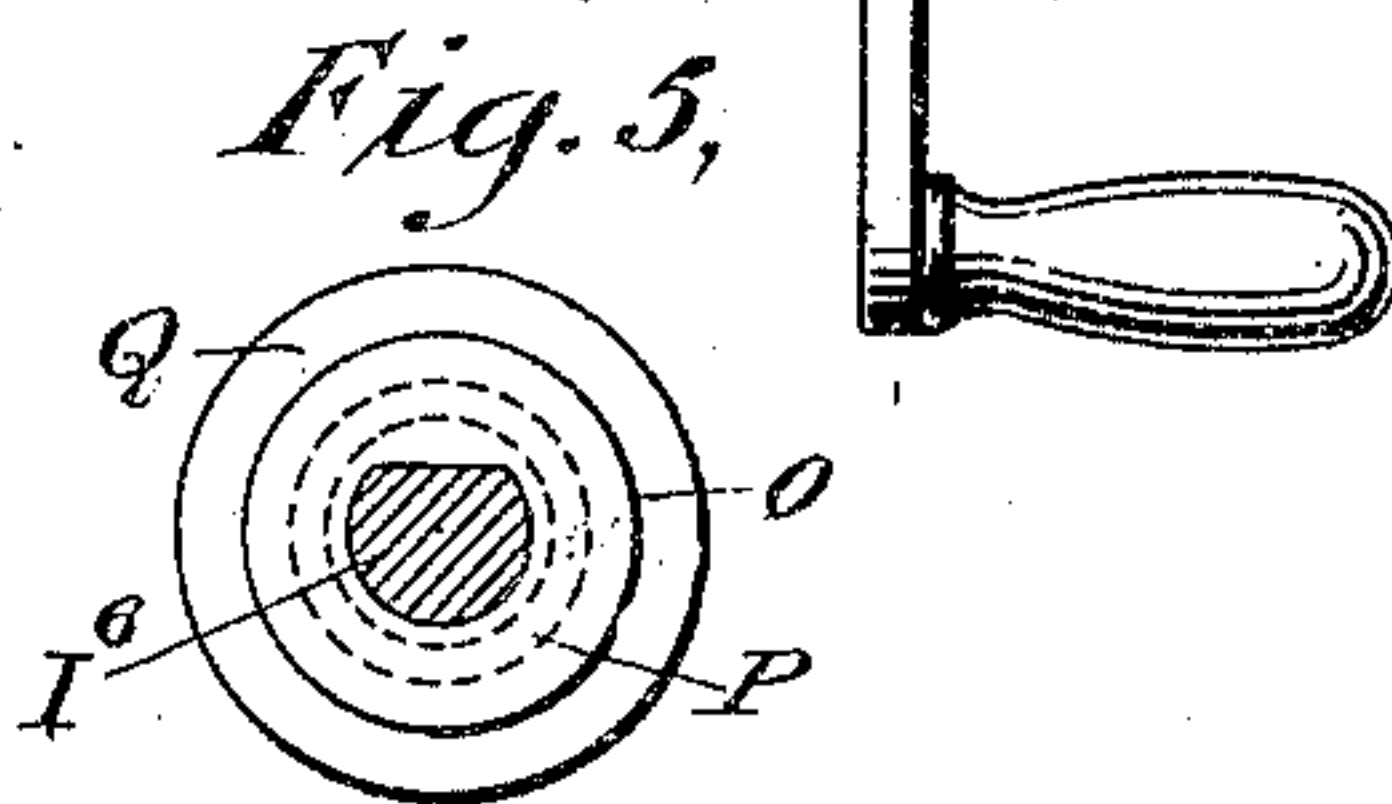
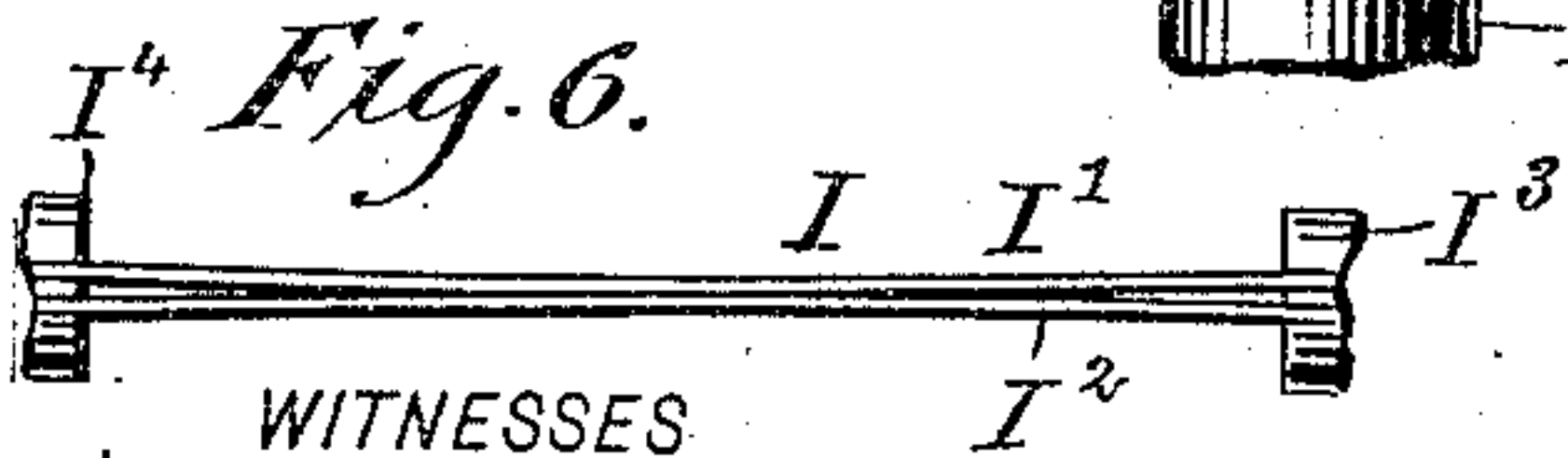
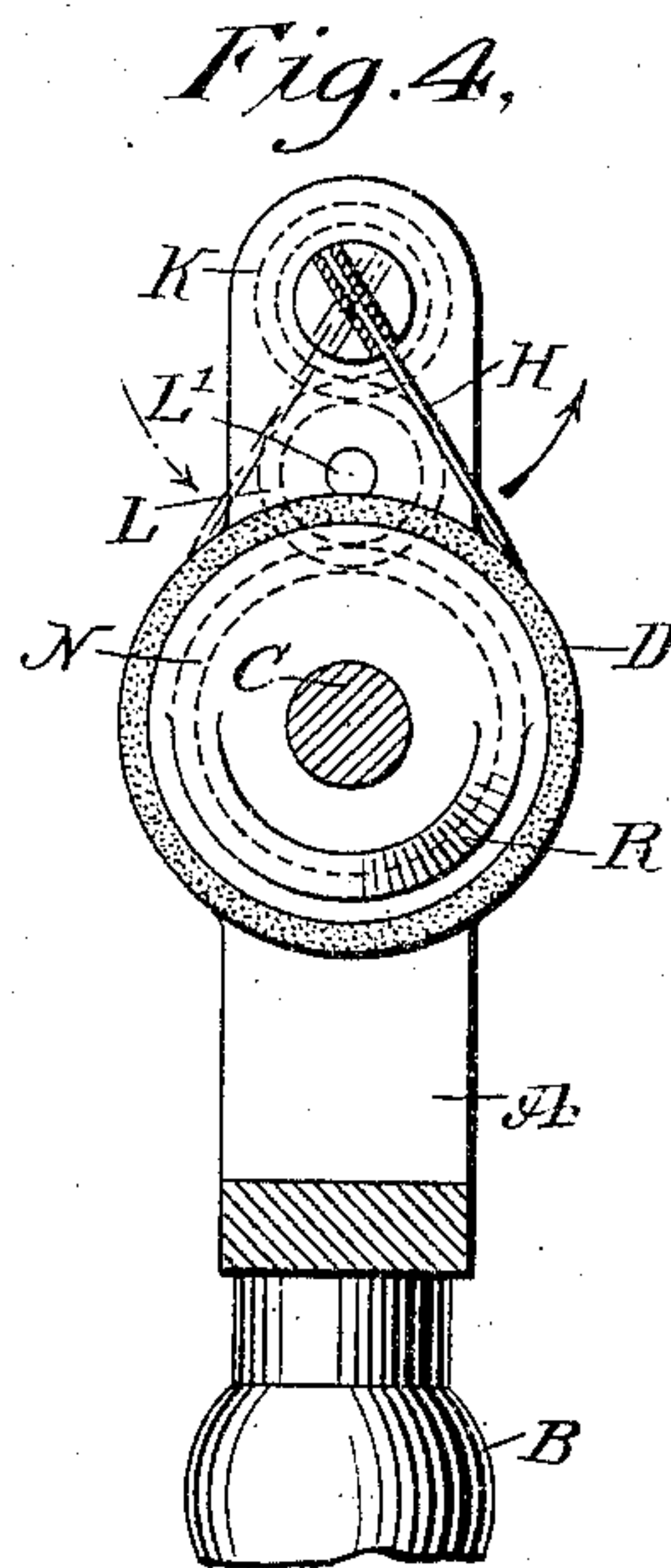
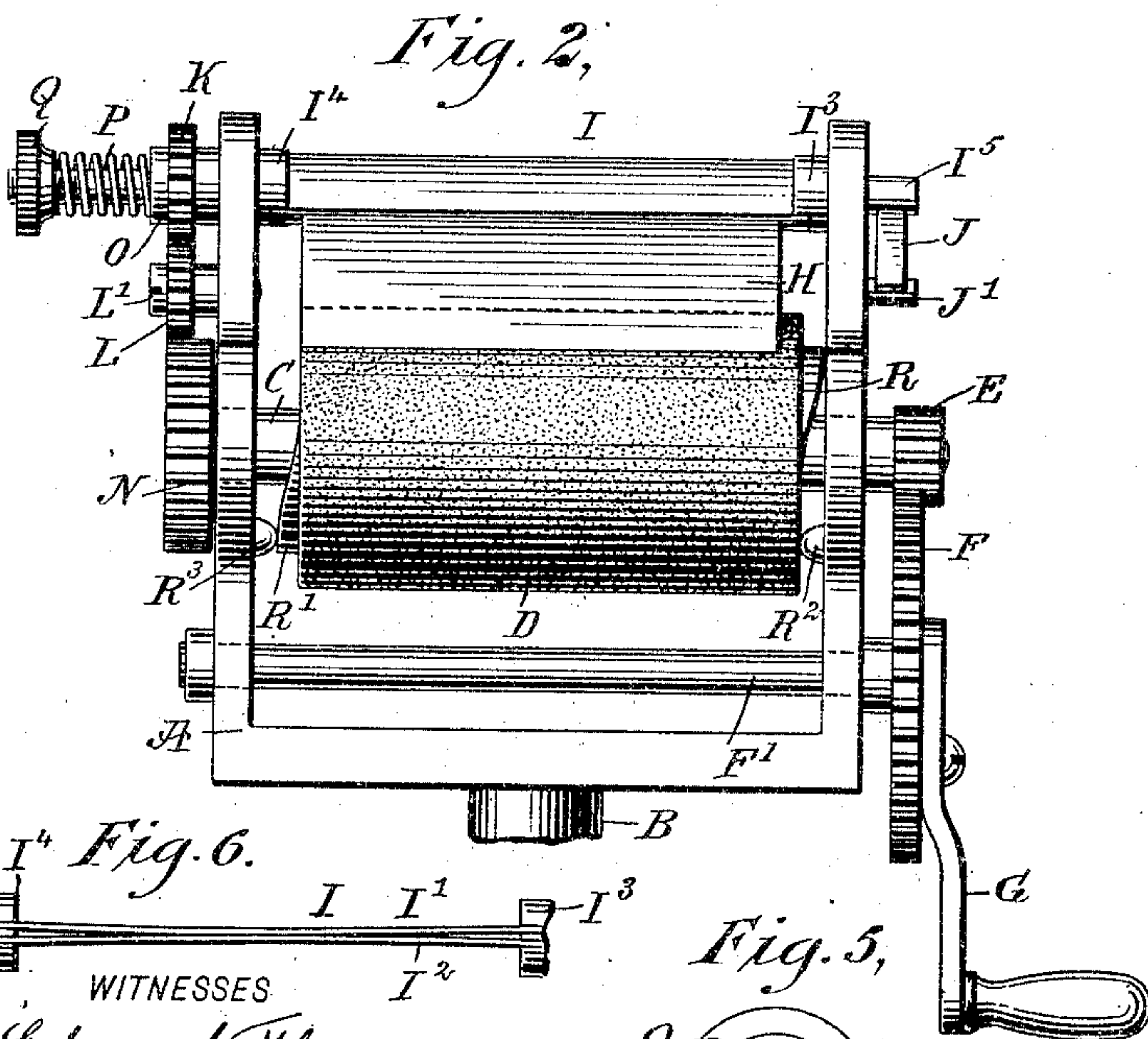
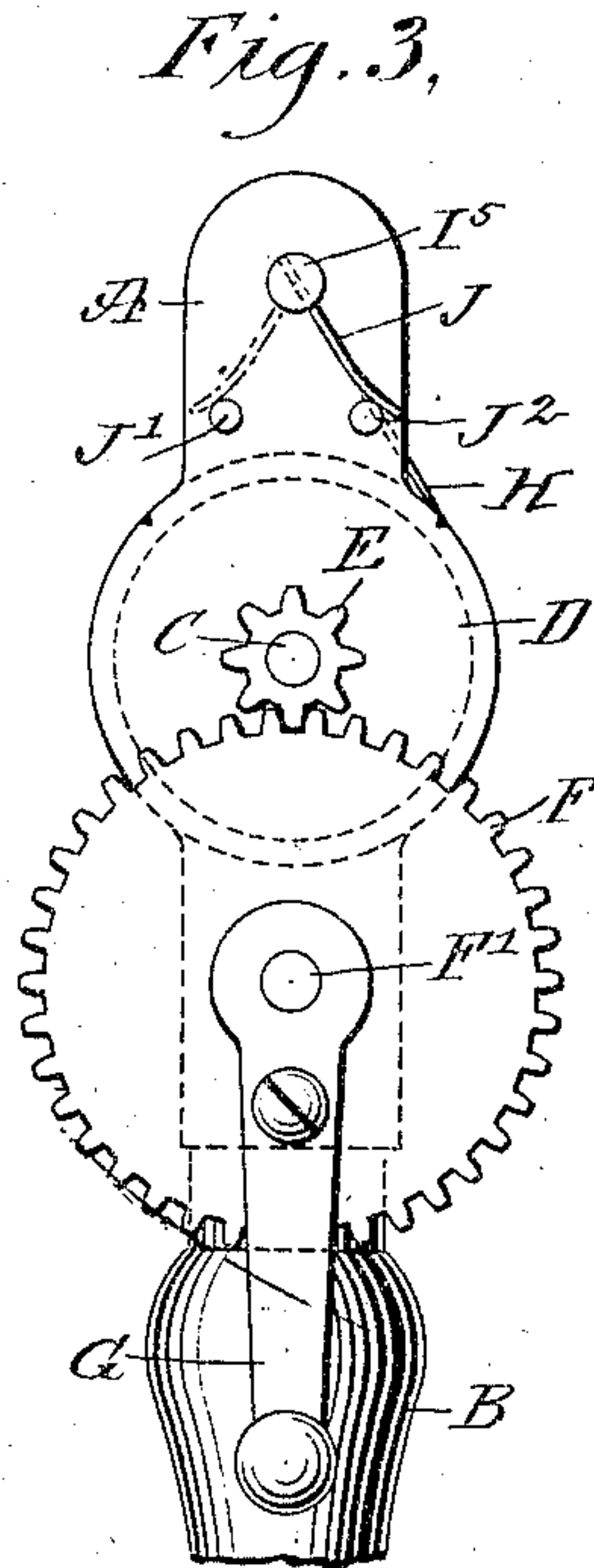
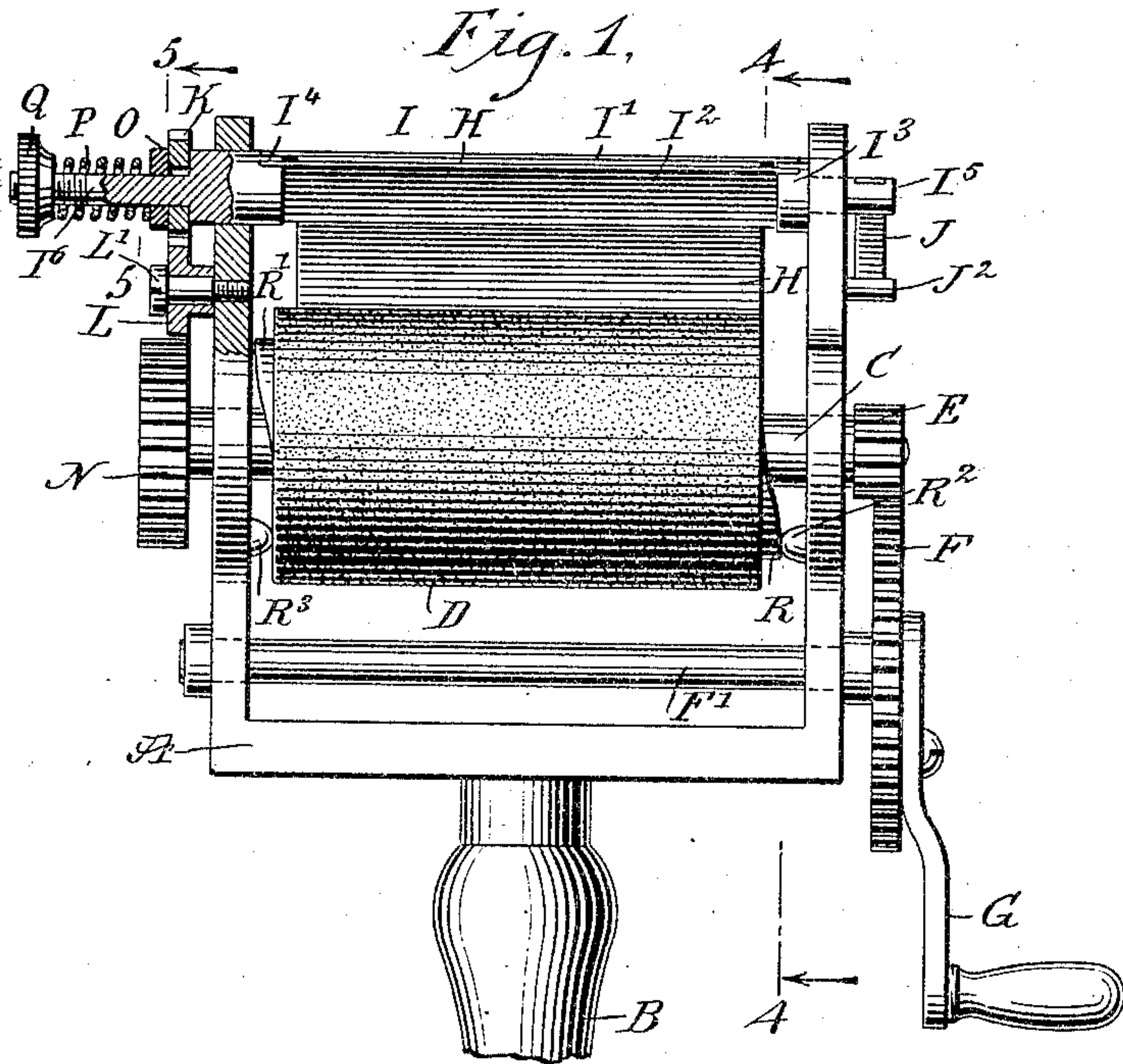


967,832.

Patented Aug. 16, 1910.



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STROPPING-MACHINE.

967,832.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed October 16, 1908. Serial No. 457,983.

To all whom it may concern:

Be it known that I, ALLISON A. PRATT, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Stropping-Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved stropping machine for stropping razor blades, knives and other cutting implements, the stropping machine being arranged to hold one side of the cutting edge of the blade in contact with a revolving stropping roller, for any desired length of time, and on turning the stropping roller in the reverse direction to automatically reverse the blade relative to the roller, with a view to bring the other side of the cutting edge in contact with the stropping roller.

The invention consists of novel features and parts and combinations of the same, which will be more fully described herein-after and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the improvement, parts being in section; Fig. 2 is a like view of the same showing the parts in a different position; Fig. 3 is a side elevation of the improvement; Fig. 4 is a cross section of the same, on the line 4—4 of Fig. 1; Fig. 5 is an enlarged cross section of the friction reversing device, the section being on the line 5—5 of Fig. 1; and Fig. 6 is a plan view of the blade holder.

The frame A of the stropping machine is provided with a suitable handle B, and in the said frame is journaled a roller shaft C carrying a roller D having a peripheral face of a suitable stropping material, such as leather and the like. On one end of the roller shaft C is secured a pinion E in mesh with a gear wheel F, having its shaft F' journaled on the main frame A, and on the outer face of the gear wheel F is secured a handle G adapted to be taken hold of by the operator, for turning the gear wheel F, with a view to rotate the pinion E, the shaft C and the stropping roller D in either a forward or a backward direction, according

to the direction in which the handle G is turned.

The blade H to be sharpened is removably held in a rocking blade holder I, journaled on the frame A, and arranged in such a manner that it is automatically reversed on reversing the motion of the stropping roller D, with a view to bring either side of the cutting edge of the blade H in contact with the peripheral face of the stropping roller D, as will be readily understood by reference to Figs. 1, 2 and 4.

The rocking blade holder I consists essentially of two plates I¹, I², made of steel or other spring metal, and secured at its ends in shafts I³, I⁴, of which the shaft I³ has a reduced end I⁵, journaled in one side of the frame A, and carrying at its outer end a flat spring J adapted to engage stops J¹, J², held on the frame A, the flat spring J serving to automatically swing the cutting edge of the blade H out of contact with the peripheral face of the stropping roller D at the time the latter is reversed, so that the cutting edge of the blade H is not liable to cut into the stropping roller D at the time of reversing the said roller. The shaft I⁴ which is also mounted to turn in the frame A, is provided with a reduced portion I⁶, on which is mounted to rotate loosely a gear wheel K in mesh with an intermediate gear wheel L, journaled on a stud L' held on the frame A, and the said intermediate gear wheel L is in mesh with a gear wheel N, secured on the roller shaft C. A washer O is mounted on the reduced portion I⁶, so as to slide forward and to turn with the same, and the said washer O is pressed against the outer face of the gear wheel K by a spring P coiled on the reduced portion I⁶ of the blade holder I. The outer end of the spring P abuts against a nut Q screwing on the outer threaded end of the reduced portion I⁶, to permit the operator to adjust the tension of the spring P, so that the washer O presses with more or less force against the gear wheel K, to hold the latter against the end of the shaft I⁴. Now when the stropping roller D is turned by the operator turning the handle G, it is evident that the gear wheel N rotates the intermediate gear wheel L, and the latter rotates the gear wheel K, so that a rocking motion is given to the blade holder I, to swing the cutting edge of the blade H into contact with the

peripheral face of the stropping roller D, and when the rotation of the stropping roller D is continued, the gear wheel K rotates loosely on the reduced end I^o of the shaft I⁴. Now when the motion of the stropping roller D is reversed, the blade holder I is rocked in a reverse direction, so that the blade I is swung over, to bring the other side of its cutting edge in contact with the peripheral face of the stropping roller D, and on further rotation of the stropping roller D, the pinion K rotates again loosely on the reduced portion I^o of the blade holder I.

From the foregoing, it will be seen, that by the operator turning the handle G in one direction, the blade H is reversed, to bring one side of its cutting edge in proper relation with the stropping roller D, and to keep this side of the cutting edge in contact with the said roller as long as the latter is turned in the same direction, but as soon as the operator reverses the motion of the stropping roller D by turning the handle G in the opposite direction, then the position of the blade H is reversed relative to the stropping roller D, that is, the other side of the cutting edge of the blade H is brought into contact with the peripheral face of the stropping roller D and is kept in contact with the stropping roller as long as the latter is rotated in the reverse direction.

It will be noticed that by the friction device, consisting of the washer O and the spring P, the corresponding side of the cutting edge of the blade H is held with the desired force in contact with the peripheral face of the stropping roller D, to insure proper stropping of the cutting edge.

When the operator is in the act of reversing the motion of the handle G, the spring J gives an initial outward swinging motion to the blade holder I, so as to lift the cutting edge off the peripheral face of the stropping roller D, as previously explained, it being understood that on moving the handle G in the reverse direction, the blade holder I is rocked to swing the blade H over into a reverse position, as above explained.

In order to bring different portions of the peripheral face of the stropping roller D in contact with the cutting edge of the blade H, the said stropping roller D is automatically reciprocated in an axial direction, and for this purpose the ends of the roller D are provided with cam faces R, R', alternately engaging pins R², R³, held on the frame A, so that when the roller D is rotated, the cams R, R' by engaging the pins R², R³ shift the roller D axially forward and backward on each revolution of the stropping roller.

It is understood that the gear wheel N is

made sufficiently wide to remain in mesh with the intermediate gear wheel L during the axial reciprocation of the roller D.

Although I have shown the device arranged for stropping thin razor blades, it is evident other cutting tools, such as regular razors, knives and the like, may be sharpened by the machine, it being only necessary to provide corresponding blade holders I for different shaped blades to be sharpened.

As shown in the drawings, the ends of the plates I', and I², are spaced apart in the shafts I³, I⁴, and the said plates I', I² are bent toward each other, so that when the razor blade H is forced between the plates I' and I², the latter securely clamp the razor blade in position, as indicated in Fig. 4.

By the arrangement described, the razor blade H can be readily inserted or removed from the blade holder I.

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

1. A stropping machine, comprising a stropping roller, manually controlled means for rotating the stropping roller in either direction, a rocking blade holder for the razor blade to hold either side of the cutting edge of the razor blade in contact with the peripheral face of the said roller, and a train of gear wheels connecting the said stropping roller with the said rock shaft, one of the gear wheels in the said train rotating by friction with its shaft.

2. A stropping machine, comprising a stropping roller, manually controlled means for rotating the stropping roller in either direction, a rocking blade holder for the razor blade to hold either side of the cutting edge of the razor blade in contact with the peripheral face of the said roller, a train of gear wheels connecting the said stropping roller with the said rock shaft, the gear wheel of the said train of gears which is mounted on the rock shaft being loose thereon, the rock shaft having a reduced end for receiving the gear wheel, and a spring pressing the gear wheel against the shaft.

3. A stropping machine, comprising a stropping roller, means for rotating the same in either direction, a rocking blade holder for the razor blade, means controlled from the said stropping roller for reversing the blade holder on reversing the said stropping roller, and means for imparting an axial reciprocating movement to the said stropping roller on rotating the latter.

4. A stropping machine, comprising a stropping roller adapted to be turned in either direction, a blade holder for the razor blade, a connection between the said stropping roller and the said blade holder for

reversing the latter on reversing the motion of the stropping roller, and shifting means for longitudinally reciprocating the said stropping roller.

5 5. A stropping machine, comprising a stropping roller, means for rotating the same in either direction, a rocking blade holder for the razor blade, means controlled from the said stropping roller for reversing the
10 blade holder on reversing the said stropping roller, and means imparting an initial movement to the said blade holder for moving the cutting edge of the razor blade out of contact with the stropping roller on reversing
15 the latter.

6. A stropping machine, comprising a stropping roller, a blade holder for a razor blade, means for rotating the roller in either direction, and a connection between the
20 roller rotating means and the blade holder for reversing the latter when the motion of

the roller is reversed, and means acting on the holder to lift the blade out of contact with the roller, before the motion is reversed.

7. A stropping machine comprising a
25 stropping roller adapted to turn in either direction, a blade holder for the razor blade, a spring in connection with the holder and normally retaining the blade out of contact
30 with the roller, and a connection between the roller and the holder for forcing the holder against the resistance of the spring when the roller is rotated for the purpose set forth.

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

ALLISON A. PRATT.

Witnesses:

THEO. G. HOSTER,
EVERARD B. MARSHALL.