

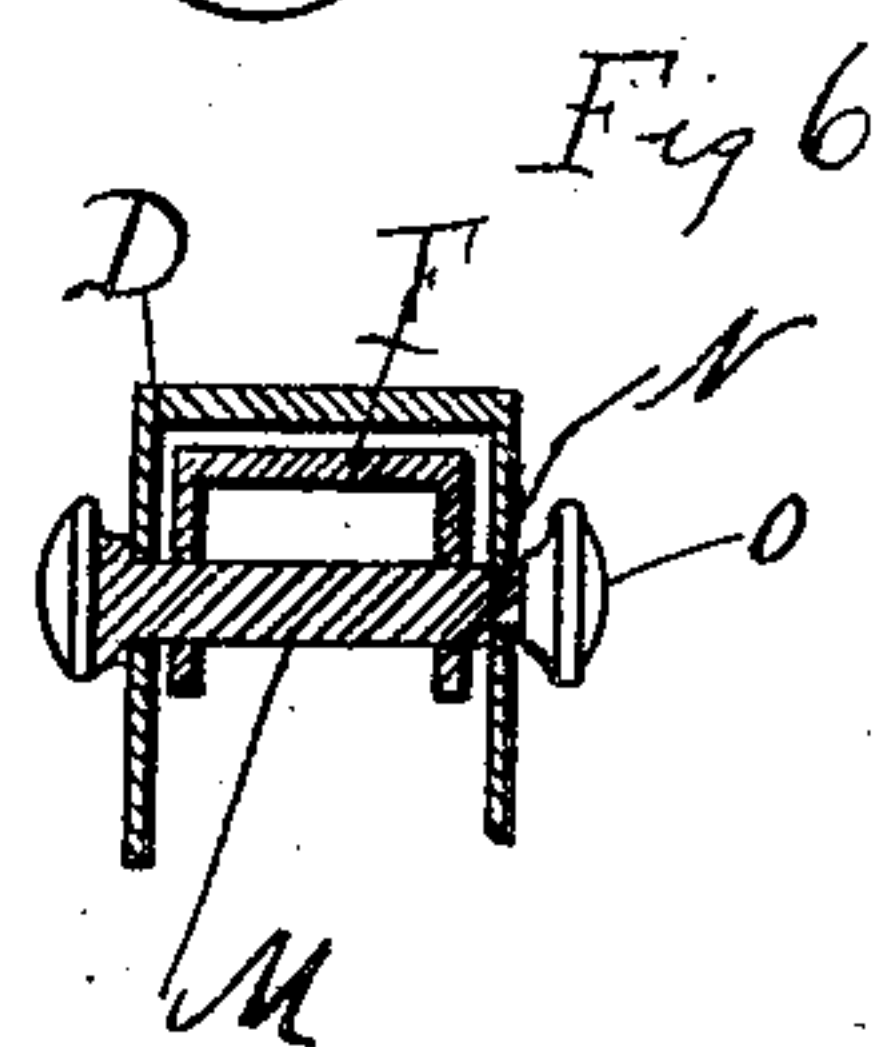
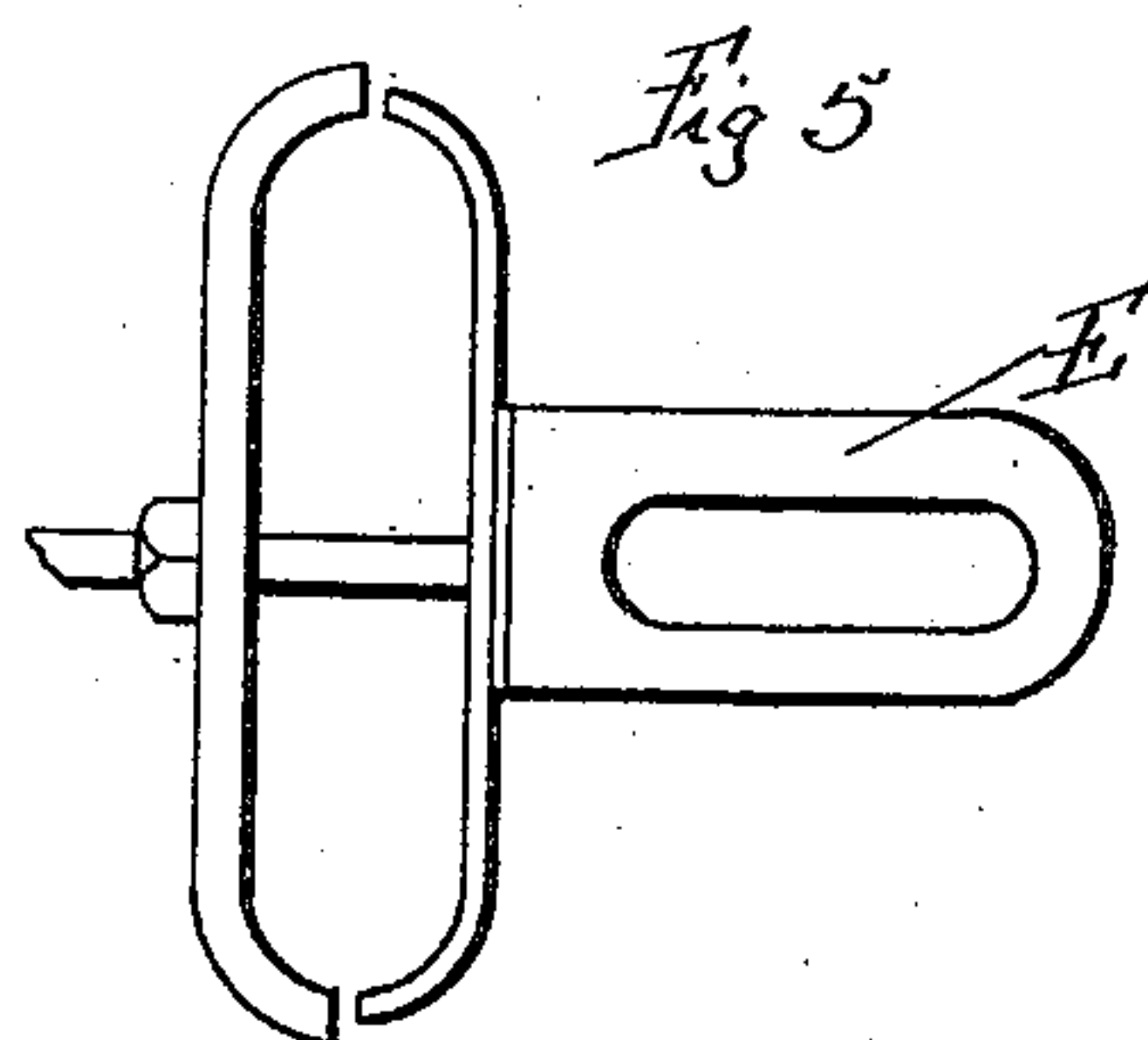
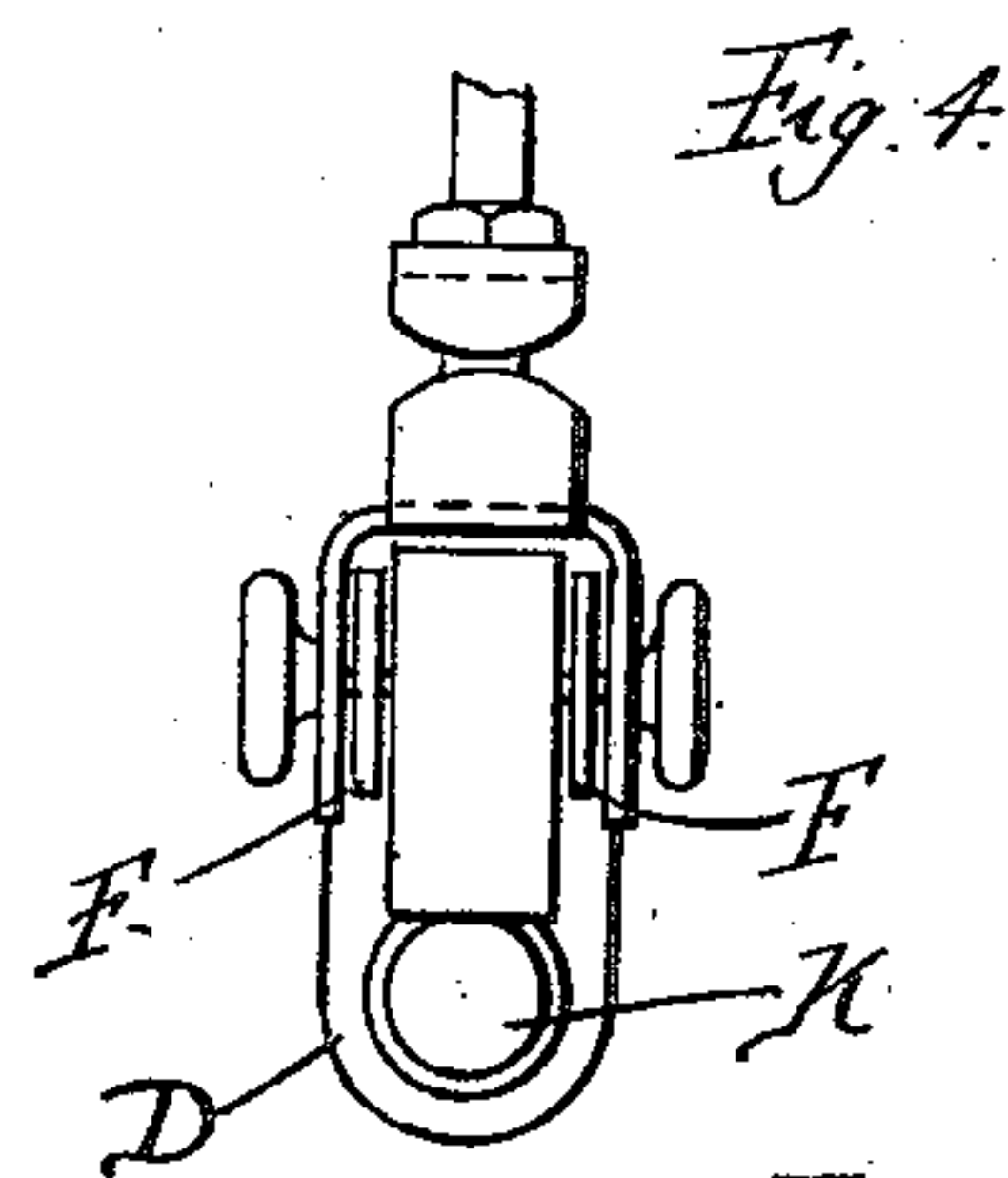
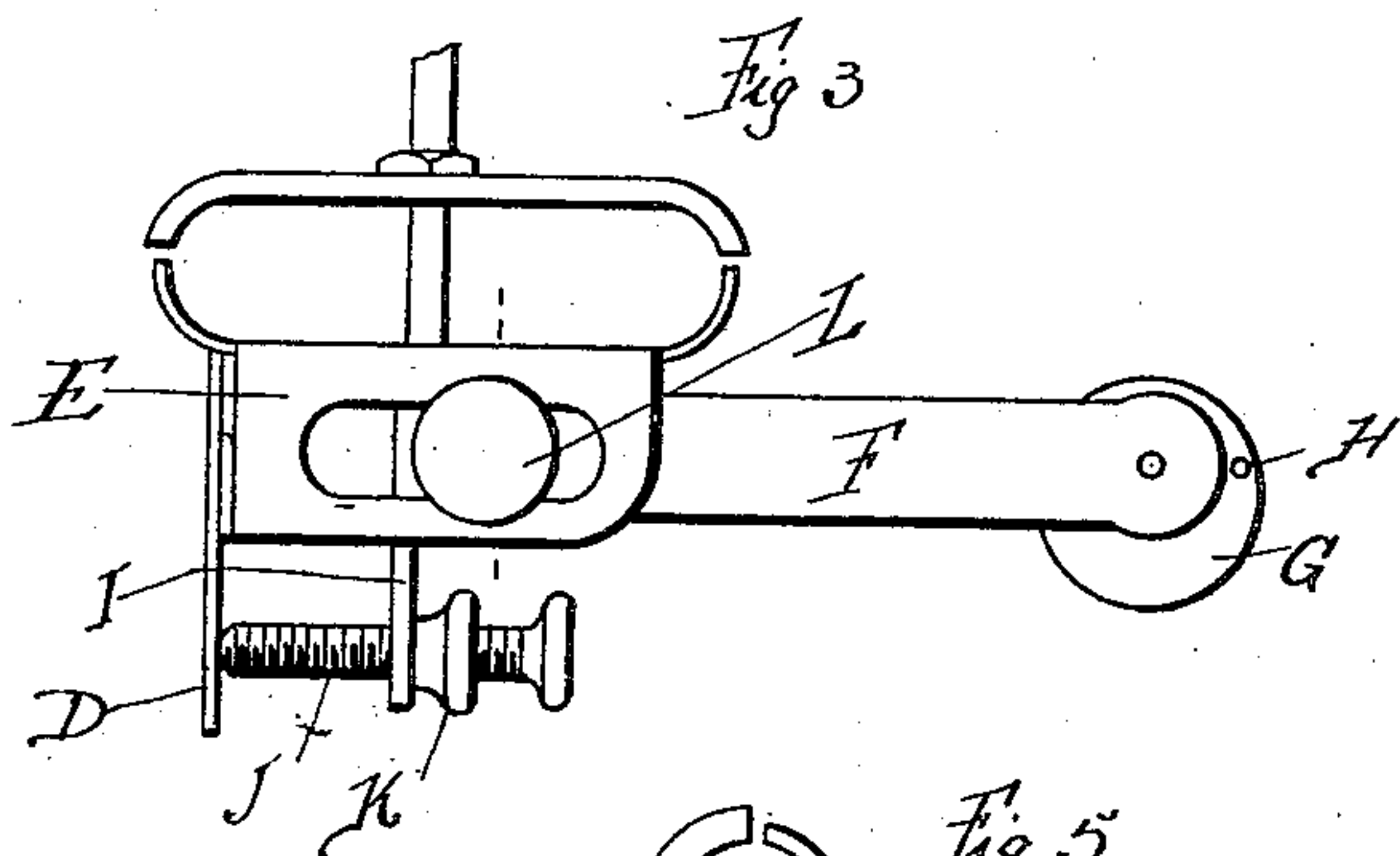
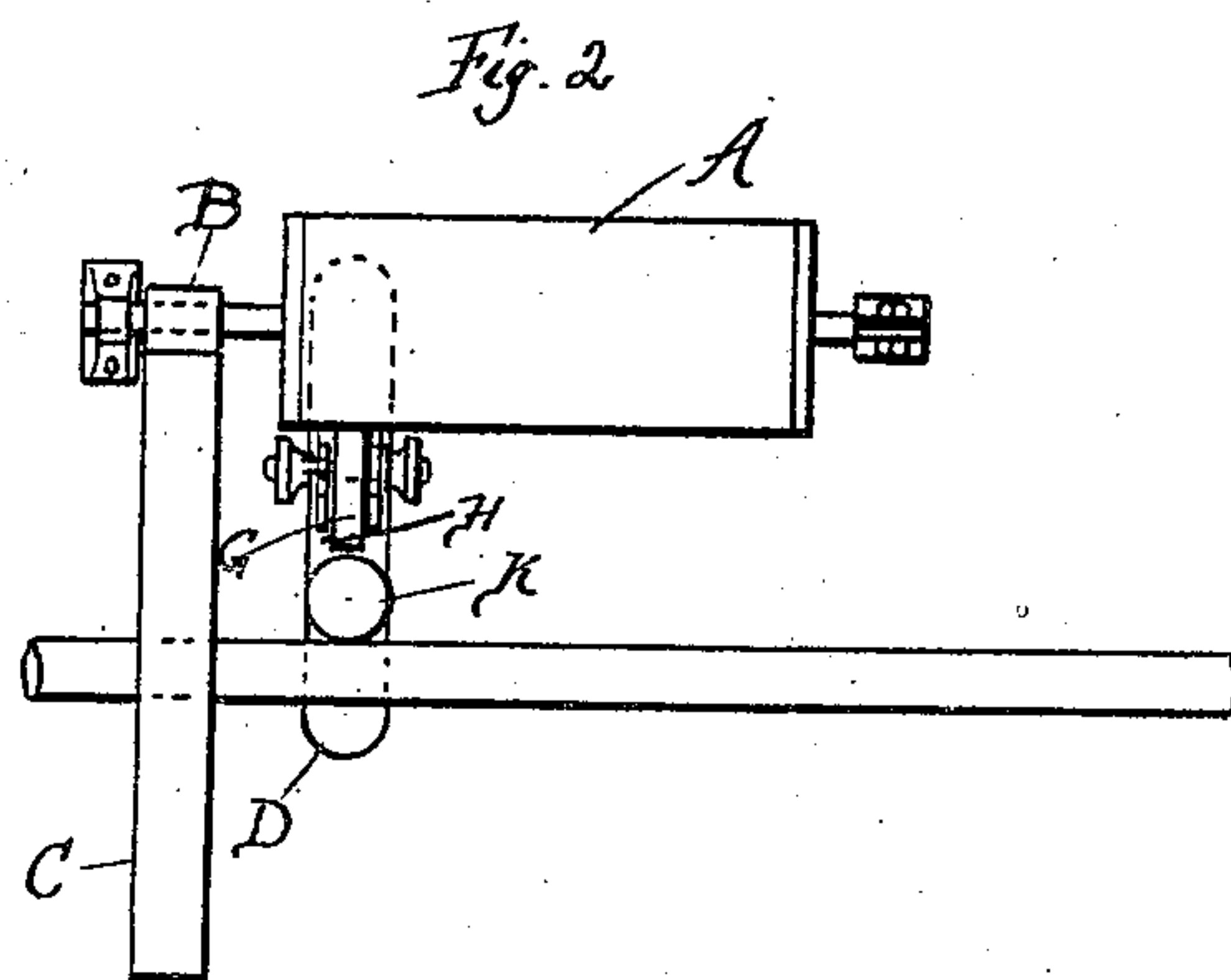
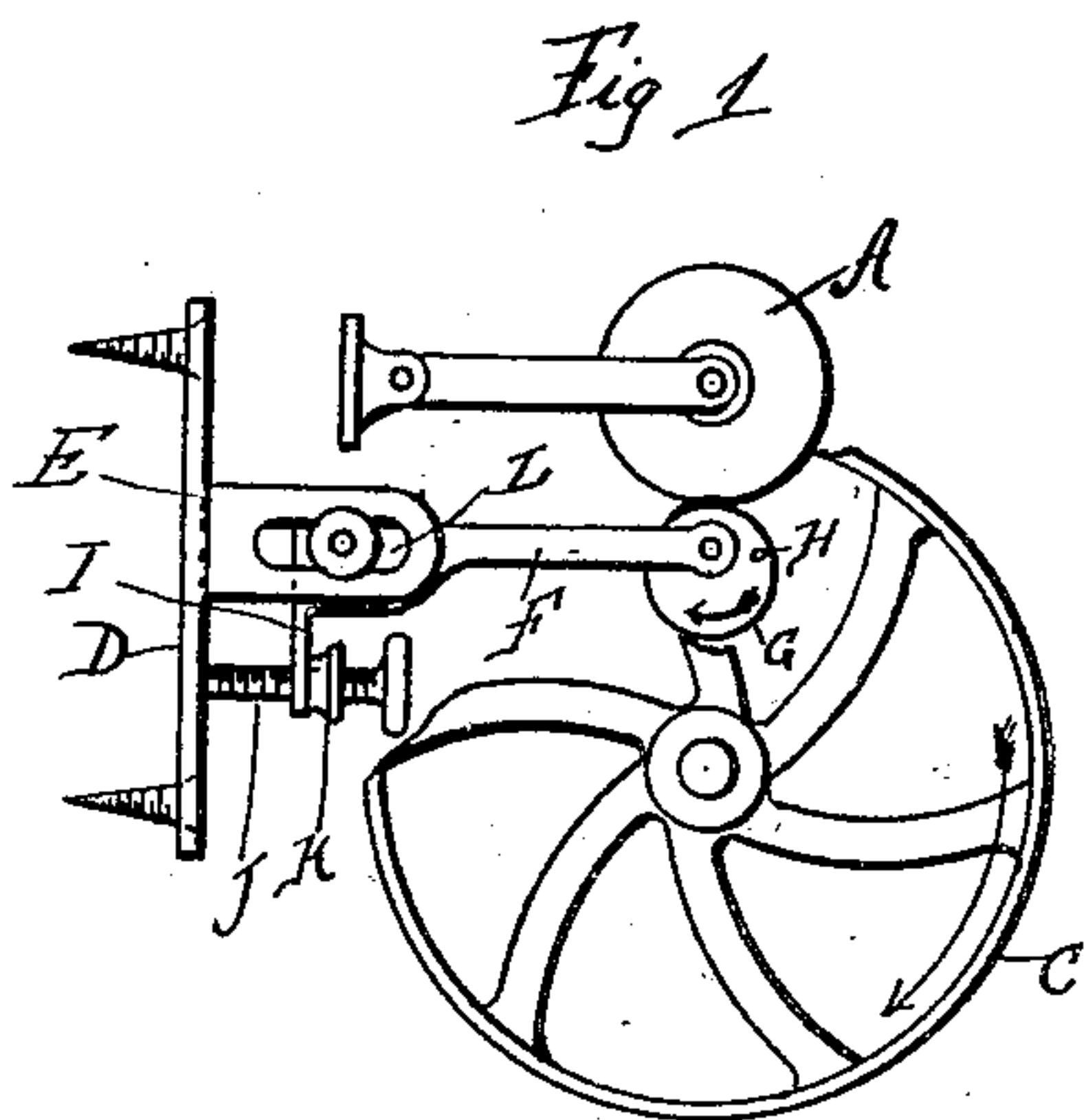
No. 880,853.

PATENTED MAR. 3, 1908.

T. WRIGHT.

STOP MOTION AND REGULATOR FOR WINDING MACHINES.

APPLICATION FILED AUG. 2, 1906.



WITNESSES:
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THOMAS WRIGHT, OF READING, PENNSYLVANIA.

STOP-MOTION AND REGULATOR FOR WINDING-MACHINES.

No. 880,853.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed August 2, 1906. Serial No. 328,851.

To all whom it may concern:

Be it known that I, THOMAS WRIGHT, a citizen of the United States, residing at Reading, county of Berks, and State of Pennsylvania, have invented a certain new and useful Improvement in Stop-Motions and Regulators for Winding-Machines, of which the following is a specification.

My invention relates to a new and useful improvement in stop motions and regulators for winding machines, and has for its object to provide a simple, effective and durable device of this description which will automatically lift the spool out of action when it has been filled to a predetermined size.

A further object of my invention is to provide for the proper adjustment of the eccentric roll so as to bring it into perfect alignment with the vertical center of the spool or bobbin to be wound.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of a portion of a winding machine showing my improvement applied thereto. Fig. 2, a front view thereof. Fig. 3, an enlarged side elevation of my improvement showing one form of clamp for attaching it to the machine. Fig. 4, a front view thereof. Fig. 5, a detail view showing a slightly modified form of a clamp for attaching my improvement to the frame of the machine. Fig. 6 is a sectional view of the detail shown in Fig. 4.

In a winding machine the spool upon which the thread is to be wound is mounted upon a spindle, and the spindle is provided with a small wheel which is revolved by gravity contact with the friction pulley.

A represents the spool, B the friction wheel upon the spindle on which the spool is mounted and C the friction pulley.

My improved stop motion attachment consists of a plate D having the lugs E projecting therefrom between which are pivoted the arms F, the latter having journaled in their outer ends the eccentric roll G. This roll has set therein a stop pin H so placed that when

the longest diameter of the eccentric roll reaches the highest vertical point this pin will come in contact with the arms F thereby stopping the further revolving of the roll in the direction of the arrow marked thereon.

The arms F have formed therewith the downwardly projecting lug I through which is threaded the adjusting screw J, the latter having a jam nut K run thereon, the object of which arrangement is to adjust the height of the eccentric roll relative to the spool A so that when the proper amount of thread has been wound upon said spool the surface thereof will come in contact with the eccentric roll and cause the latter to revolve, and as this eccentric roll revolves in the direction of the arrow marked thereon its longest diameter will ride beneath this spool and elevating the same so as to lift the friction wheel B out of contact with the friction pulley C, thus causing the spindle upon which the spool is located to cease revolving and consequently stop the winding of the thread upon the spool.

When the adjusting screw J has been set at the proper adjustment the jam nut K is tightly set up so as to avoid the accidental displacement of the adjusting screw as will be readily understood. As the distance of the spool spindles from the point to which the attachment may be secured varies in different machines, and as the adjustment of the eccentric roll by means of the adjusting screw causes it to describe an arc thereby carrying it toward or from the true vertical center of the spools, I have found it necessary to provide means for adjusting the arms F in which the eccentric roll is journaled in a horizontal line, and this I accomplish by slotting the lugs E as indicated at L and pivoting the arms on the stud M which is adapted to pass through the larger of the slots L and shoulder against the smaller slot on the opposite side of the lugs and terminates in a threaded end N on which is run the thumb nut O, this will permit the right adjustment of the arms within the lugs.

The great advantage of my improvement consists in the eccentric roll which normally stands in the position shown in Figs. 1 and 3, the shorter diameter being at the top, but as soon as this upper surface comes in contact with the spool the long diameter of the roll will be brought to the top, thus quickly raising the spool out of action, and I have found in practice that by this quick eccentric move-

ment of the roll there is absolutely no friction on the material whatever, and it will prevent a great amount of material from going to waste, as with this attachment on a frame it is impossible for a spool to run too full and rove the sides. At present a great amount of material goes to waste in this manner which is a great loss and annoyance to manufacturers, and in some instances this loss is as high as twenty percent. of the material in the winding department from bobbins being wound too full and the material roving over the sides. By the use of my improvement it will be impossible for any material to be wasted in this manner because when the regulator is properly adjusted it will positively and automatically and without any attention of the operator whatever throw the spool or bobbin out of action when it has been wound to a predetermined size. Thus it will be seen that the operator can produce more and better work thereby reducing the cost of spool winding.

Having thus fully described my invention, what I claim as new and useful, is—

1. In a stop motion and regulator for winding machines the combination of a spool on which thread is wound, a spindle upon which the spool is mounted, a friction wheel carried by the spindle for turning the spool, a friction pulley upon which the friction wheel is adapted to bear, a pair of pivoted arms having vertical adjustment and independent longitudinal adjustment and an eccentric

roll pivoted between said arms and so located relative to the spool that when the latter is full its surface will come in contact with the short diameter of said roll causing it to revolve whereby its long diameter will be turned upward and disengage the friction wheel and roller, substantially as described.

2. In a stop motion and regulator for winding machines the combination of a spool on which thread is wound, a spindle upon which the spool is mounted, a friction wheel carried by the spindle for turning the spool, a friction pulley upon which the friction wheel is adapted to bear, a pair of pivoted arms having vertical adjustment and independent longitudinal adjustment and an eccentric roll pivoted between said arms and so located relative to the spool that when the latter is full its surface will come in contact with the short diameter of said roll causing it to revolve whereby its long diameter will be turned upward and disengage the friction wheel and roller, a pin projecting from the eccentric roll to stop the latter when its long diameter is at the top, substantially as described.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

THOMAS WRIGHT.

Witnesses:

CHAS. STEINER,
HERBERT PURSEL.