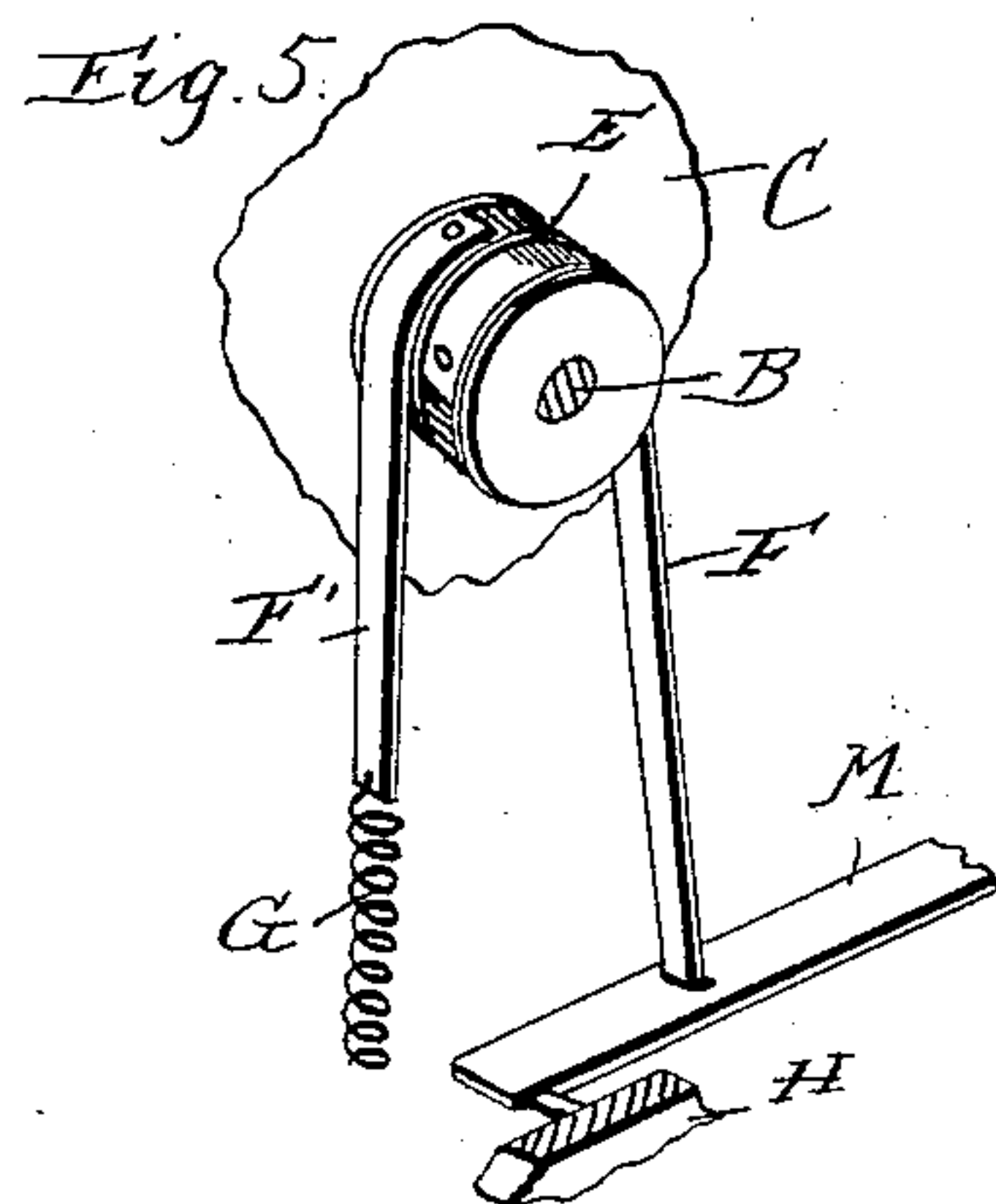
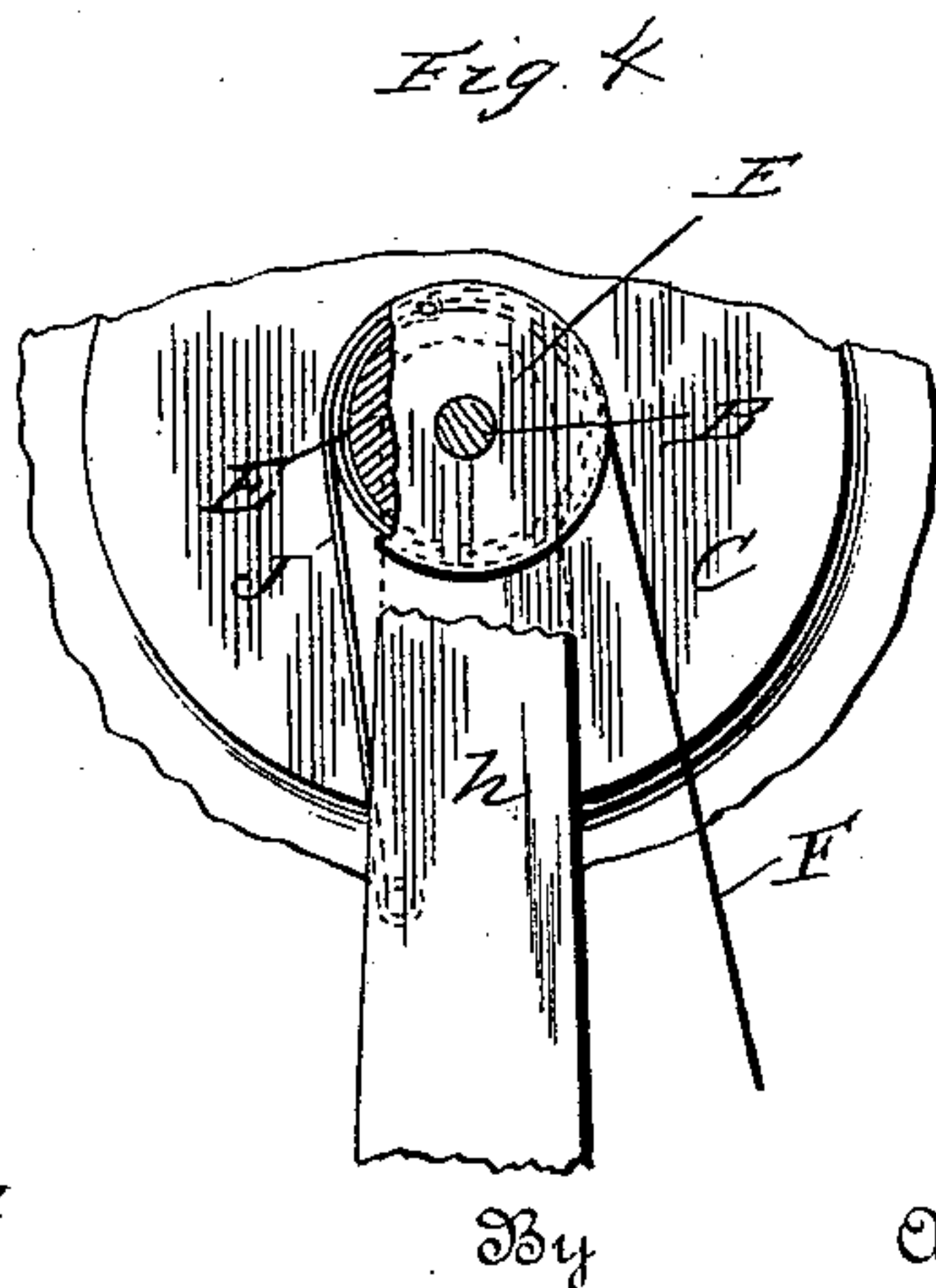
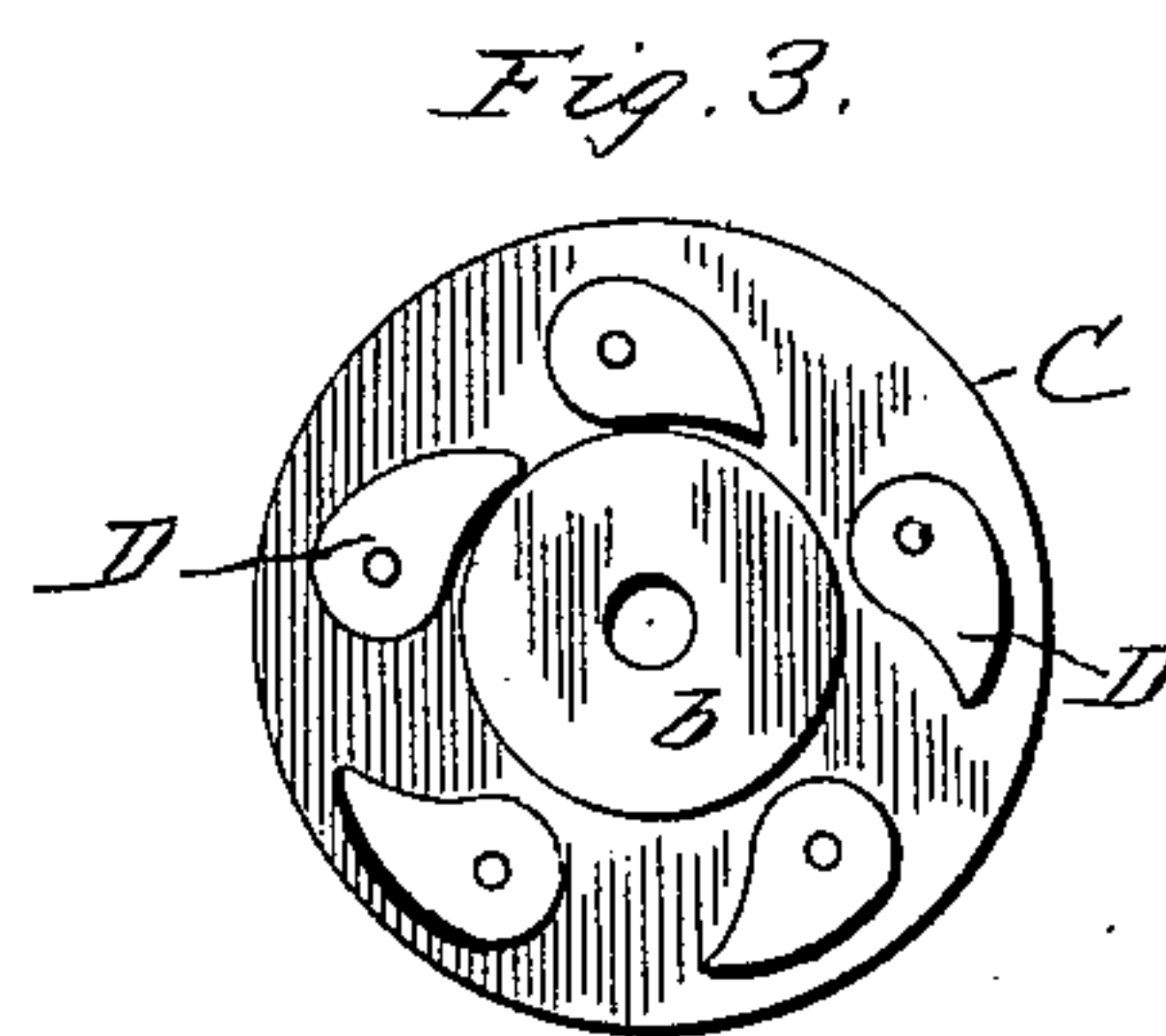
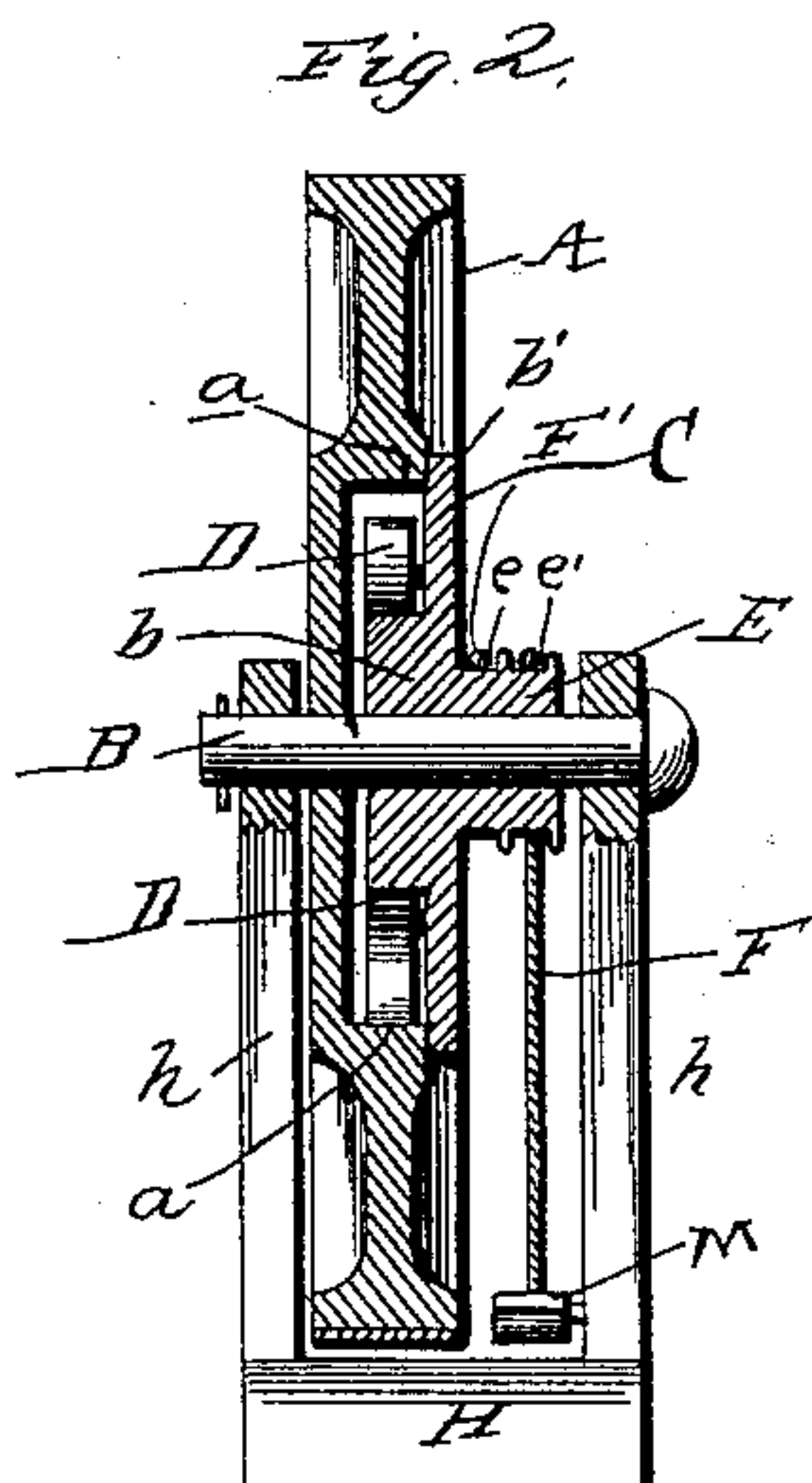
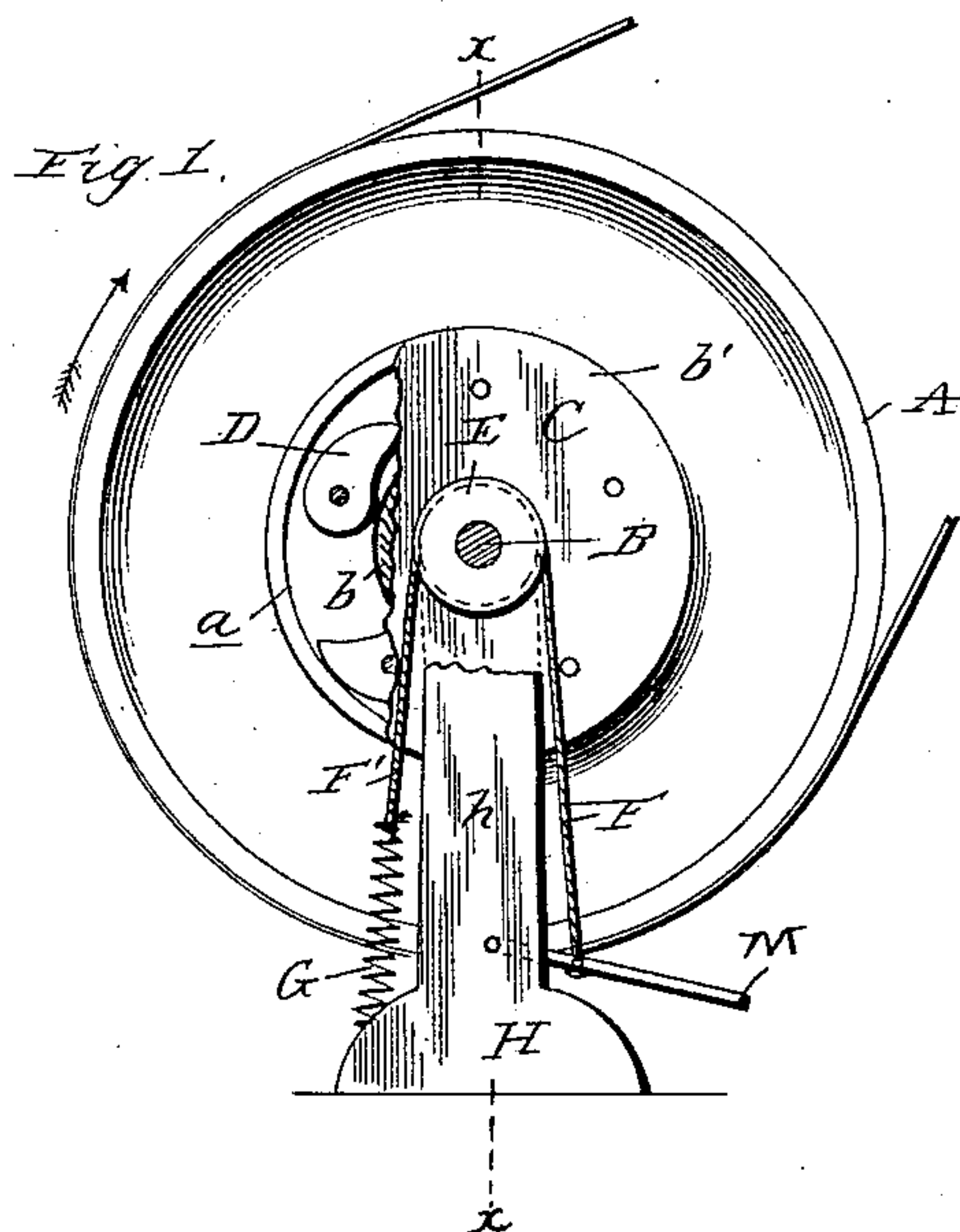


(Model.)

W. E. CANEDY.  
INTERMITTENT GRIP DEVICE.

No. 435,279.

Patented Aug. 26, 1890.



Witnesses  
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By

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*R. A. Lacey*

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# UNITED STATES PATENT OFFICE.

WILLIAM E. CANEDY, OF DOWNER'S GROVE, ILLINOIS, ASSIGNOR OF ONE-HALF TO WM. H. EDWARDS, OF SAME PLACE.

## INTERMITTENT GRIP DEVICE.

SPECIFICATION forming part of Letters Patent No. 435,279, dated August 26, 1890.

Application filed July 2, 1889. Renewed May 19, 1890. Serial No. 352,277. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. CANEDY, a citizen of the United States, residing at Downer's Grove, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Intermittent Grip Devices; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to devices for converting a reciprocating motion into a continuous rotary movement; and it consists of the novel features which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a side view, parts being broken away, of a device of my invention; Fig. 2, a vertical cross-section about on the line X X of Fig. 1; Fig. 3, a side view of the operating-disk; Fig. 4, a detail of a modification. Fig. 5 is a detail perspective view of the operating-disk, showing the relative arrangement of the straps, spring, and treadle.

The fly-wheel A, mounted on the shaft B, is recessed in its side to form the flange or annular shoulder *a*. The operating-disk C, placed on the same shaft B, has a circular portion *b*, which enters the recess in the wheel, and a flange *b'* to overlap the flange or shoulder, as shown. The friction-pawls D, pivoted eccentrically to the operating-disk, are provided to bind between said portions *b* and the flange *a* and turn the wheel A forward when the said disk C is rotated forward. The tubular extension E, projecting laterally from the side of the disk C, has two grooves *e* and *e'*, around which is passed or wound the straps or cords F and F' in reverse directions. The strap F is connected at its upper end with the tubular extension E, over which it passes, and is connected at its lower end with a treadle M or other convenient means for operating it,

and the strap F', likewise connected with the said tubular extension, over which it passes in a reverse direction, is connected by the spring G with a stationary part of the frame on which the wheel A is mounted. For convenience the frame is shown composed of the base-plate H and the standards *h h*, the latter forming supports for the shafts B.

The operation of the device is as follows: When the strap F is pulled upon, it rotates the disk C, and the friction-pawls, binding between the circular portion *b* of disk C and the shoulder *a* of wheel A, cause the latter to rotate with it. When the strap F is released, the spring G, previously distended, reacts and causes the disk C to rotate in a reverse direction and rewinds the strap F on the tubular extension E. On the return or backward movement of the disk C the friction-pawls ride on the shoulder or flange *a*. The momentum of the wheel A is sufficient to cause it to rotate forward during the return of the disk C. The office of spring G is simply to return the disk to its normal position and rewind the strap F on the extension E. Any means that will subserve the same purpose will answer equally as well as the spring G and the strap F'. In Fig. 4 is shown a coil-spring J, one end being fastened to the tubular extension and the other end to a stationary object, as the standard of the frame. This spring J is provided to replace the cord or strap F' and the spring G and rewind the strap or cord F on the tubular extension when released after being unwound from said extension.

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

The hereinbefore-specified intermittent grip device, composed of the wheel A, having a central depression to form an annular shoulder *a* and mounted on shaft B, the disk C, mounted on said shaft B and having an exterior tubular projection E, which is provided with two grooves *e* and *e'*, and having a circular portion *b*, which enters the said depression in

wheel A, and having a flange  $b'$  to overlap  
the sides of the said depression, friction-pawls  
between the said shoulder  $a$  and the periph-  
ery of the circular portion  $b$ , pivoted to the  
5 said disk, and two straps wound in opposite  
directions on the tubular extension E, one  
strap being connected with a treadle, the other  
having a yielding connection with a suitable

support, substantially as described, for the  
purpose set forth. 10

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

WILLIAM E. CANEDY.

Witnesses:

S. E. VERMILYEA,  
H. H. ROSE.