

No. 655,126.

Patented July 31, 1900.

R. STILLWELL.  
CUTTER HEAD.

(Application filed Dec. 8, 1896.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

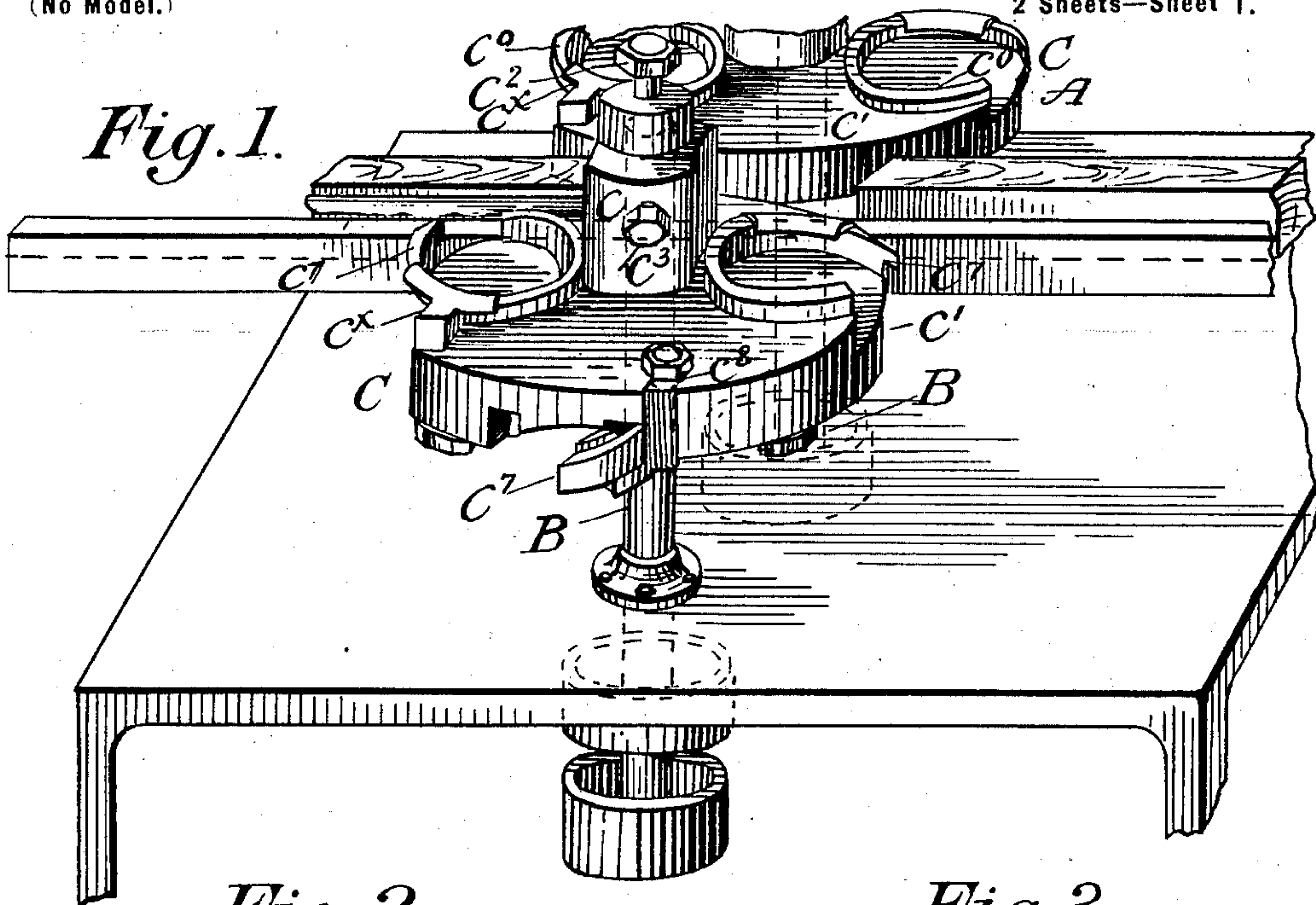


Fig. 2.

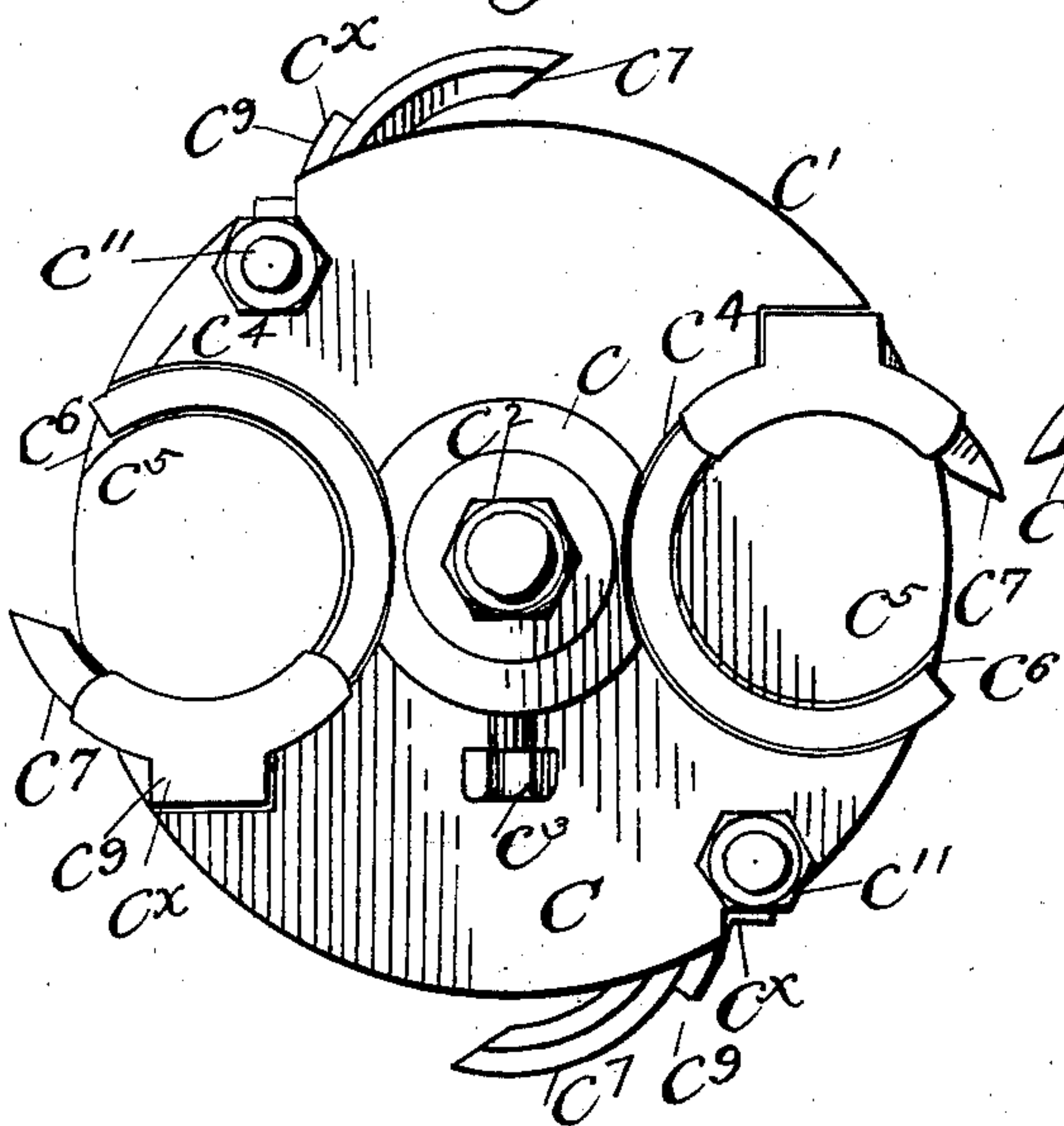
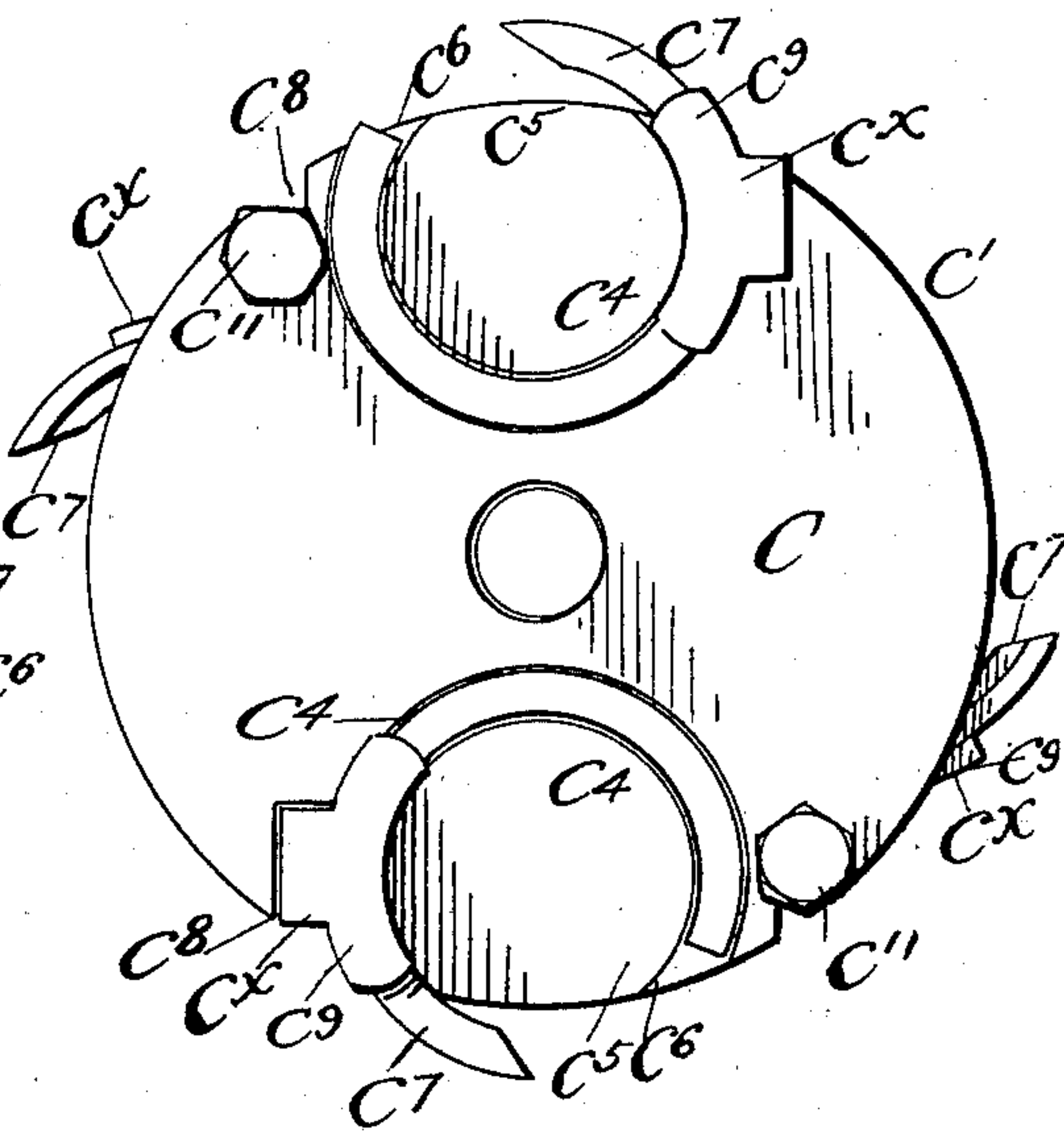


Fig. 3.



WITNESSES

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Fig. 4.

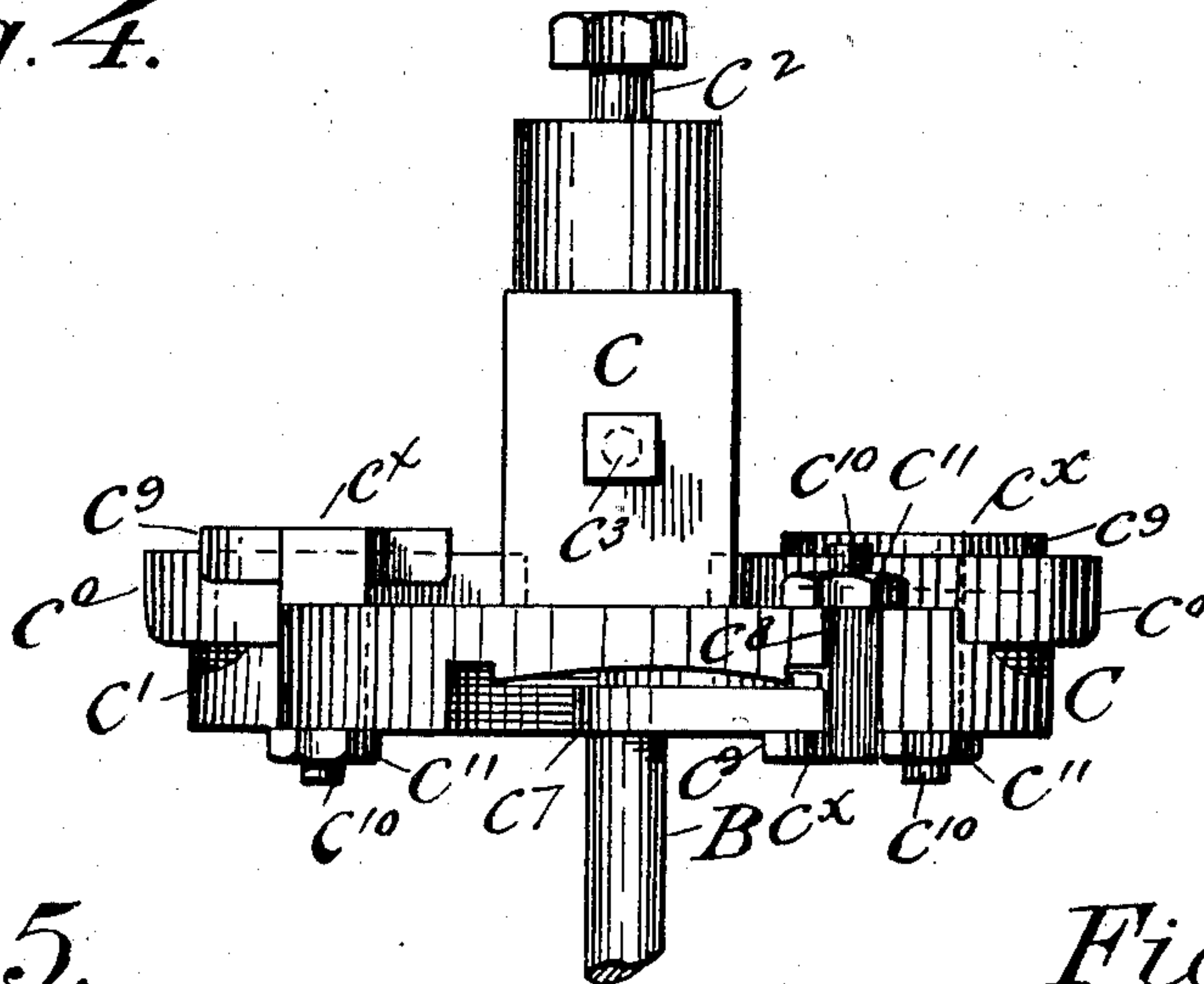


Fig. 5.

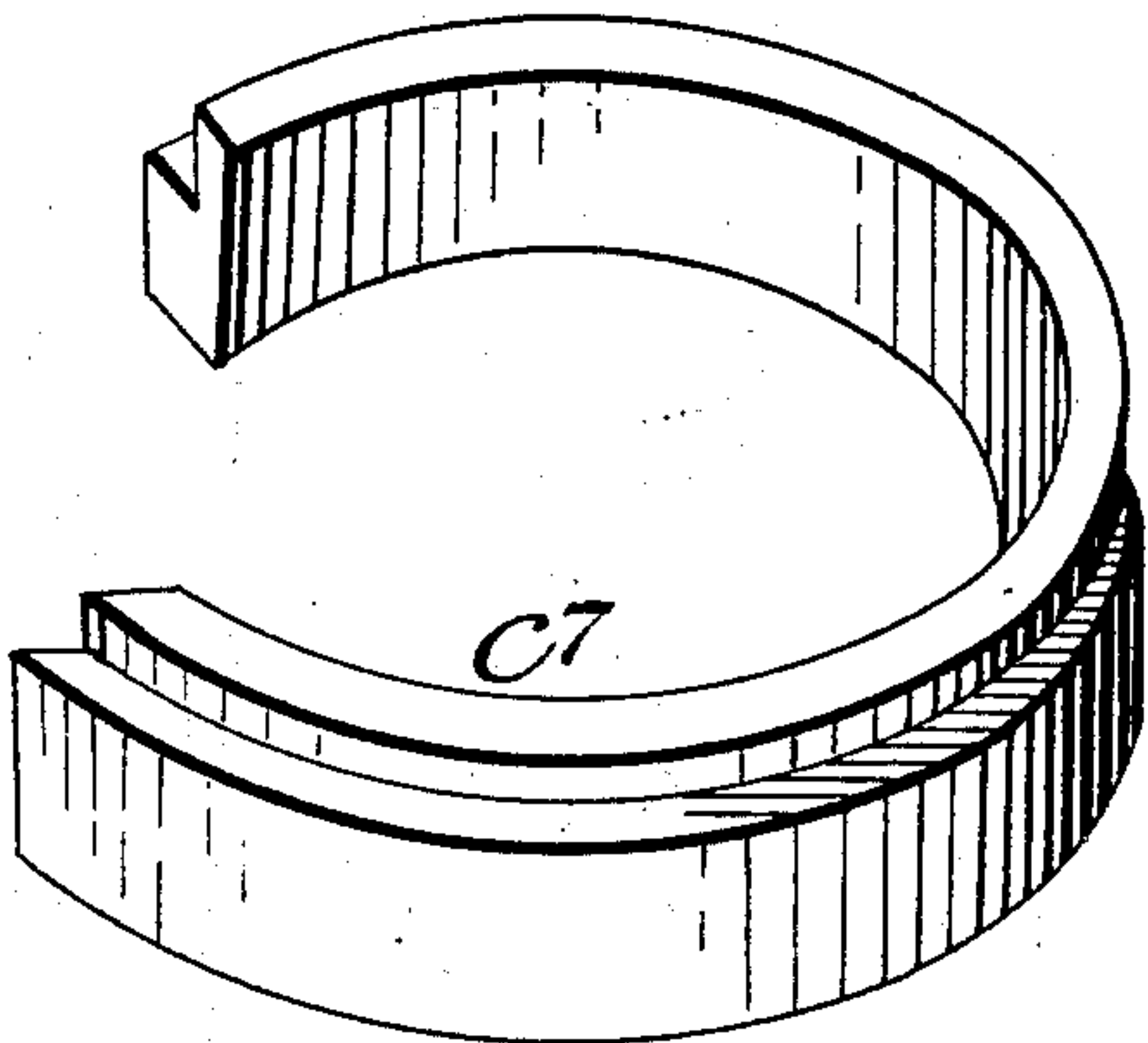


Fig. 7.

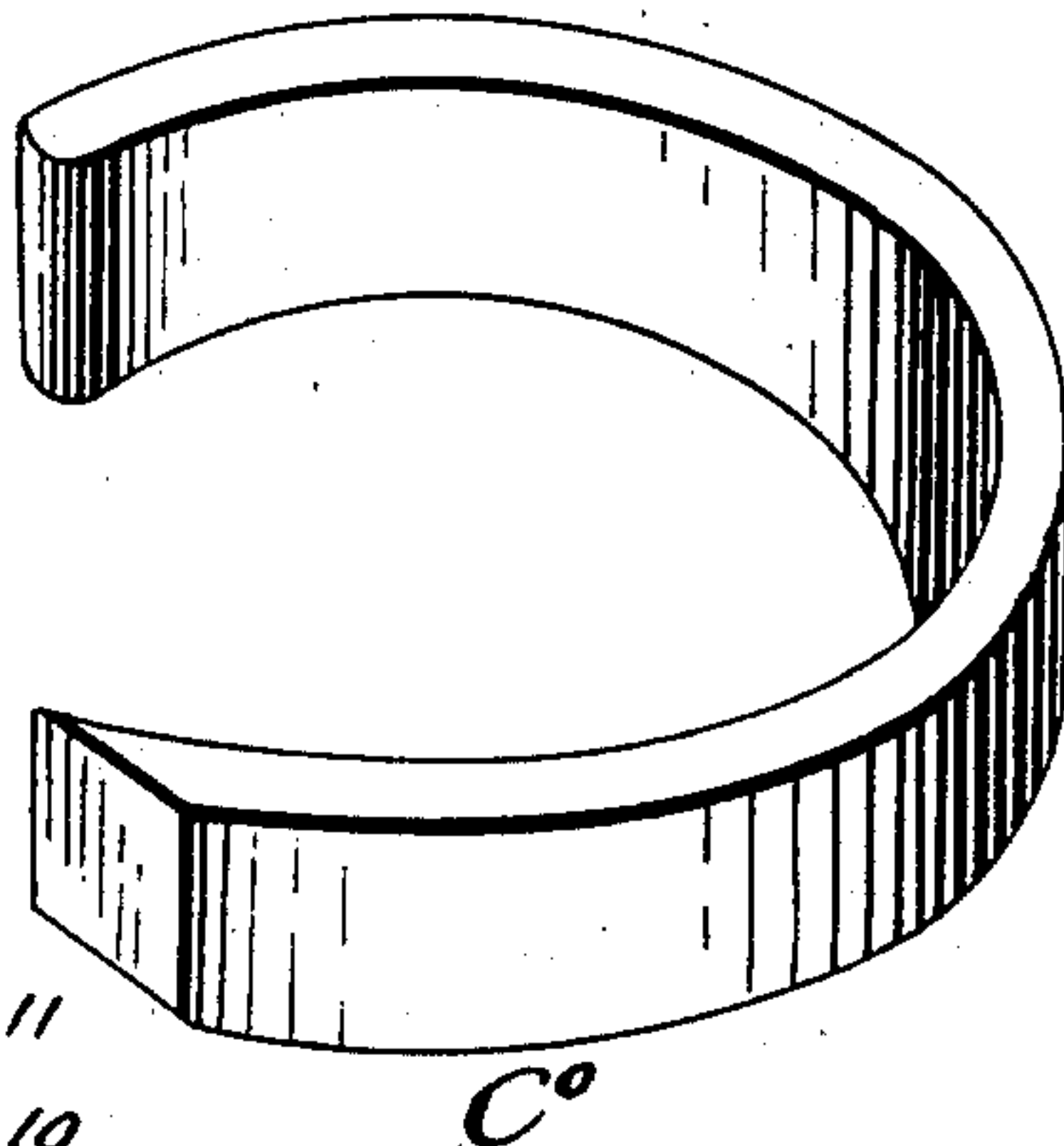
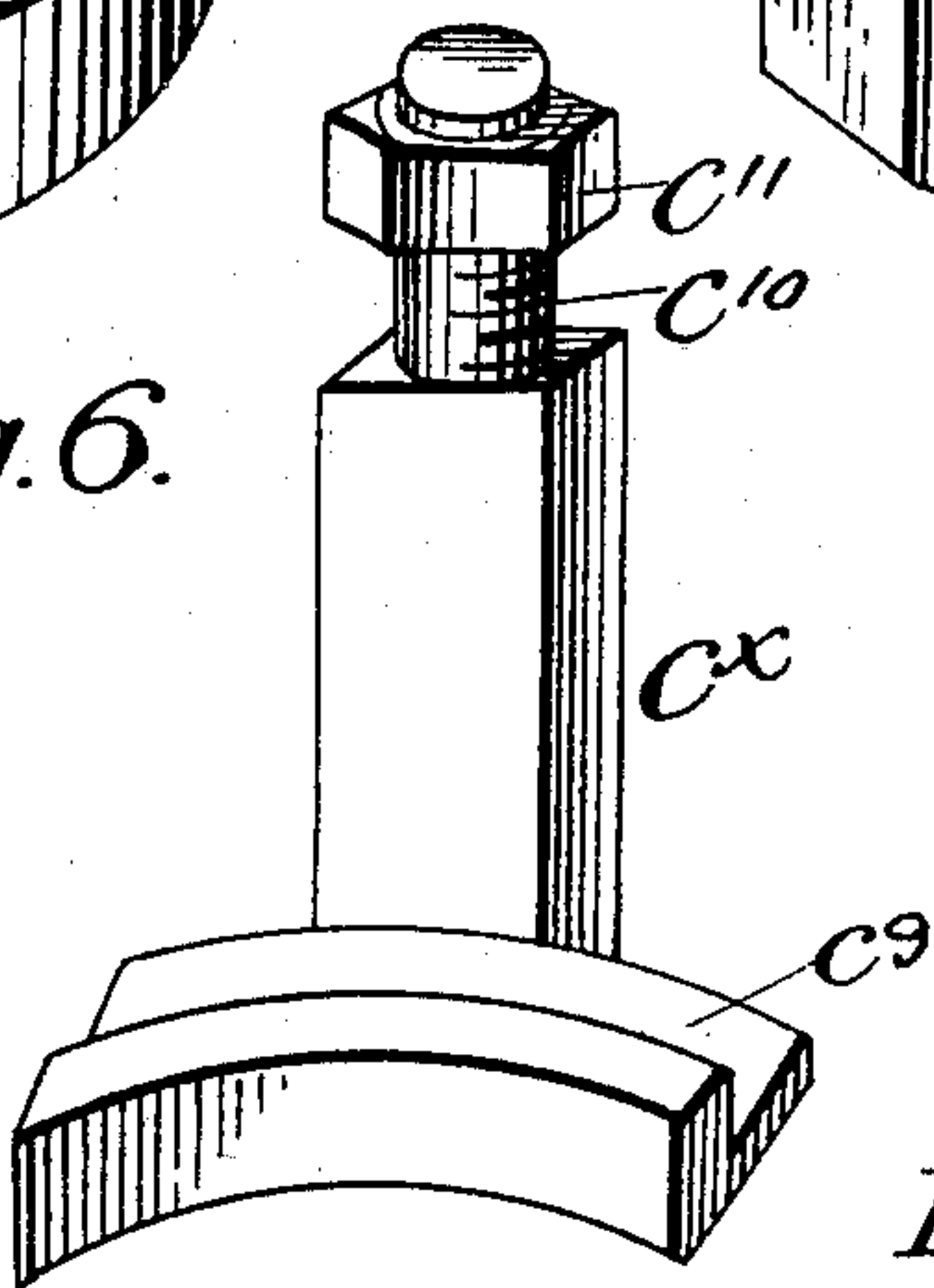


Fig. 6.



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# UNITED STATES PATENT OFFICE.

RICHARD STILLWELL, OF KINGSLAND, ARKANSAS.

## CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 655,126, dated July 31, 1900.

Application filed December 8, 1896. Serial No. 614,964. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD STILLWELL, a citizen of the United States, residing at Kingsland, in the county of Cleveland and State of Arkansas, have invented certain new and useful Improvements in Mill-Plane Attachments; 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 which it appertains to make and use the same.

This invention relates to improvements in cutter-heads for planing-machines; and it consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a portion of a planing-machine, showing the application of my invention. Fig. 2 represents an enlarged detail top plan view of one of my said improved cutter-heads. Fig. 3 represents a bottom plan view of the same. Fig. 4 represents an enlarged detail side elevation of said cutter-head. Fig. 5 represents an enlarged detail perspective view of one of the circular tenon-cutters. Fig. 6 represents an enlarged detail perspective view of one of the cutter-securing clamps. Fig. 7 represents an enlarged detail perspective view of one of the grooving-cutters.

A in the drawings represents the planing-machine table, B B the vertical power-shafts, and C C my improved cutters. Each of said cutters comprises a hub portion *c*, adapted to receive the upper end of the respective operating-shaft B and a head *c'*. The said hub *c* is provided at its upper end with an adjusting-bolt *c<sup>2</sup>*, adapted to bear against the upper end of the shaft B' and thus support the said head *c'* in the desired vertical position. The said hub *c* is also provided with a securing-bolt *c<sup>3</sup>*, whereby said hub *c* is firmly attached to the upper end of said shaft B when the desired vertical adjustment is secured. The said head *c'* is provided upon its upper side with two diametrically-arranged semicircular recesses *c<sup>4</sup>*, each of which is provided with a central enlargement *c<sup>5</sup>*, thus forming a segmental groove *c<sup>6</sup>*. Divided circular ring-cutters *c<sup>7</sup>*

and *c<sup>0</sup>* are adapted to be secured in said recesses *c<sup>4</sup>* and rest in said grooves *c<sup>6</sup>* by clamping-pieces *c<sup>x</sup>* passing through suitable slots *c<sup>8</sup>*, cut in the periphery of said head *c'*. Each of said clamps *c<sup>x</sup>* comprises a segmental grooved head *c<sup>9</sup>*, adapted to fit over the upper edge of the divided cutter, a screw-threaded shank *c<sup>10</sup>*, passing through a groove *c<sup>6</sup>*, and a securing-nut *c<sup>11</sup>*, adapted to screw upon the lower end of said shank and bind against the under side of the head *c'*. It will be observed from the foregoing description that when the said cutters *c<sup>7</sup>* are applied in the recesses *c<sup>4</sup>* and properly adjusted their cutting ends will project beyond the periphery of the said cutting-head *c'*. The under side of the said cutting-head *c'* is also provided with two ring-cutters of substantially the same construction and mounted in a similar manner to the cutters on the other side of the head. The said under cutters are arranged diametrically opposite each other and in positions midway between the upper cutters. The arrangement of the cutting-knives upon the upper and lower sides of the head A are such as to leave the desired free space between them, so that when said cutter is operated it will only cut the wood from the two edges of the strip being operated upon, thus leaving the desired central tongue for the tongue and groove of the flooring or ceiling being planed.

I do not care to limit myself to any particular style of circular cutter, as any design may be inserted into the cutting-head so as to cut fancy molding, beading, and the like. The cutters may be adjusted in the head to cut any desired depth by simply loosening the clamps and giving them a slight rotation in their respective recesses.

In operation the cutters *c<sup>7</sup>* are employed on one side of the machine and the cutters *c<sup>0</sup>* upon the opposite edges of the strip of lumber.

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

In a head of a cutter-head tool, a hub adapted to be mounted on the power-shaft, a collar adapted to adjust said hub on the shaft, a set-screw in said hub to prevent turning on the shaft and a locking-nut on said shaft above said collar, a circular flange projecting at right angles to said hub provided alternately



on either surface with circular recesses intersecting the periphery of the flange provided with grooves in their bottom next the side walls, and a square hole through the flange  
5 next said recesses, ring-shaped cutters with one edge rabbeted, adapted to set in said recesses, their cutting edges projecting beyond the periphery of said flange, clamps adapted to overlap the upper part of said cutter, said  
10 clamps being provided with square shanks adapted to fit in the square holes in said

flange, said shanks having a round screw-threaded end, and nuts adapted to screw on the ends of said shanks, substantially as shown and described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

RICHARD STILLWELL.

Witnesses:

W. W. MITCHELL,  
R. L. HOLLIS.