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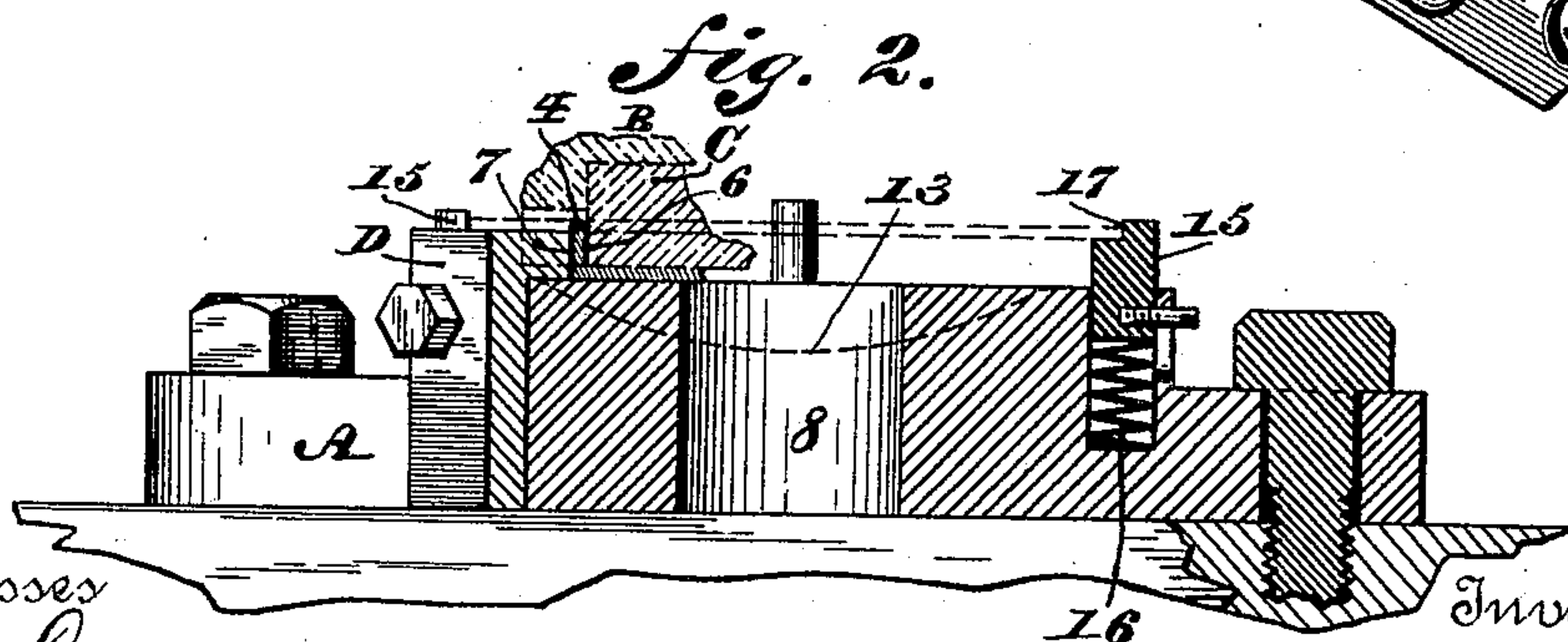
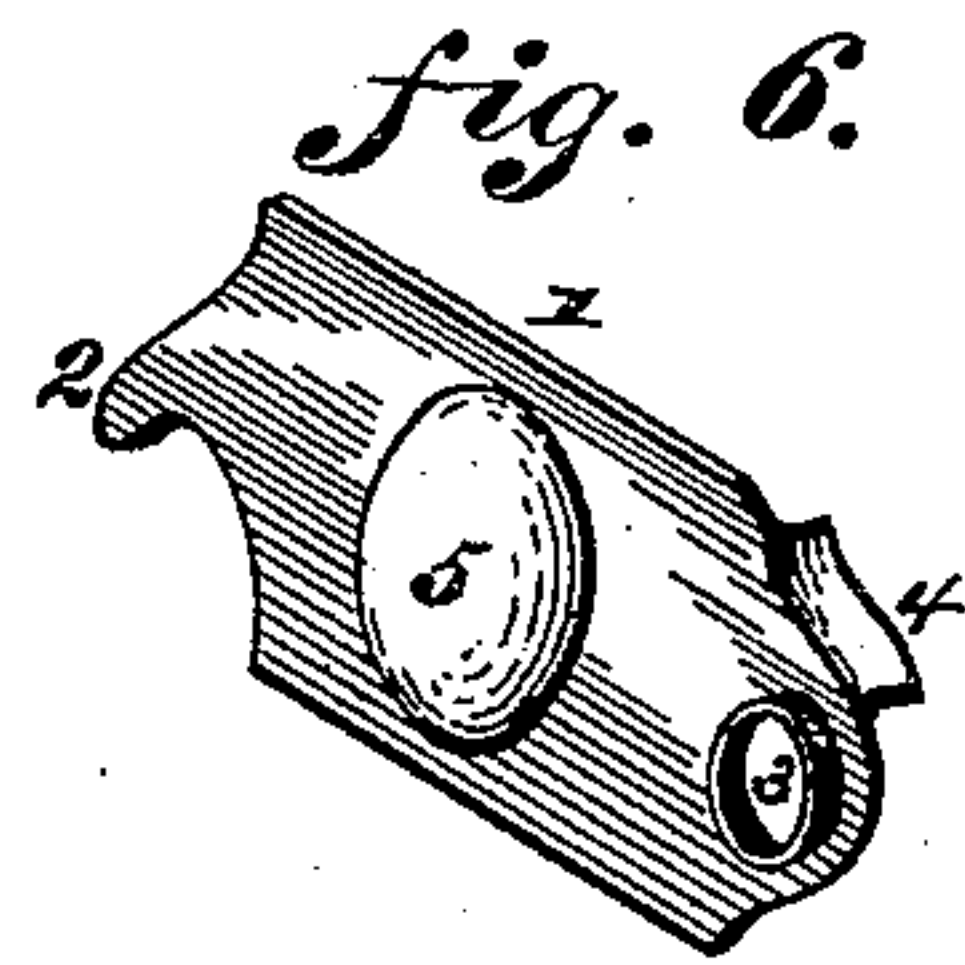
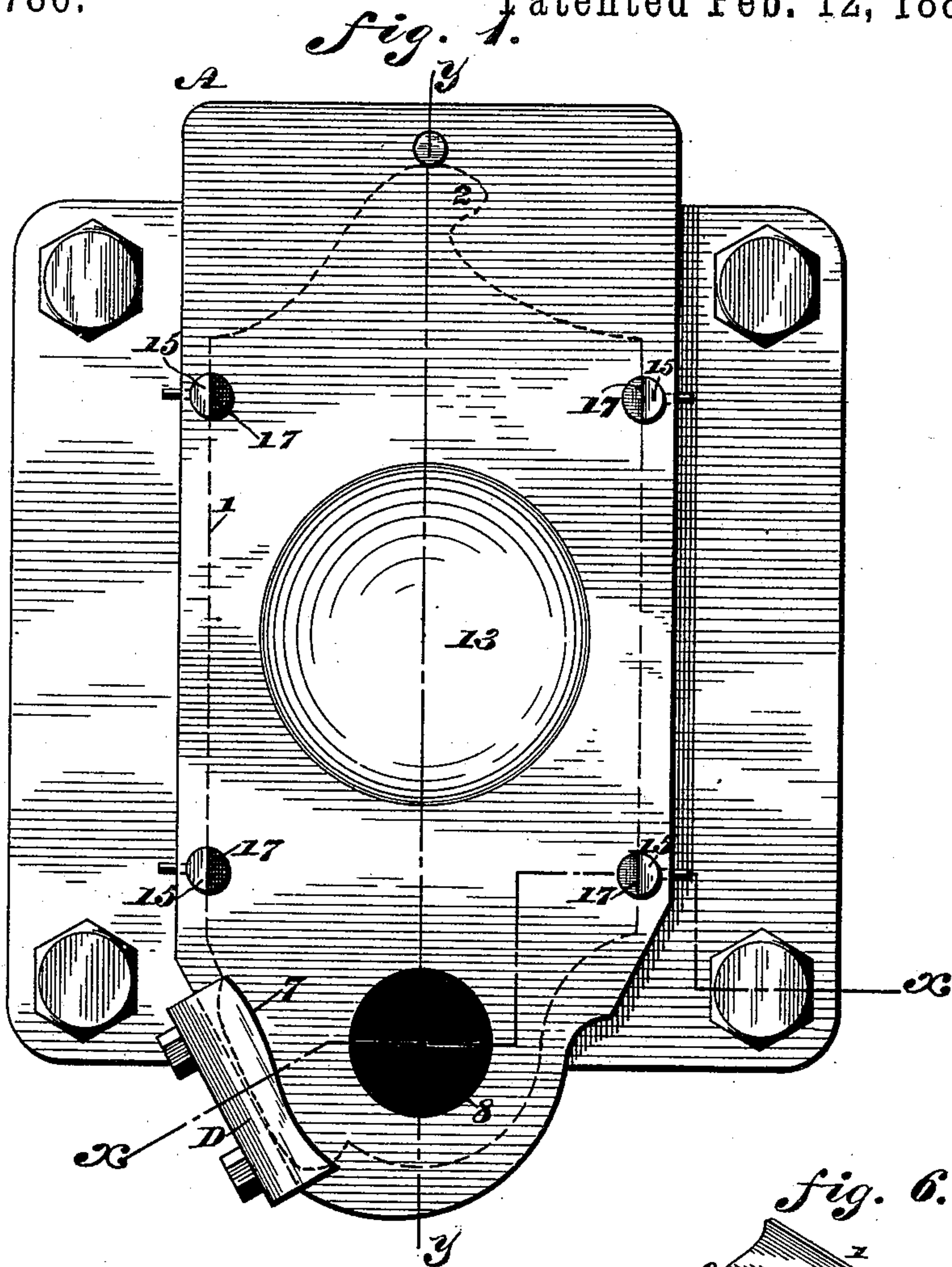
2 Sheets—Sheet 1.

N. H. DAVIS.

DIE FOR THE MANUFACTURE OF LIDS FOR JOURNAL BOXES.

No. 397,786.

Patented Feb. 12, 1889.



Witnesses
L. Dawville,

Wm. N. Moore

Inventor,
Nathan H. Davis.

By his Attorneys
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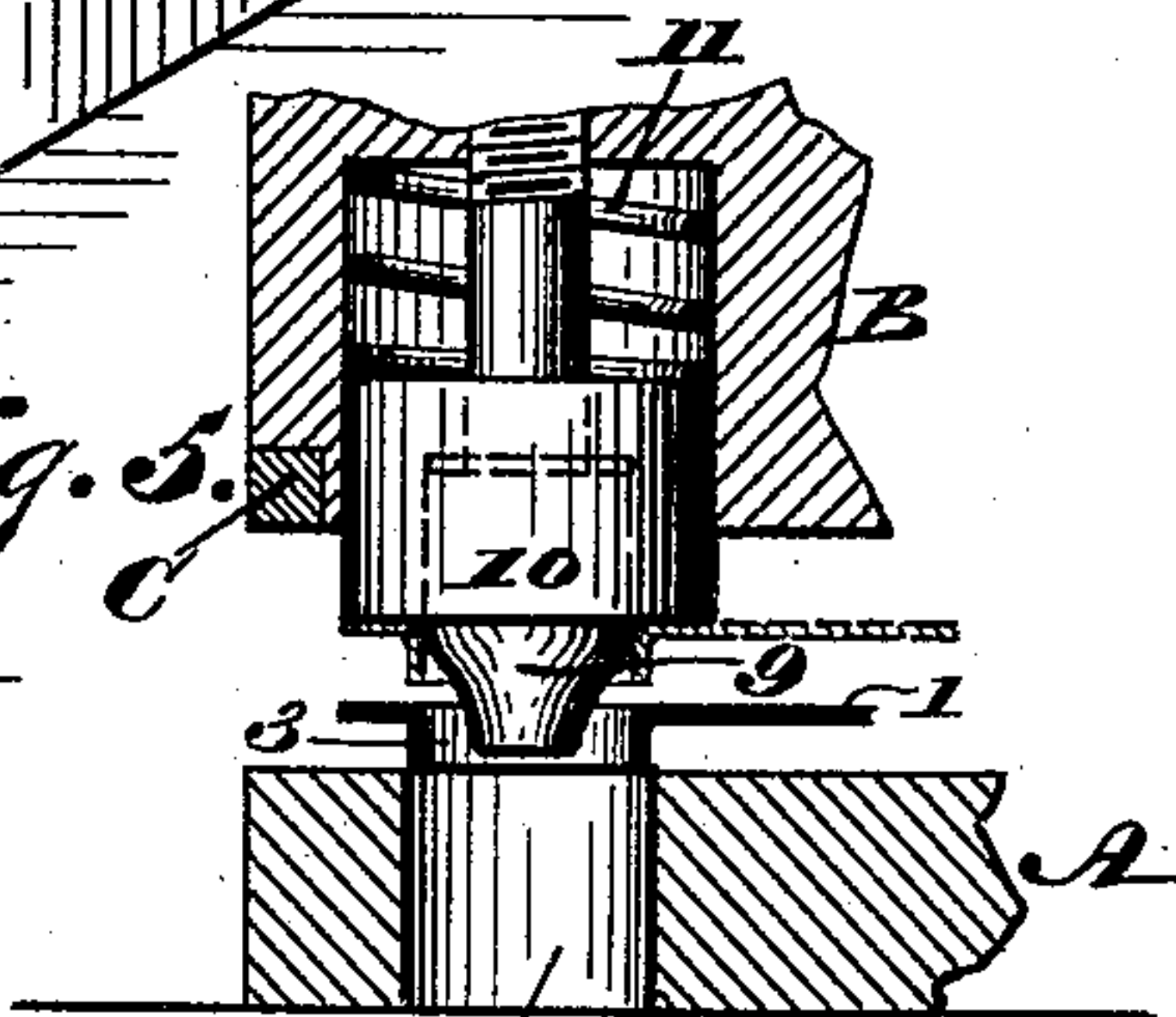
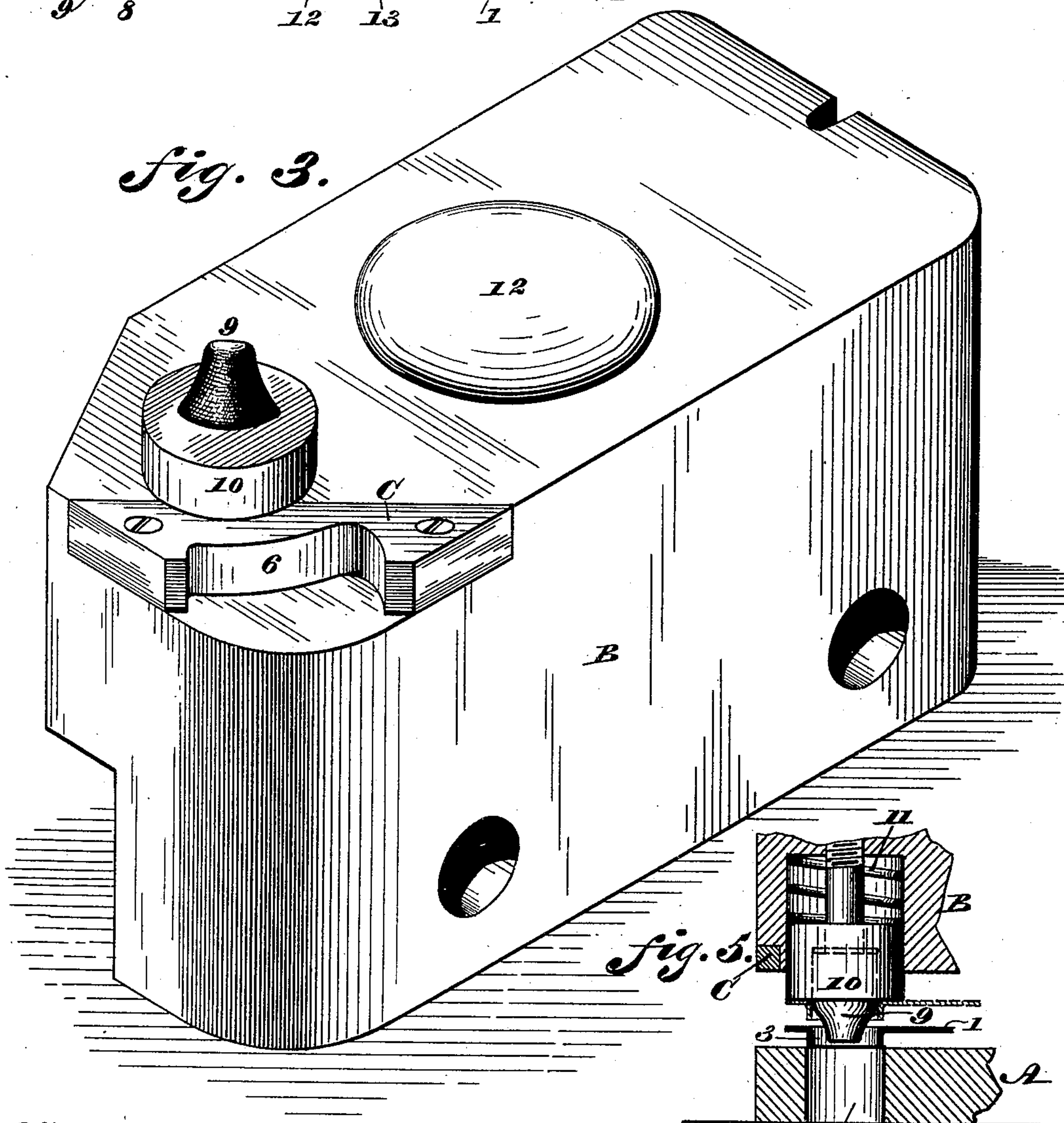
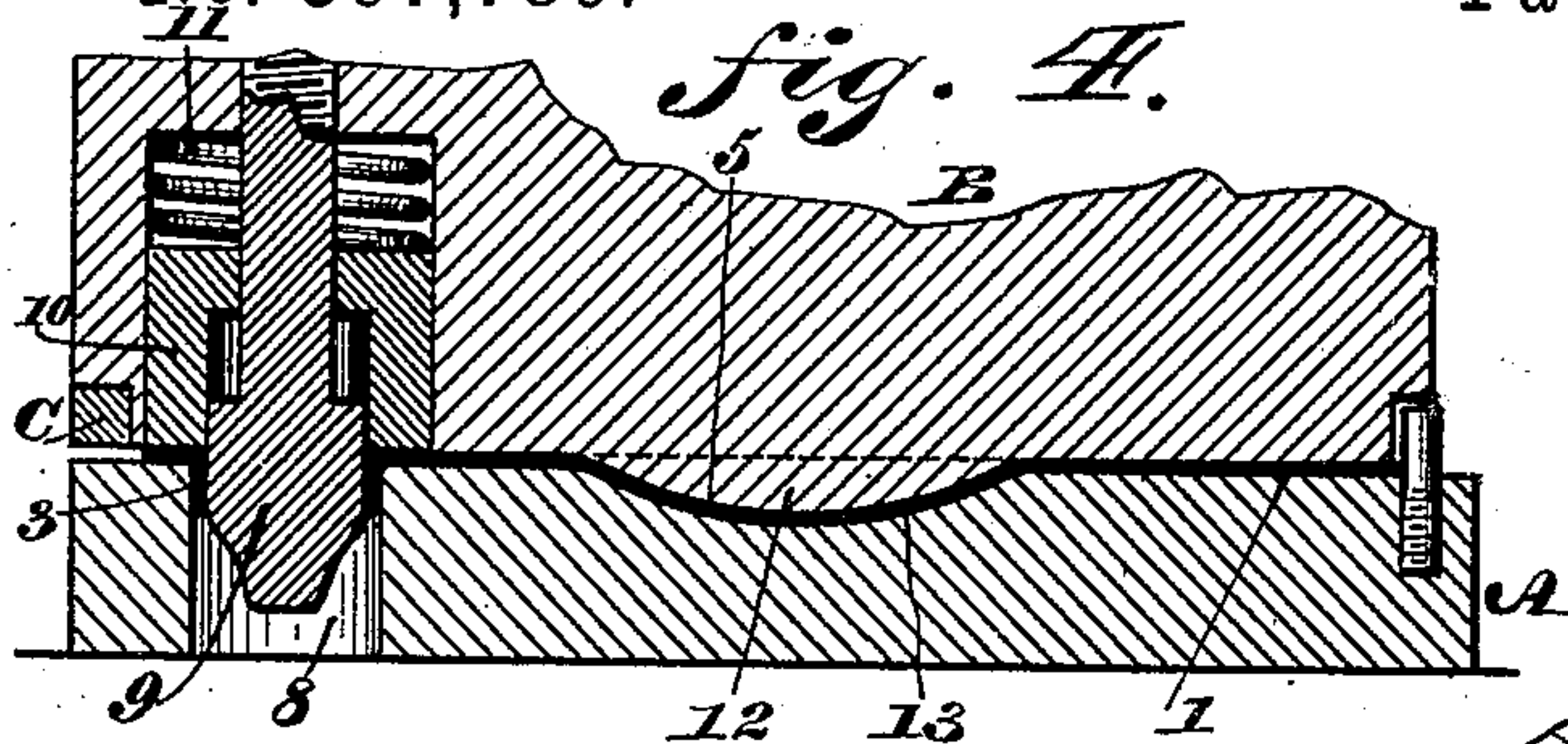
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UNITED STATES PATENT OFFICE.

NATHAN H. DAVIS, OF PHILADELPHIA, PENNSYLVANIA.

DIE FOR THE MANUFACTURE OF LIDS FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 397,786, dated February 12, 1889.

Application filed December 10, 1888. Serial No. 293,155. (No model.)

To all whom it may concern:

Be it known that I, NATHAN H. DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dies for the Manufacture of Lids for Journal-Boxes, which improvement is fully set forth in the following specification and accompanying drawings.

10 My invention consists of dies for the manufacture of lids for a journal-box embodying means for forming a lip by which the lid is supported.

15 It also consists of means for flanging the opening which receives the pivotal bolt of the lid.

Figure 1 represents a top or plan view of the lower die. Fig. 2 represents an irregular vertical section in line *x x*, Fig. 1. Fig. 3 represents a bottom plan view of the upper die in perspective. Fig. 4 represents a section of a portion of the two dies on line *y y*, Fig. 1, on a reduced scale. Fig. 5 represents a view of a portion of a figure, certain parts thereof being in different position. Fig. 6 represents a perspective of a lid on a reduced scale made in accordance with my invention.

Similar letters and numerals of reference denote corresponding parts in the several figures.

Referring to the drawings, A and B represent the upper and lower dies of a pair of dies for the manufacture of a lid for a journal or box, said lid consisting, as in Fig. 6, of a body, 1, with a grasping-piece, 2, at one end, a flanged opening, 3, at the other end to receive the axial bolt or pivot of the lid, a lip, 4, above said opening, by which the lid may be supported in horizontal position, and a concavity or socket, 5, to receive the head or outer end of a journal or axle. Secured to the face of the upper die, at one end thereof, is a depending block or shoulder, C, having a working-face, 6, on the side thereof. Secured to the face of the lower die and rising therefrom is a block or shoulder, D, having a working-face, 7, on the side thereof, said shoulders being at coincident ends of the dies, the face 6 of the upper die being adapted to descend and ascend within the face 7 of the lower die, with a space between them equal to or approximately equal

to the thickness of the lip 4 of the lid, as will be seen in Fig. 2. In the lower die is a vertical opening, 8, to receive the flanging punch or die 9, which is secured to the upper die and has a face somewhat conical. Surrounding the upper portion of the punch and shank thereof is a wiper or stripper, 10, which plays in an opening in the upper die and is pressed outward in downward direction by a spring, 11, the diameter of the wiper being greater than that of the opening 8, as will be seen in Figs. 4 and 5. On the face of the upper die is a convex projection, 12, and on the face of the lower die at a coincident place is a concave depression, 13. Rising from the lower die are supports and guides 15, which are of the form of pins, located vertically in the die and adapted to rise and fall, their rising motion being occasioned by springs 16, suitably applied. On the upper ends of the pins are shoulders 17, which face inwardly, it being seen that the blank shown in dotted lines, Figs. 1 and 2, is placed on the pins and retained thereon owing to the shoulders 17, the plate being elevated from the face of the lower die. In this position of parts the upper die descends, when the punch enters an opening in the plate previously made and flanges the wall of said opening, as will be seen in Fig. 4. The wiper 10 enters the opening in upper die, while its lower face is in contact with the metal around the flanged opening, as in Fig. 4. The concavity and convexity 12 and 13 form the socket 5, as also seen in Fig. 4.

The shoulder C bears against the end of the plate near the flanged opening 3 and forces the same downwardly against the lower die, when the face 6 of said shoulder and the face 7 of the shoulder D throw up the adjacent portion of the metal forming the lip 4, as will be seen in Fig. 2, it being noticed that the guides 15 are forced into the lower die by the descending upper die. The upper die now rises, whereby the guides 15 are permitted to return to their normal position, thus lifting the plate from the face of the lower die. As the upper die rises the spring 11 exerts pressure on the wiper 10, so as to force the same outwardly and downwardly, whereby it strips the wall of the flanged opening from the punch or flanging die. The plate is now in the form

of a lid and may be removed, after which another blank is placed on the lower die and the upper die lowered, the subsequent operation being similar to those hereinbefore stated.

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

1. Dies provided, respectively, with the shoulders C D, having the working-faces 6 and 10 7, for forming the lip of the lid, said parts being combined as described.

2. Dies provided, respectively, with the opening 8 and punch 9, for forming the flanged opening of the lid, and the wiper 10, for stripping the plate from said punch, said parts being combined substantially as described. 15

NATHAN H. DAVIS.

Witnesses:

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