

# G. Hastings, Watch-Hand Die,

No 54, 539,

Patented May 8, 1866.

Fig. 2.

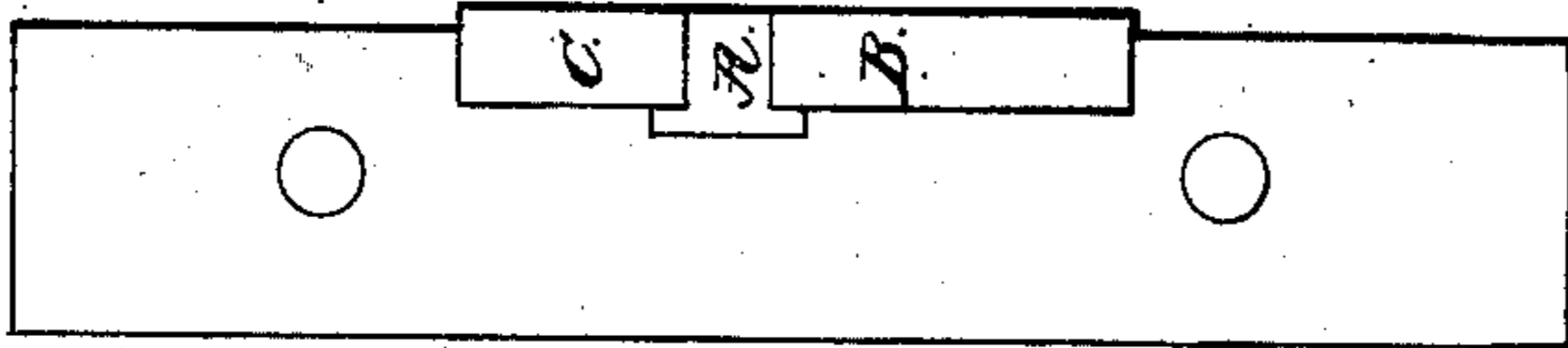


Fig. 4.

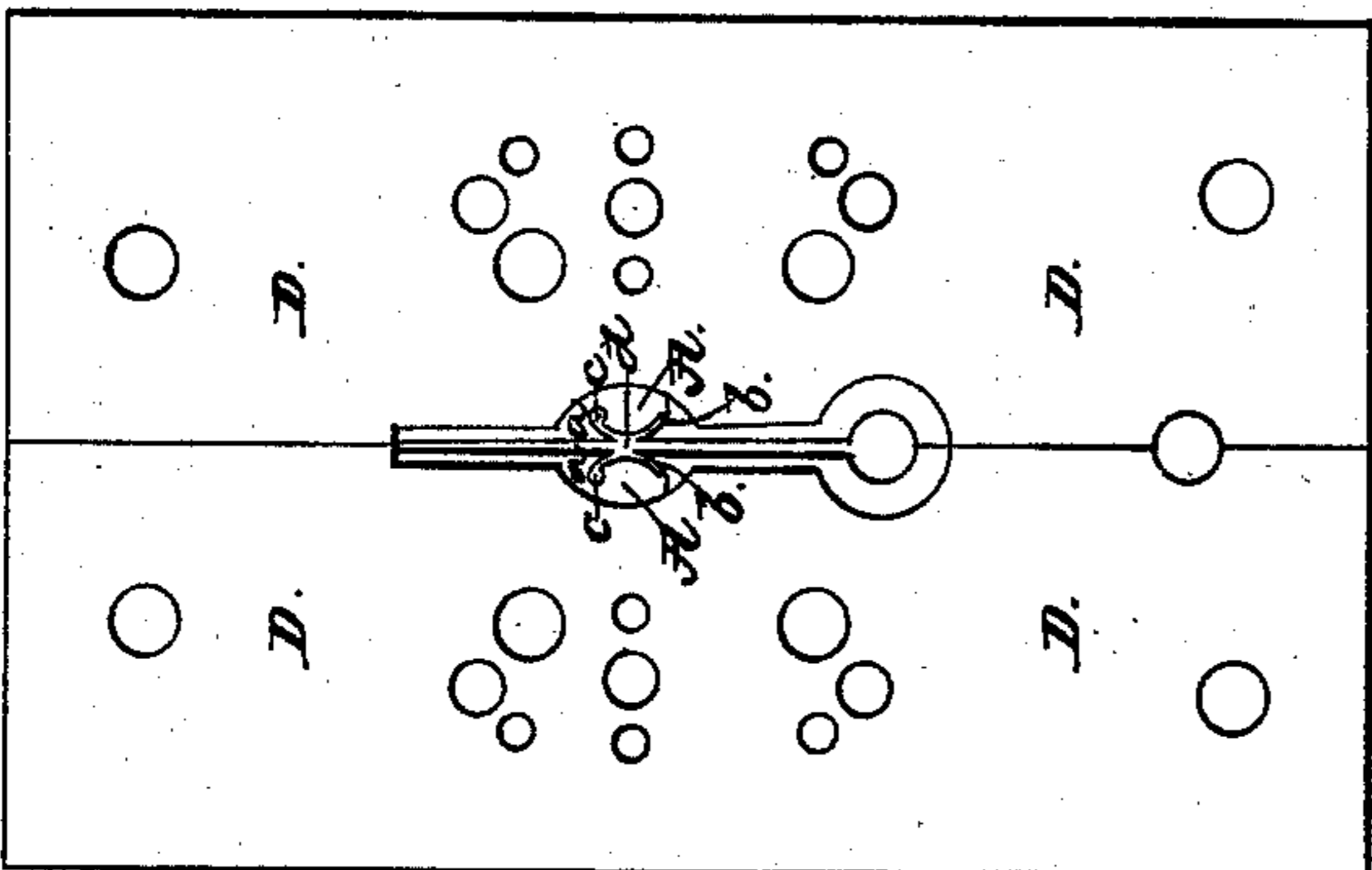


Fig. 3.

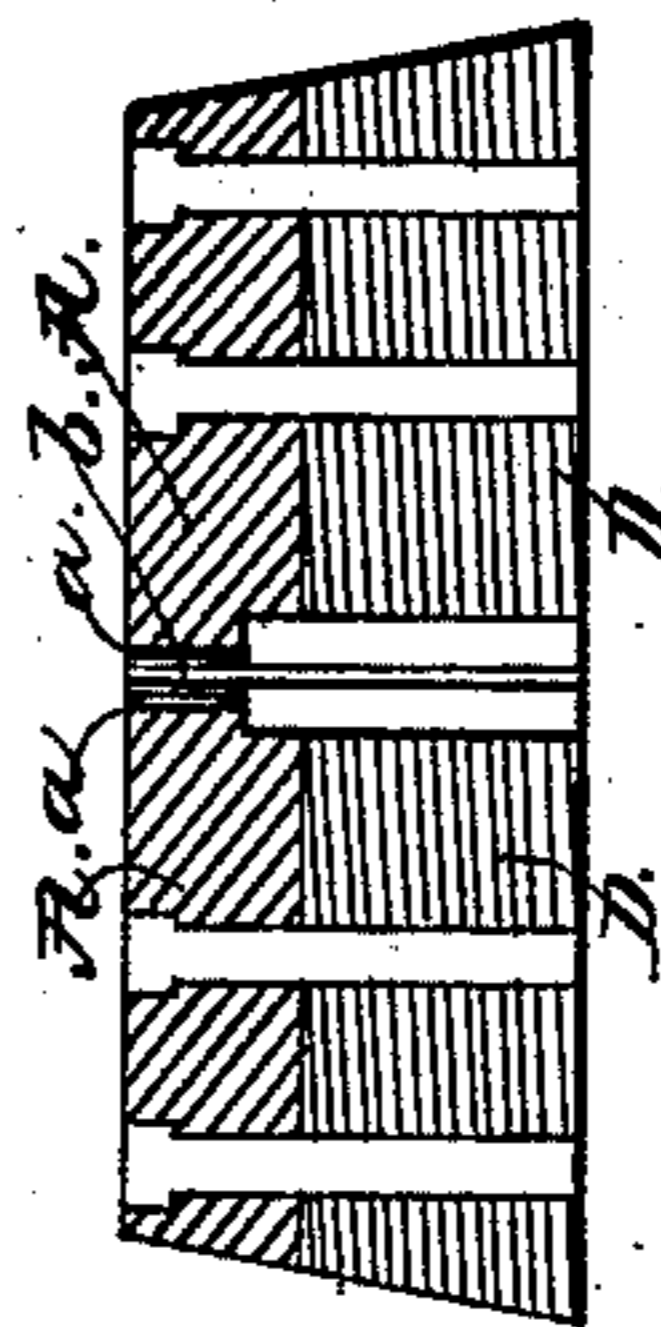
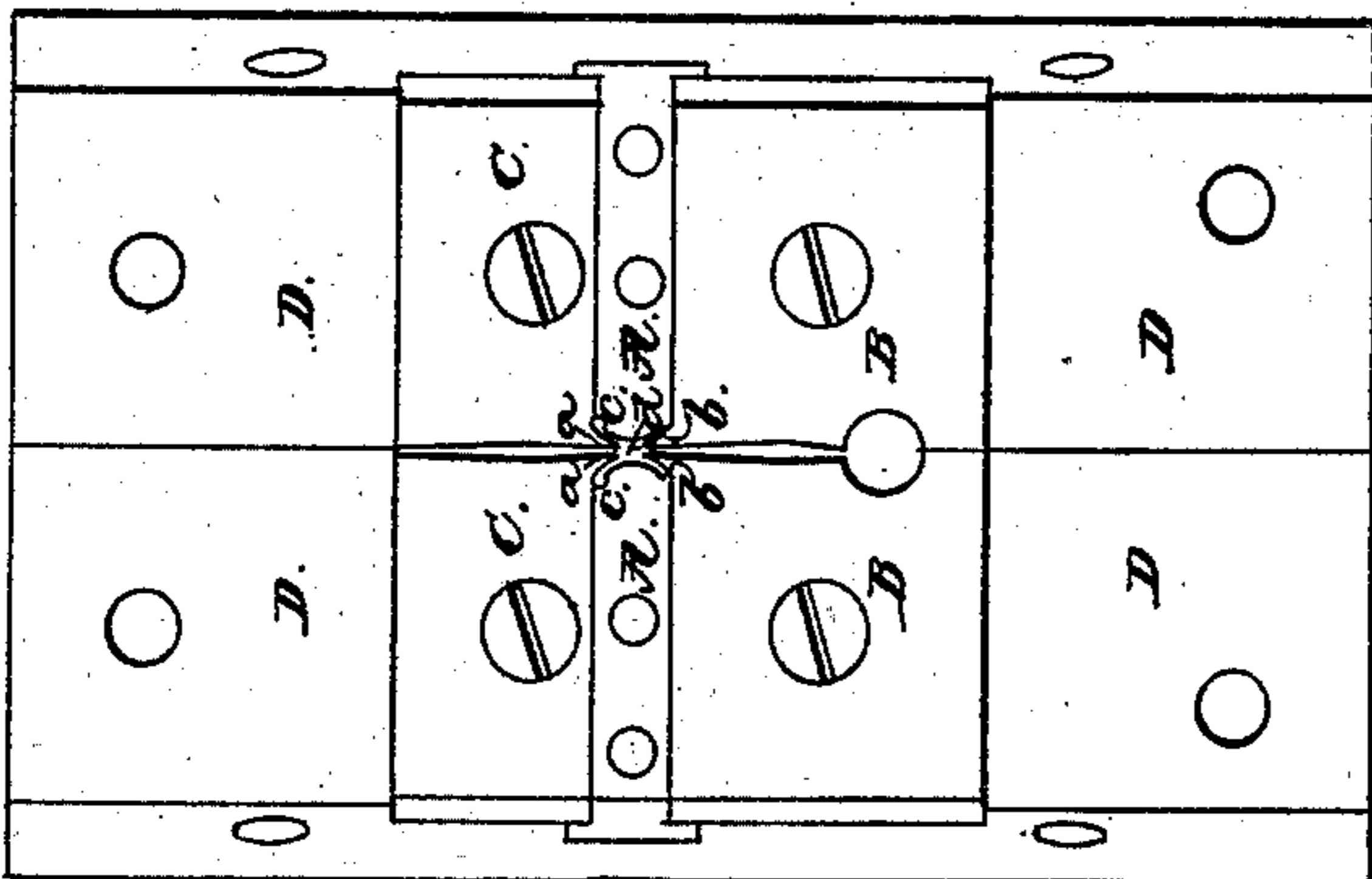


Fig. 1.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN WATCH-DIES.

Specification forming part of Letters Patent No. 54,539, dated May 8, 1866.

*To all whom it may concern:*

Be it known that I, GEORGE HASTINGS, of Waltham, in the county of Middlesex and State of Massachusetts, have made a new and useful invention having reference to Dies for Making Watch or Time-Piece Hands; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 an edge elevation, Fig. 3 a longitudinal section, and Fig. 4 a bottom view, of a die made in accordance with my invention.

The said die is specially designed for making the fleur-de-lis pattern of watch-hand, and consists of three pairs, A A B B C C, of steel plates, formed and arranged in a peculiar manner, and united to two connection-plates, D D.

In carrying out my invention, I arrange the plates of each pair opposite to each other, in manner as represented, and make each of the plates which flank either of the middle plates, A A, with a small projection to extend by the inner end of the plate A, the same being as represented at *a* and *b* in Fig. 1. I also curve the inner end of each of the plates A, and form it with a recess, *c*, in manner as exhibited in Fig. 1.

Between each part *a* or *b* and the inner end of the plate A which is overlapped by such part there is a space, as shown in the drawings. These spaces, the space *d* between the two dies

A A, and the circular recesses *c c* constitute that part of the die through which the metal passes during the formation of the fleur-de-lis of the hand, the remaining portions of the hand being formed by the inner edges of the two pairs of dies B B and C C, which are shaped as shown in Fig. 1.

Each of the dies A A is dovetailed and fastened into one of a pair of supporting-plates, D D. The other dies are secured to the said plates by means of screws, and the two supporting-plates are to be connected together by bolts or screws going from one into the other of them.

In using this die, a plunger or male die having its bottom surface corresponding in shape with the female die formed by the three pairs of plates A A B B C C is employed to force the metal down into such female die. I also employ another plunger, arranged so as to work upward within the female die and expel therefrom a watch-hand after having been formed by it.

I claim as my invention—

The watch-hand die as made of the three pairs of plates A A B B C C, formed, arranged, and combined substantially as specified.

GEO. HASTINGS.

Witnesses:

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