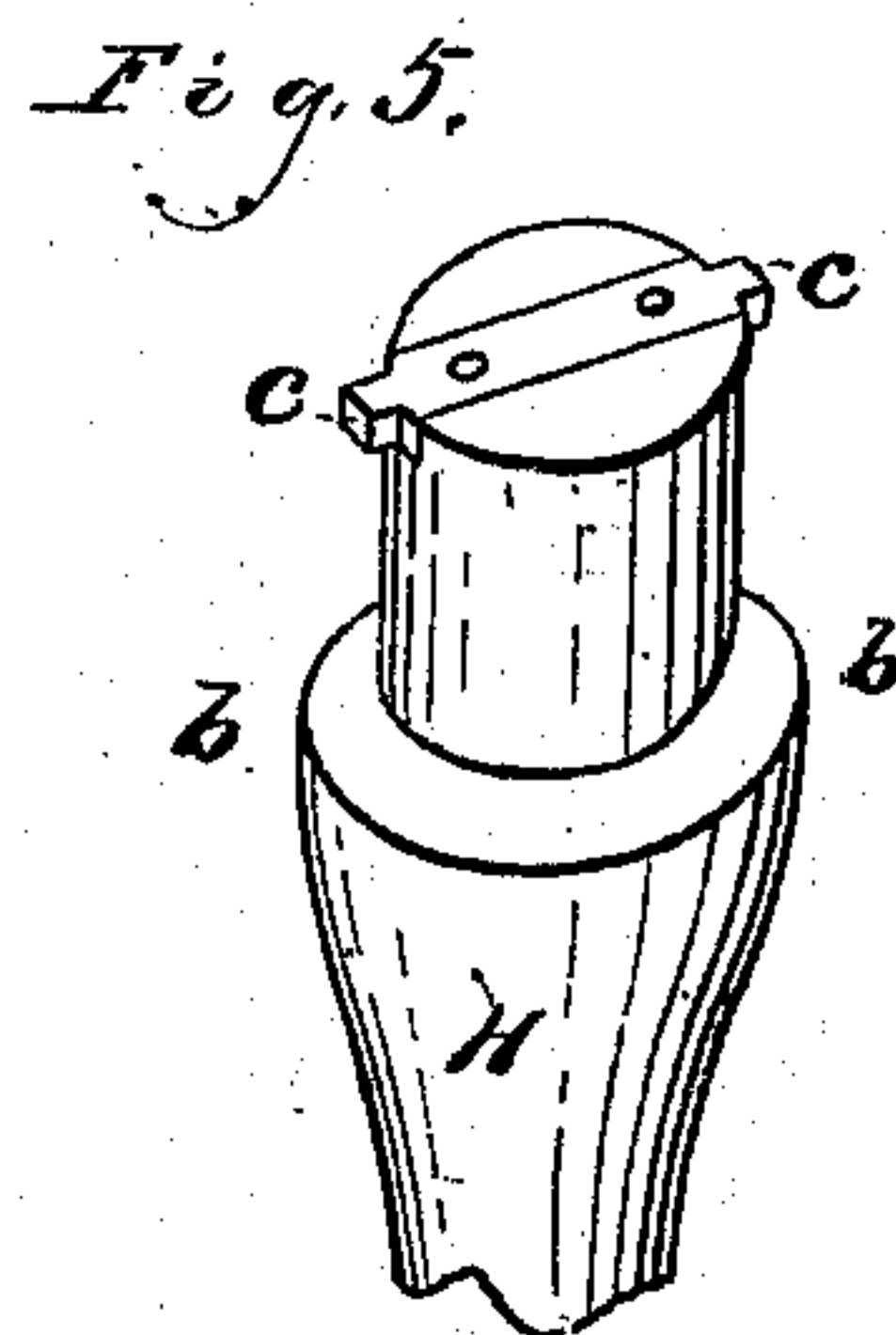
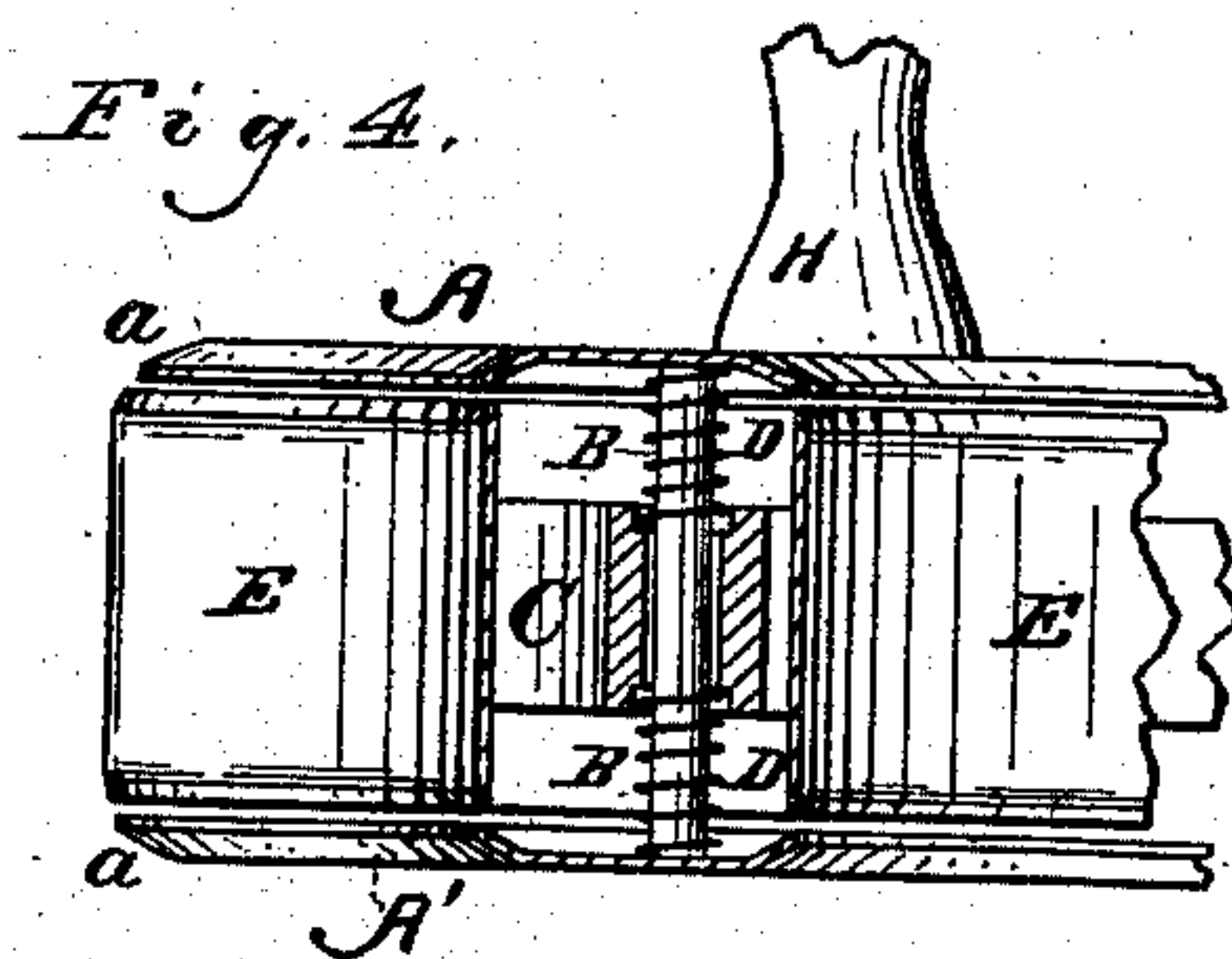
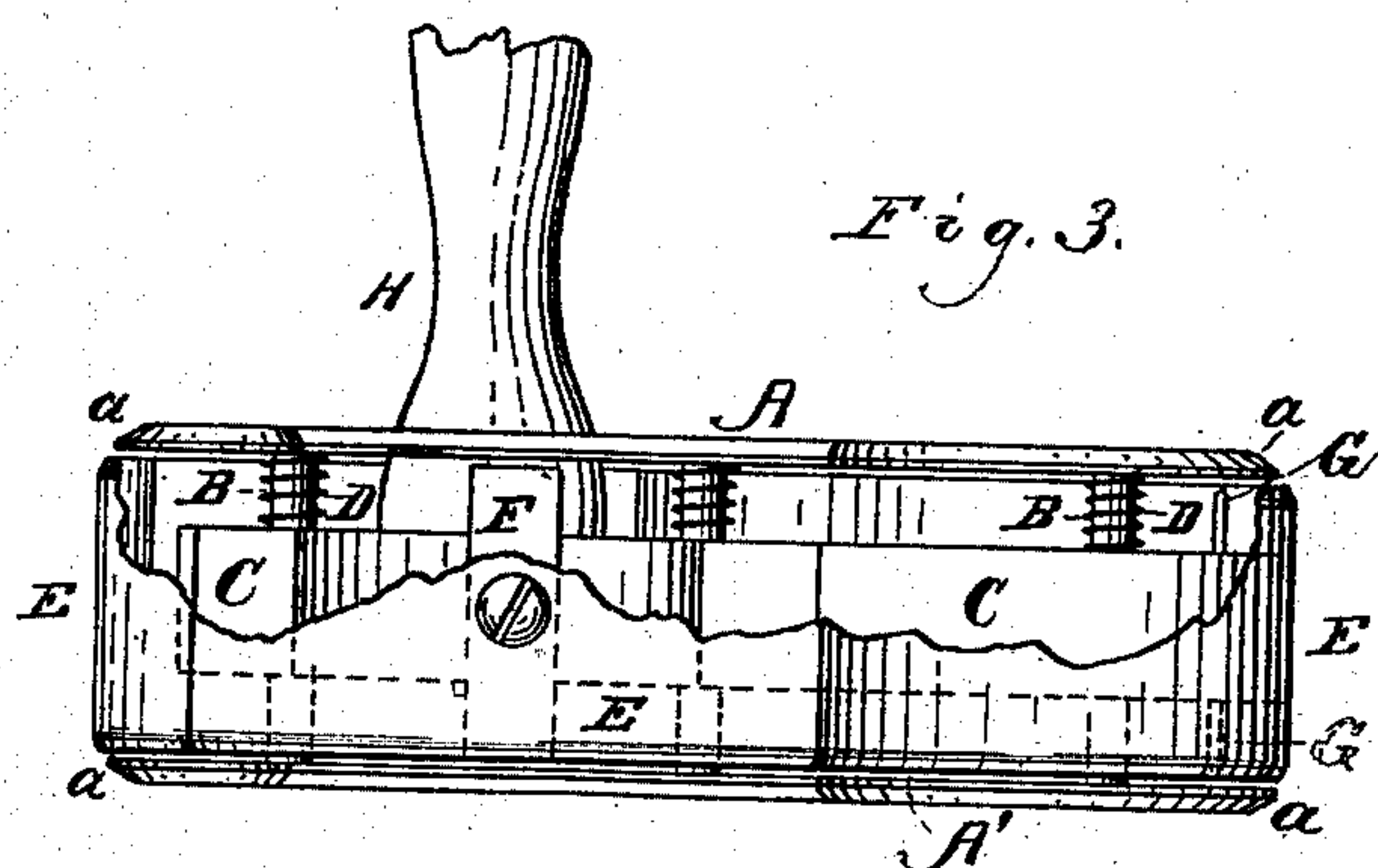
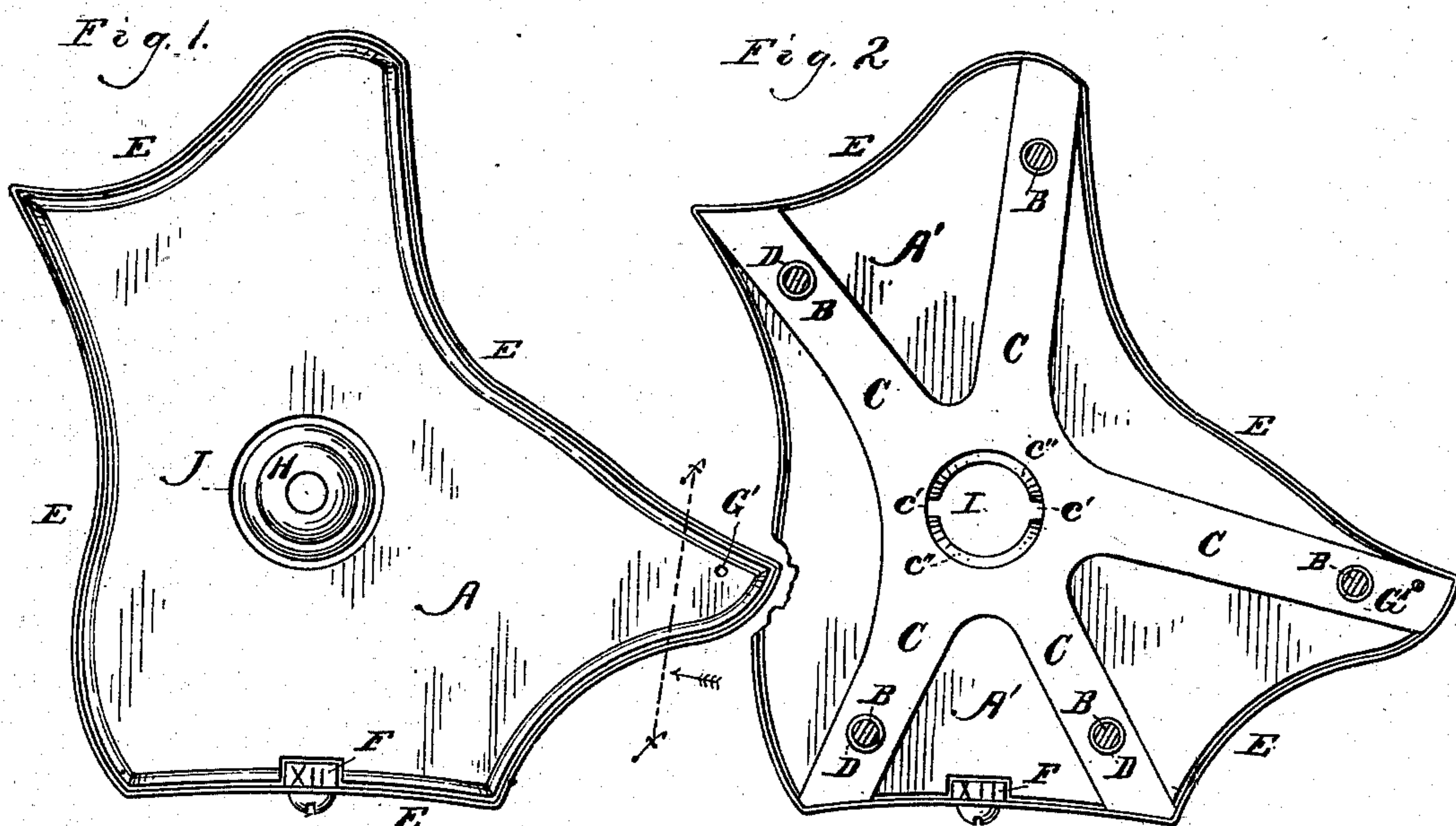


(No Model.)

W. BIGGS.
CUTTING DIE.

No. 272,115.

Patented Feb. 13, 1883.



Witnesses,
Henry Frankfurter.
C. J. Kunkle

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his Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM BIGGS, OF CHICAGO, ILLINOIS.

CUTTING-DIE.

SPECIFICATION forming part of Letters Patent No. 272,115, dated February 13, 1883.

Application filed December 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BIGGS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Cutting-Dies, of which the following, in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a top or plan view of a die embodying my invention. Fig.
10 2 is a like representation, showing one of the side plates removed. Fig. 3 is a side elevation of the die, showing a part of the cutter or knife broken away. Fig. 4 is a side view, broken away and shown partly in section, the
15 sectional part being in the plane of the line *x* of Fig. 1, and viewed in the direction indicated by the arrow there shown; and Fig. 5 is a perspective of the lower end of the handle.

20 Like letters of reference indicate like parts.

A A' represent the side plates of the die, which in the example shown are in the form of shoe-quarters; but their form may be varied according to the nature of the work to be
25 done. The edges of these plates are turned in slightly toward each other, as is clearly indicated at *a a*, Fig. 4, so that the die may be moved with facility over the leather without obstruction and without injury to the leather.

30 B B are vertical posts or studs connecting the plates A and A' rigidly to each other. These posts are by preference made of metal.

35 C is a brace, made by preference of steel, and the posts B B pass freely through the brace C.

D D are spiral springs surrounding the exposed parts of the posts B B, and the ends of these springs rest respectively against the brace C and the plates A and A', as shown.

40 E is a knife or cutter attached rigidly to the brace C. The edges of this knife or cutter are both sharpened for work, and stand a little way out from but about in the same plane with the edges of the plates A and A', as is
45 clearly indicated in Figs. 3 and 4.

F is a vertically-arranged marker applied to the cutter, and G G are markers or punches extending from the brace C.

50 G' G' are holes in the plates A and A', and these holes are so located as to permit the punches G G to pass through them when the brace C is depressed.

H is the handle. The brace C has in it a central opening, I, to receive the handle, and J J are openings in the plates A and A' to permit the handle to be inserted into the opening
55 I. The lower part of the handle is shouldered, as shown at *b b*, to rest upon the brace C when the handle is inserted into the opening I, and *c c* are lugs on the lower end of the handle H. 60 The opening I is grooved vertically to receive the lugs *c c*, as shown at *c' c'*, and the edges of the opening I are countersunk, as shown at *c'' c''*, to engage the lugs *c c* when the handle H is turned to bring these lugs in contact with
65 the portions *c'' c''* of the brace C. The countersunk parts *c'' c''* are somewhat spiral or inclined, so that as the handle H is turned, after being inserted into the opening I, the shoulder *b* will be drawn tightly against the brace
70 C, thereby holding the handle firmly in place. The handle is thus made capable of being applied to either side of the die, and may be inserted and removed with facility.

The function of the marker F is to mark each
75 quarter alike which is cut by the same die, so that each of these quarters may be readily distinguished as being of the same size, or as belonging to shoes of the same size, and the punches G G mark the quarters, so that the re-
80 lation of the quarter to the vamp may be readily ascertained.

It will be perceived from the foregoing description and from reference to the drawings
85 that the die shown and now described is capable of being reversed, so that rights and lefts may be cut by means of the same die, the handle being removed and applied to the other side of the die. It is to be understood that
90 the upper end of the handle may be struck, if necessary, in order to drive the knife through the leather. It is also obvious that the form of the die may be changed or modified to correspond to the nature of the work to be per-
95 formed or the class of goods to cut. When it is deemed best not to connect the handle to the die, the handle or its equivalent may simply be placed on the brace and struck with a mallet.

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

1. In a cutting-die, the knife or cutter having upper and lower cutting-edges adapted to be reversed, so that rights and lefts may be cut

by the same knife or cutter, substantially as specified.

2. The combination, in a cutting-die, of a cutter or knife having upper and lower cutting-edges, and a removable handle adapted to be applied alternately to both sides of the said die, substantially as and for the purposes specified.

3. The combination, in a cutting-die, of a double-edged cutter, E, a yielding brace or stock for the said cutter, and the plates A and A', substantially as and for the purposes specified.

4. The combination, in a cutting-die, of the double-edged cutter E, provided with a marker, F, a yielding brace or stock for the said cutter, and the plates A and A', substantially as and for the purposes specified.

5. The combination, in a cutting-die, of the yielding brace or stock C, provided with the punches or markers G G, the double-edged cutter E, applied to the said brace, and the plates A and A', substantially as and for the purposes specified.

6. The combination of the plates A A', the yielding brace or stock C, the double-edged cutter E, applied to the said stock, and the reversible handle H, substantially as and for the purposes specified.

WILLIAM BIGGS.

Witnesses:

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C. J. KRUMBEIN.