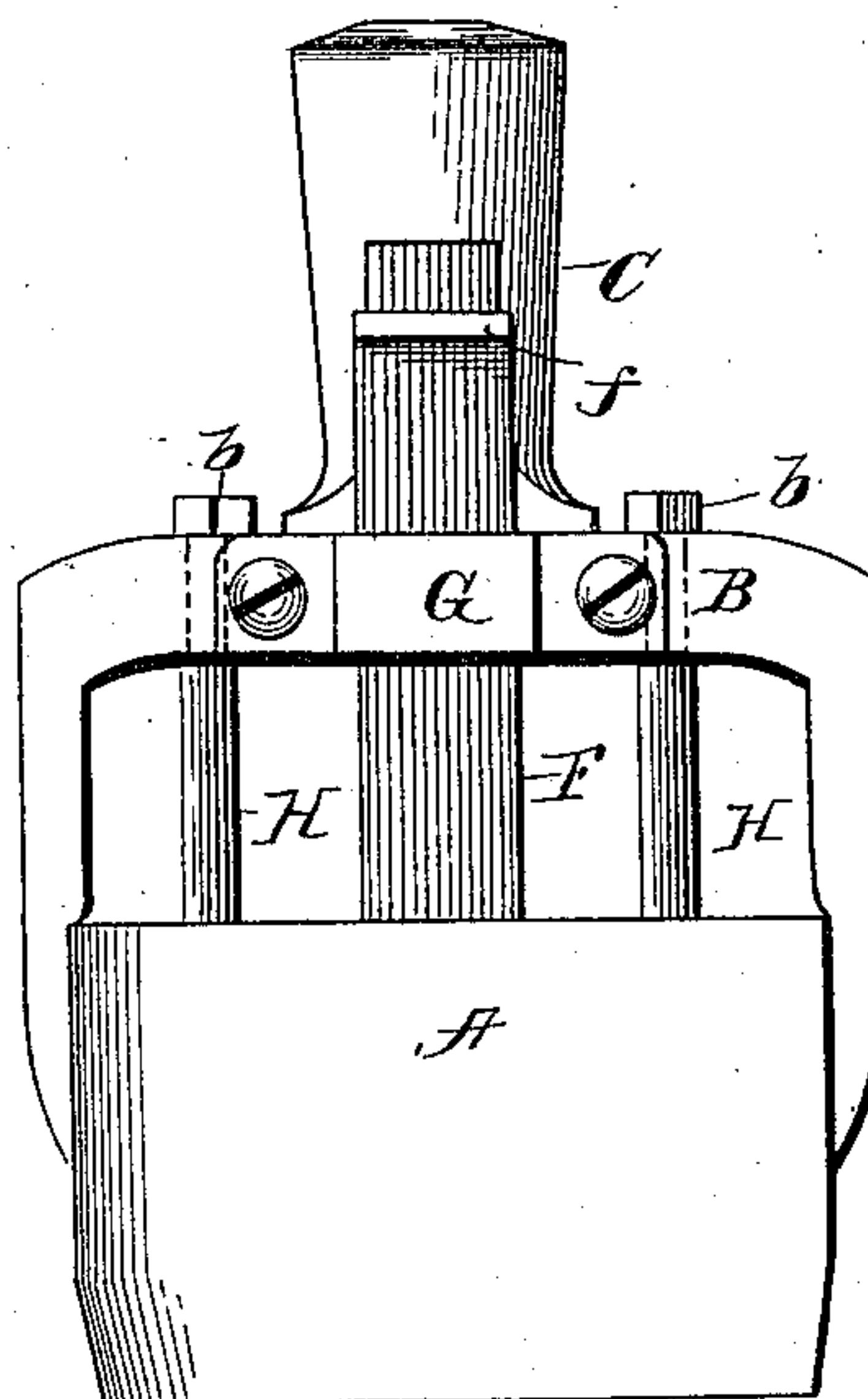
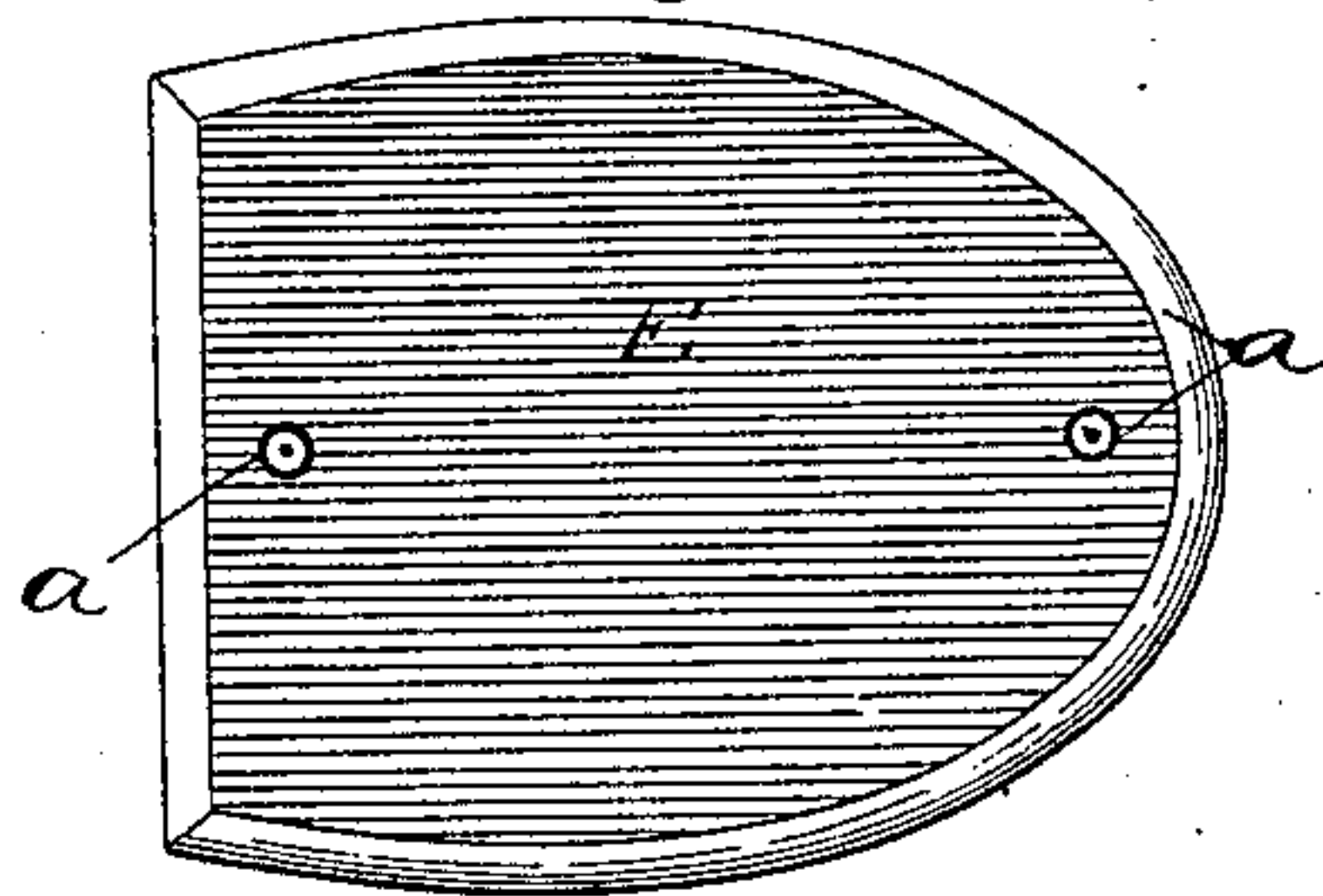


Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN HECKEL, OF ROCHESTER, NEW YORK.

## HEEL-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 574,902, dated January 12, 1897.

Application filed December 2, 1895. Serial No. 570,817. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HECKEL, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Heel-Cutting Dies; 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

10 which it appertains to make and use the same.

The invention relates to heel-cutting dies; and it consists in constructing a die with a cutting edge for cutting out lifts of leather or other suitable material for a heel of a boot or shoe and provided with a movable follower inside the die, which acts both as an adjustable bed for the die to support a suitable number of lifts for a heel as they are successively cut and also to eject the heel from the die when the desired number of lifts are cut, and is also provided with two pick-ups for receiving and retaining a sufficient number of lifts to form the heel.

The objects of the invention are to produce a die that will be cheap, practical, and durable and that will obviate the customary use of springs and screw-thread rods, as has heretofore been usually the practice in the art. I attain these objects by the mechanism hereinafter described, and illustrated in the accompanying drawings, forming a part of this specification, and on which—

Figure 1 is a perspective view of one side of the die with a part of the shell broken away to show the follower and pick-ups. Fig. 2 is a vertical elevation of the opposite side. Fig. 3 is a bottom plan view.

Like letters of reference indicate corresponding parts in the different views.

40 A is the die, which consists of a case or shell of the general configuration of the heel of a boot or shoe, and its lower edge is sharpened or formed as a cutting edge in a well-known manner. An arch-shaped brace B is provided near its upper end and at the apex thereof is a vertical arm, handle, or post C, which is to receive the impact of a hammer or mallet to drive the die into and through the material to be cut. The arm C is preferably hollow or tubular and a round rod or arm D, carrying a follower and its shank E, is mounted loosely therein. The follower E

at its lower end is of the same shape as the inside of the die and forms a bed for the lifts as they are successively cut. On one side of the follower E, as well shown in Fig. 2, is a pusher F, which is brazed, welded, or riveted to the shank of the follower and is provided at its upper end with an offset or enlarged part *f*, for a purpose which will be hereinafter explained. 60

A loop G, secured to the arch B or formed as a part thereof, forms a way for the pusher F and serves to hold it in place.

Instead of making the arm C hollow or tubular, the arm or handle may be solid and the shank of the follower hollow or tubular and the rod would then be movable in the shank of the follower instead of the hollow or tubular arm or handle. In other words, the parts so far as they relate to the movable follower are simply reversed. 70

Depending from the arch-shaped brace B are rods or arms H, one on each side of the center thereof. In the present instance the rods H are passed through holes or apertures in the top of the brace B and secured in place by nuts *b*. These rods are shouldered on the under side, where they come in contact with the brace B, and where the nuts *b* are screwed home hold the rods firmly in position. 80

The lower ends of the rods H are provided with sharpened or attenuated pick-ups K for retaining the lifts as they are cut. I have shown them as inserted in tapped holes in the ends of the rods and held by set or thumb screws, but they may be inserted in any well-known manner or may even be made as a part of the rods. 85

The follower itself, which forms the bed for the gathered lifts, is perforated at or near the rear and also at or near the front or breast of the heel, as shown at *a*, for the passage of the pick-ups K therethrough. 90

The mode of using the die is as follows, viz: The stock is laid on a suitable table, and the upper side of it is preferably covered with a coat of cement or suitable paste. I prefer next to cut an unpasted lift and then by a blow with a hammer or mallet cut successive lifts from the pasted stock until enough have been cut and pasted together in the die to form a heel of the desired height. When the lifts are thus built up, a tap or blow on the 100



end of the projection on the pusher F forces the follower E against the built-up heel and ejects it from the die. It will thus be seen that the pick-ups K retain the lifts in the die until enough are assembled for a heel and that the follower E acts both as an adjustable bed for the die and an ejector for the heel.

It will be apparent that instead of using the die by hand—that is, with a mallet or hammer—it might be operated by suitable mechanism, as a treadle, for example, or from some prime motor through the intervention of a toggle-lever or other proper mechanism.

On the rod of the follower, as clearly shown in Fig. 1, a washer or washers  $x$  are provided, so that by the insertion or removal of one or more of said washers or the use of thicker or thinner ones heels of different heights may be cut and built up.

Minor changes in the details of construction within the scope of the invention may be made without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A hollow heel-cutting die provided with a movable follower with a rigid stem or shank and a rigid base arranged therein and normally adjacent to the cutting edge of the die,

and two fixed attenuated pick-ups for the lifts one near the breast and the other near the rear of the heel and which project through the follower, substantially as described.

2. A heel-cutting die provided with a movable follower therein, which forms a bed for the die as successive lifts are cut, and also an ejector for the built-up heel, one arm to receive the impact of a mallet or hammer for operating the cutter and a separate vertical arm arranged outside of and parallel with the first arm for operating the ejector, substantially as described.

3. A heel-cutting die having a movable follower therein, forming a bed for the die as successive lifts are cut, and also an ejector for the built-up heel, and an adjusting-washer on the shank of the follower, substantially as described.

4. A heel-cutting die having a movable follower therein a pusher for the follower, an adjusting-washer on the shank of the latter, and a projection for holding the pusher, substantially as described.

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

JOHN HECKEL.

Witnesses:

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CLARENCE T. HESS.