

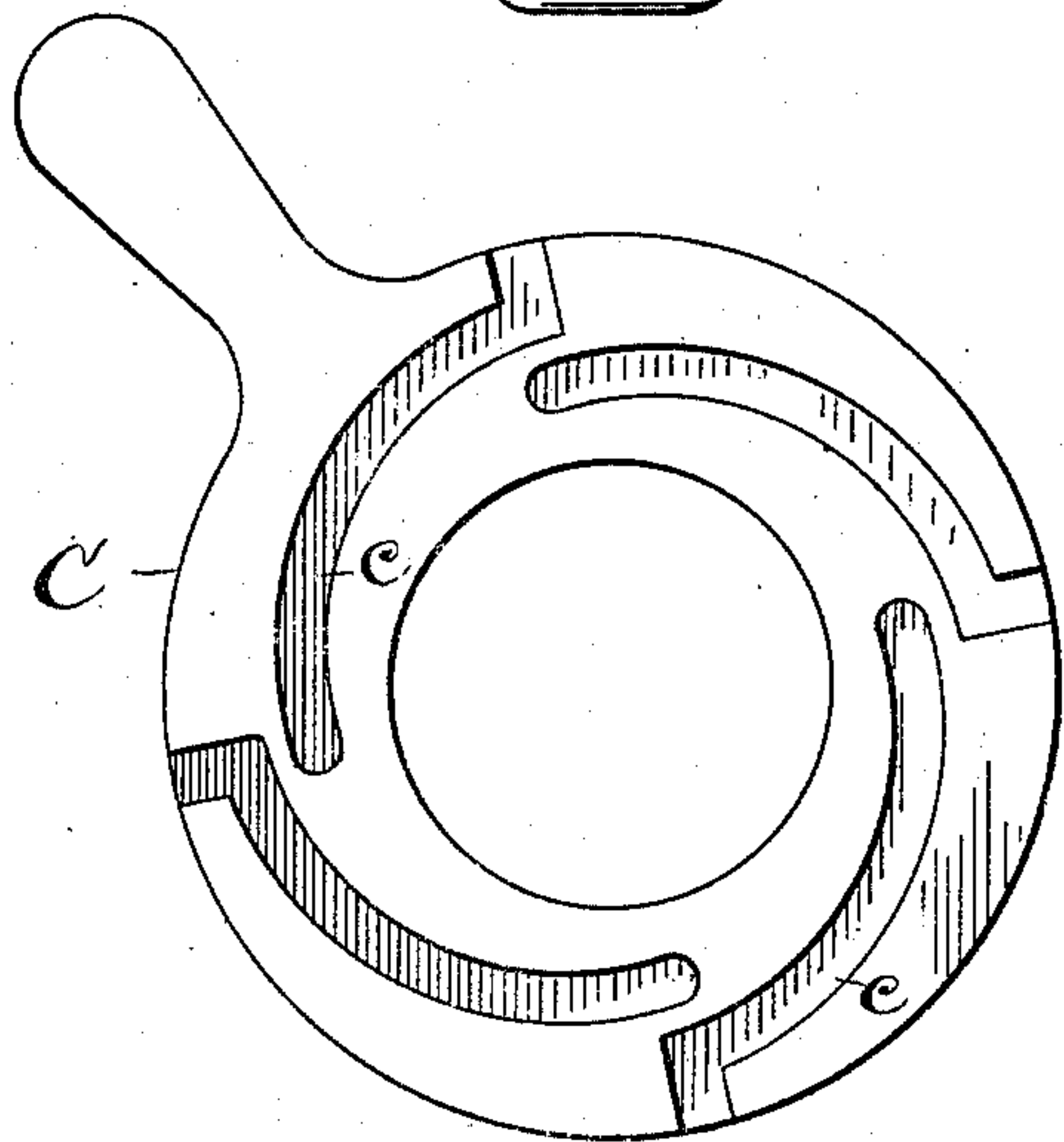
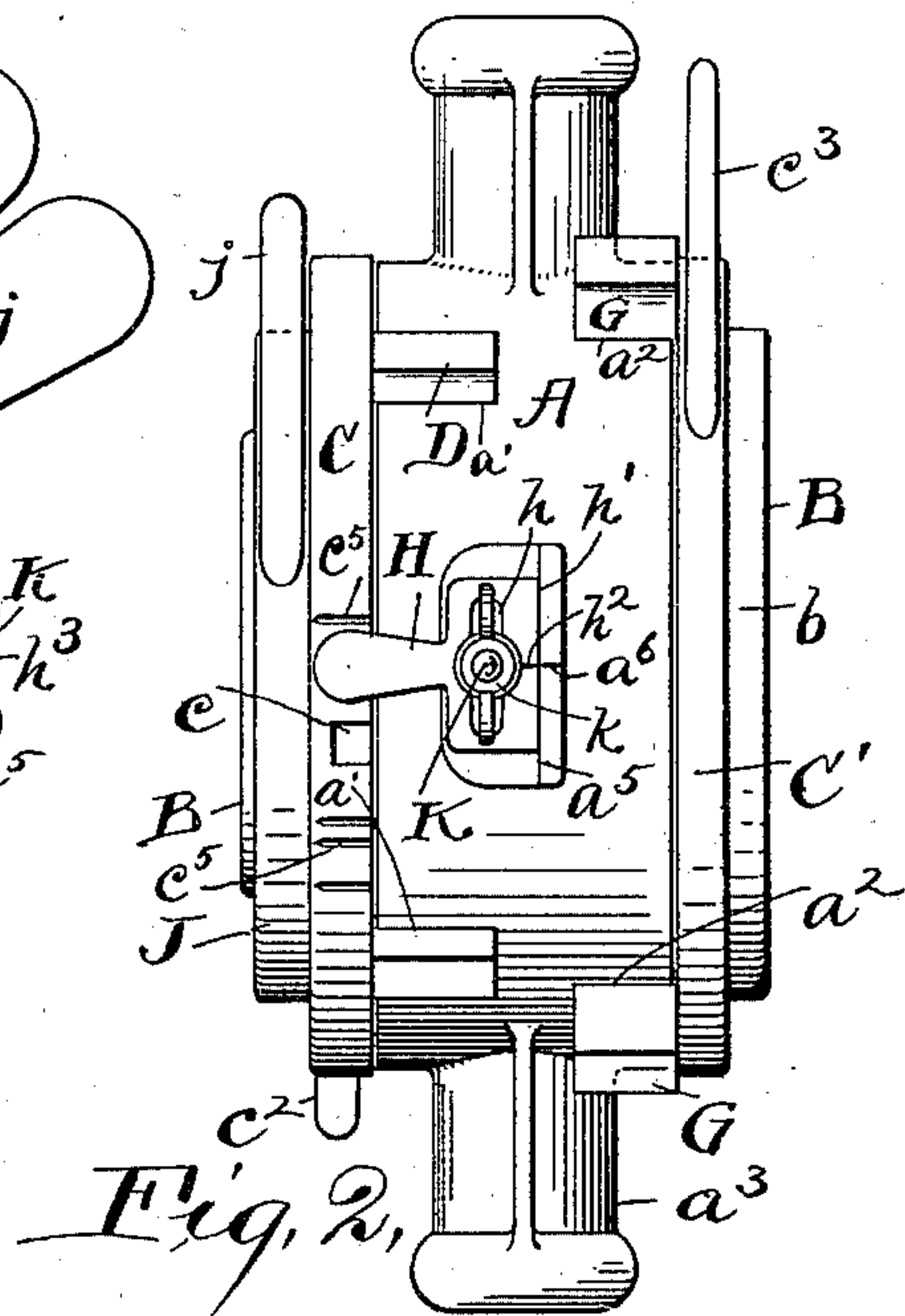
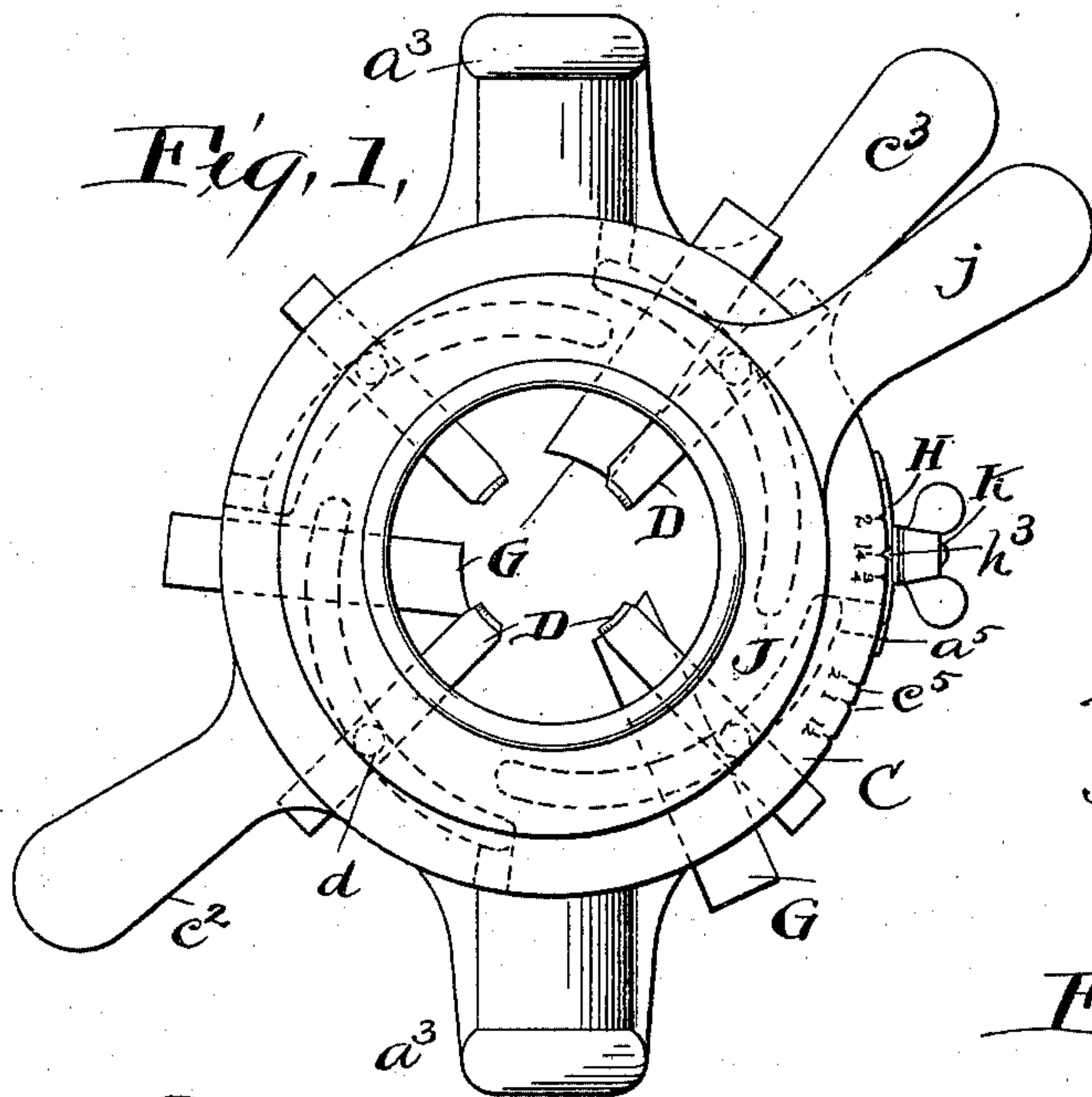
No. 686,221.

Patented Nov. 5, 1901.

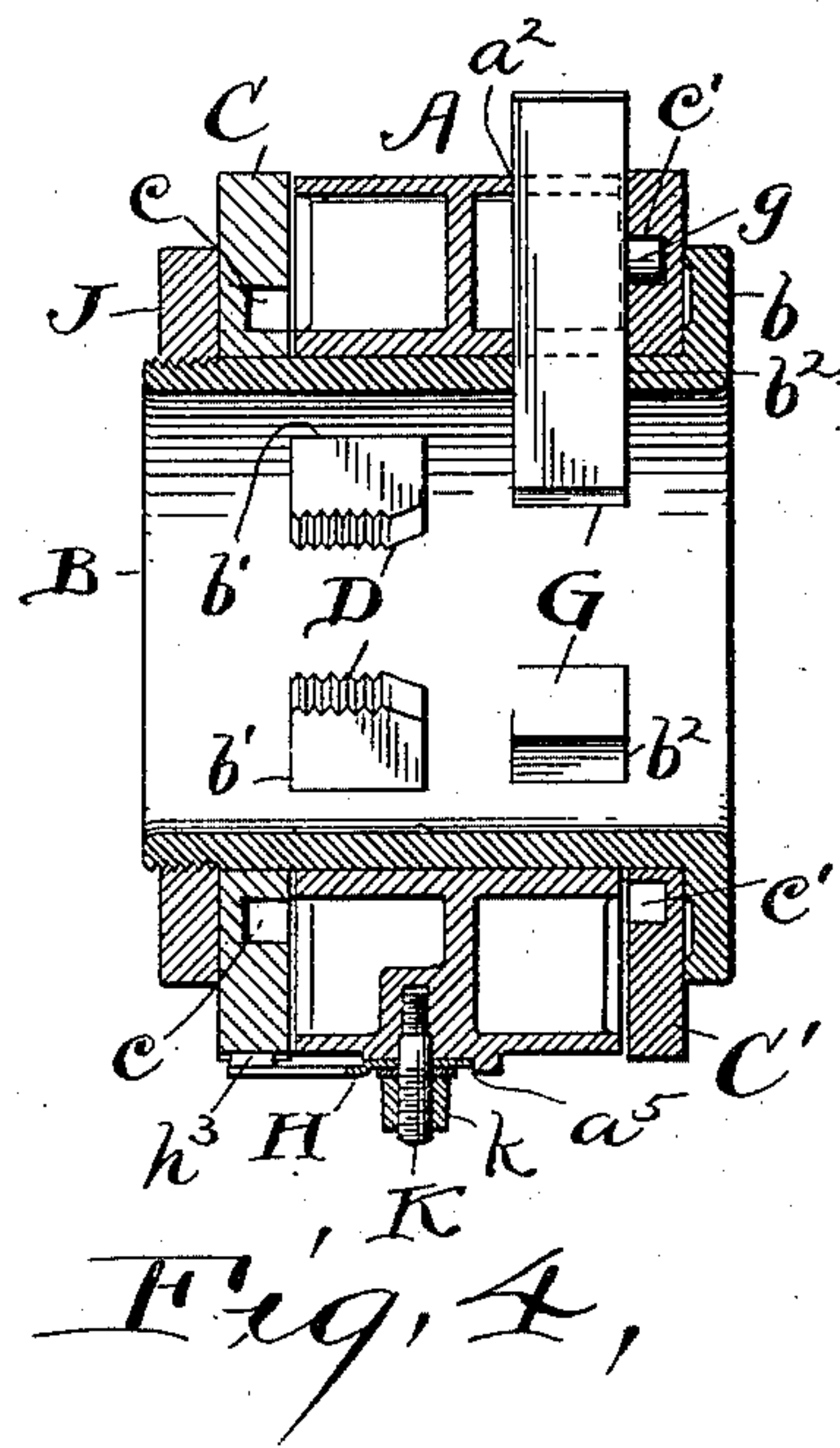
C. HART.  
DIE STOCK.

(Application filed Jan. 21, 1901.)

(No Model.)



*Fig. 3,*



*Fig. 4,*

Witnesses,  
E. B. Gilchrist  
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Inventor,  
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By his Attorneys,  
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# UNITED STATES PATENT OFFICE.

CHARLES HART, OF CLEVELAND, OHIO.

## DIE-STOCK.

SPECIFICATION forming part of Letters Patent No. 686,221, dated November 5, 1901.

Application filed January 21, 1901. Serial No. 43,990. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES HART, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Die-Stocks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to die-stocks for cutting screw-threads.

The primary object of the invention is to so construct such a tool that the operation of one locking device will lock the dies and the guide-slides also in any desired position into which they may have been moved.

Another object of the invention is to provide a simple and easily-operated adjustable gage whereby to determine when the dies are in the desired operative position.

The invention consists in the construction and combination of parts hereinafter described, and pointed out definitely in the claims.

In the drawings which fully illustrate my invention, Figure 1 is a plan view of a die-stock constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom view of one of the cam-plates forming part of this die-stock, and Fig. 4 is a longitudinal central section in the horizontal plane of Fig. 1.

Referring to the parts by letters, A represents a cored-out head, preferably made of malleable iron and provided at opposite points with sockets  $a^3$ , adapted to receive handles for operating the die-stock, as will be readily understood. A sleeve B projects through this head and beyond both ends thereof. This head A has two sets of openings  $a' a^2$  in the ends thereof, and sleeve B is provided with two sets of openings  $b' b^2$ , which are in alinement with the openings  $a' a^2$ . These openings  $a' a^2 b' b^2$  are preferably rectangular in section and constitute guides for the dies D and guide-blocks G, respectively.

There are four of the dies D shown, and there are three of the guide-blocks G shown; but less or more of these dies and guide-blocks could be employed, if desired, and corresponding openings  $a' a^2 b' b^2$  would be provided to receive them.

The dies and guide-blocks are moved by familiar means, it being understood that the guide-blocks are moved independently of the dies. In the construction shown a cam-plate C is rotatively mounted on one projecting end of the sleeve B, lying between one end of the head and the locking-plate J, which screws onto said end of the sleeve B. This cam-plate C has cam-grooves  $c$  on its under surface which receive pins  $d$ , which project from the edges of the dies. Another cam-plate C' is rotatively mounted on the other projecting end of the sleeve B, between the opposite end of the head and the annular flange  $b$  on said sleeve B. This cam-plate has also on its inner surface cam-grooves  $c'$ , which receive pins  $g$ , projecting from the edges of the guide-blocks G. The cam-plates C and C' may be provided, respectively, with handles  $c^2 c^3$ , wherewith they may be turned. The locking-plate J may also be provided with a handle  $j$ , whereby it may be turned. By slightly unscrewing the locking-plate either or both of the cam-plates C C' may be turned, and by turning this locking-plate in the opposite direction both of these cam-plates will be locked—that is to say, the cam-plate C' will be clamped down upon the guide-blocks G (which project slightly beyond the end of the head) by the flange  $b$ , while the other cam-plate C will be clamped by the locking-plate down upon the edges of the dies D, which also project slightly beyond the upper end of the head.

The dies D and guide-blocks G do not tightly fit the holes in the sleeve B. There is sufficient clearance (which, however, may be very slight and would not show in the drawings) to permit said sleeve B the limited longitudinal movement it must have.

A gage H is adjustably secured to the side of the head by the following means, viz: a single-threaded stud K, which is secured to the side of the head and extends through a slot  $h$  in the gage, and a thumb-nut  $k$ , which screws onto said stud. This gage has a straight lower edge  $h'$  parallel with the slots  $h$ , which edge engages with the straight edge of a rib  $a^5$  on the head, whereby the gage is prevented from turning on the stud K. On the gage and on the rib  $a^5$  are two marks  $h^2 a^6$ , which are in alinement when the gage is in the proper



position for use with sharp unworn dies. If the dies become worn, this gage is moved sufficiently to compensate for the wear. The upper end of the gage has a shoulder which is adapted to engage with a shoulder on the edge of the cam-plate C and to thereby indicate when said plate has been turned sufficiently to bring the dies into operative position. In the form shown the gage is made of resilient metal, and the shoulder thereon has a tooth  $h^3$ , which engages with the shoulder formed by making a notch  $c^5$  in the edge of the cam-plate C. This plate may have a plurality of these notches  $c^5$  to be used with different dies or with the same dies to effect different adjustments thereof, which adapt them to cut threads on cylinders of different diameters.

Having described my invention, I claim—

1. In a die-stock, in combination, a head, a sleeve mounted in and extending through said head and having an external flange at one end, cam-plates rotatably mounted on said sleeve at opposite ends of said head, dies and guide-blocks movable through openings in the head and sleeve and operated re-

spectively by said cam-plates, a locking-plate embracing the non-flanged end of said sleeve, and means for relatively moving said sleeve and locking-plate longitudinally to clamp both cam-plates simultaneously, substantially as and for the purpose specified.

2. In a die-stock, the combination of the head, a sleeve passing through the same and having two projecting ends, one flanged and one threaded, and a locking-plate screwed onto said threaded end, said sleeve and head having alined openings, with dies, and guide-blocks movable in said openings, cam-plates rotatably mounted on the sleeve and lying the one between its flange and the head, and the other between the head and said locking-plate, and operative connections between said cam-plates and the dies and guide-blocks respectively, substantially as and for the purpose specified.

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

CHARLES HART.

Witnesses:

LOUIS F. HART,  
E. L. THURSTON.