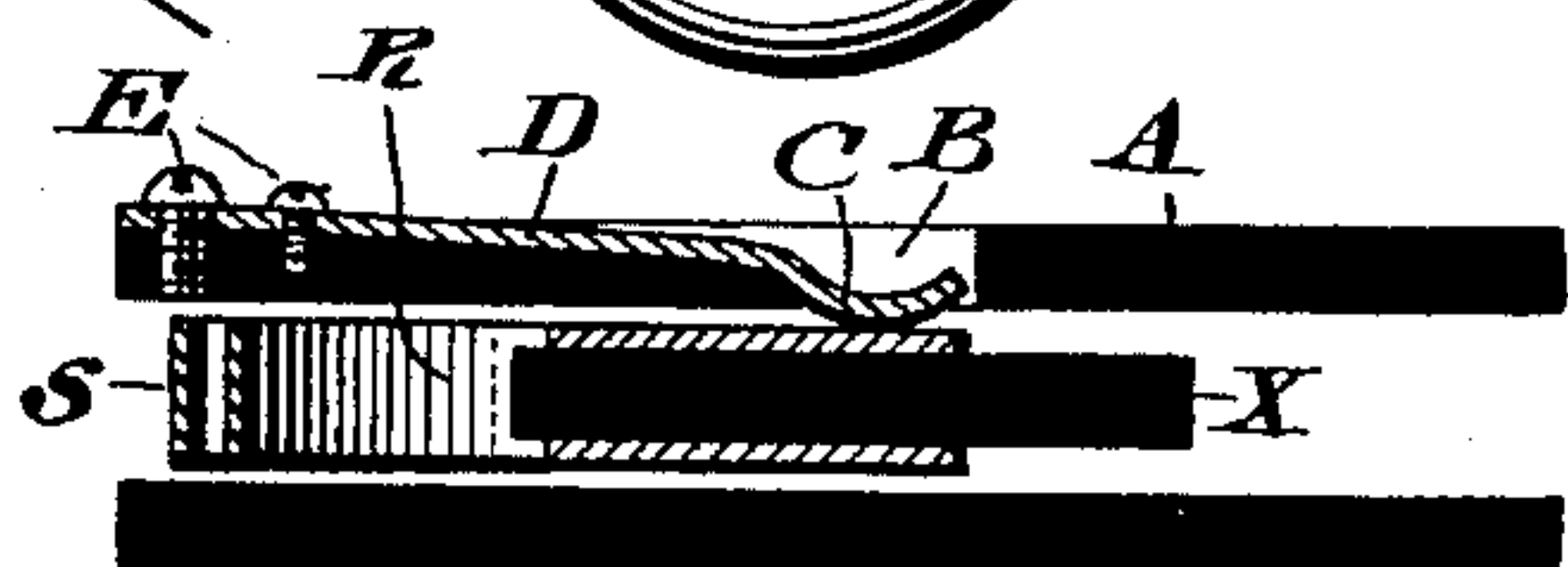
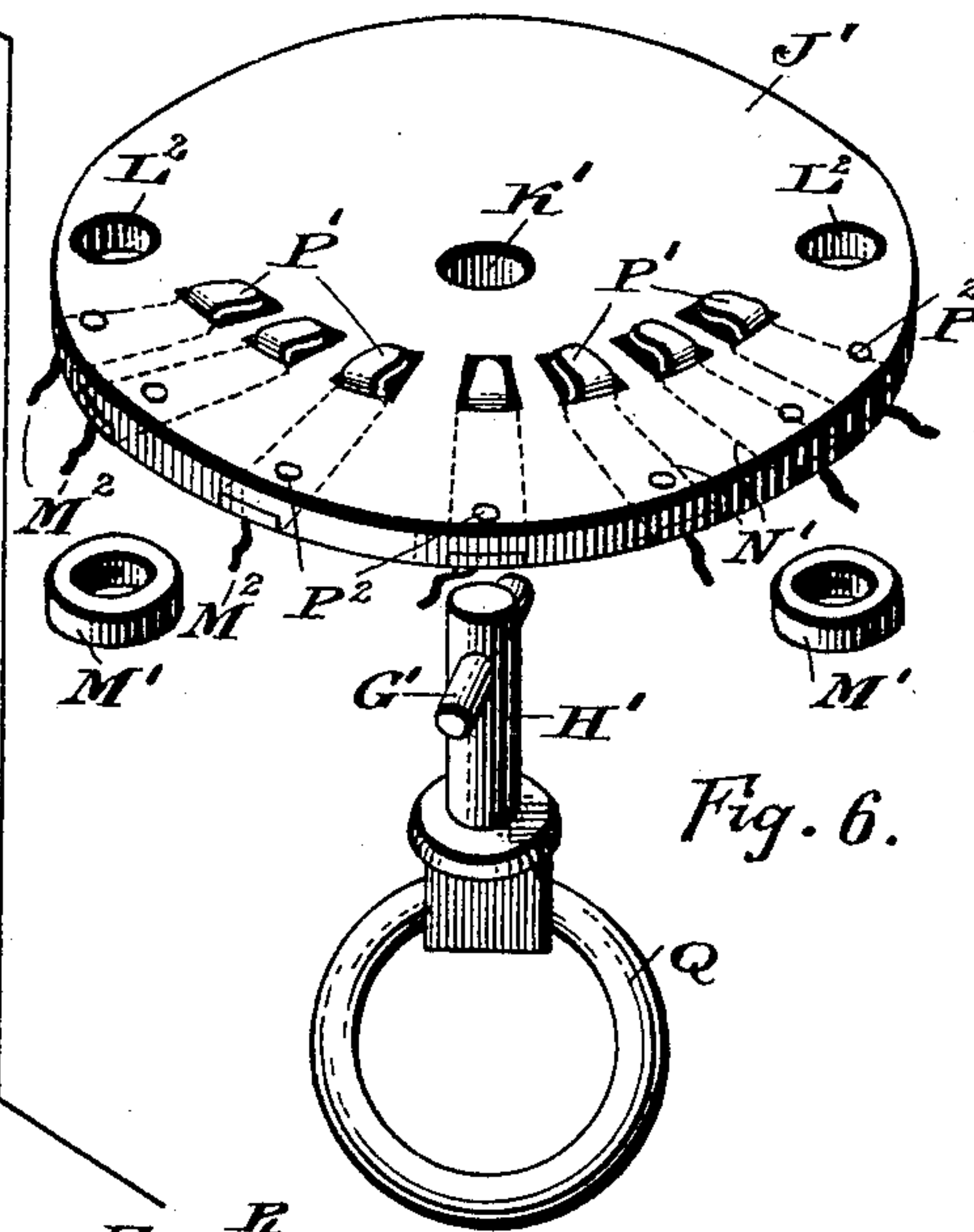
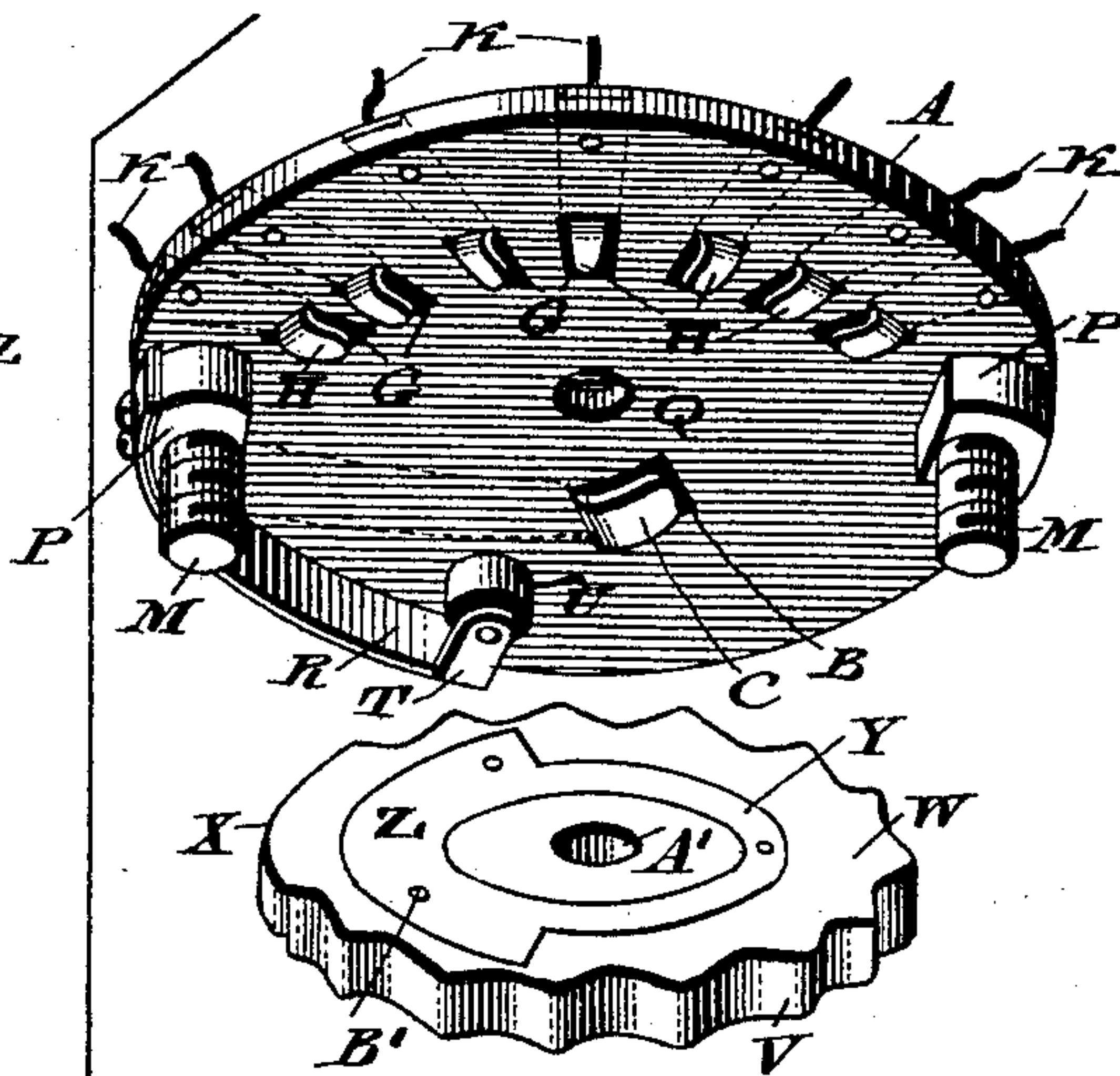
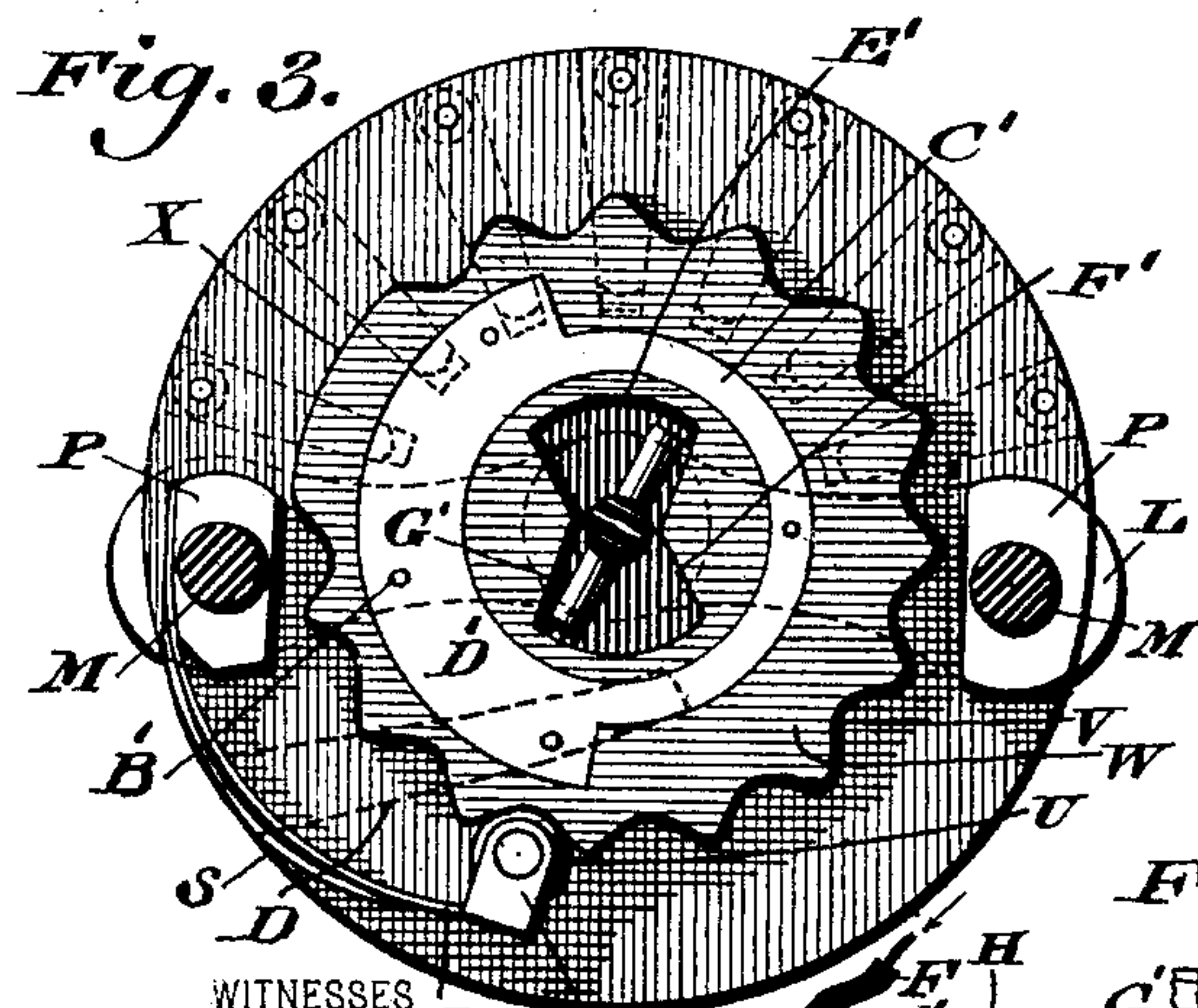
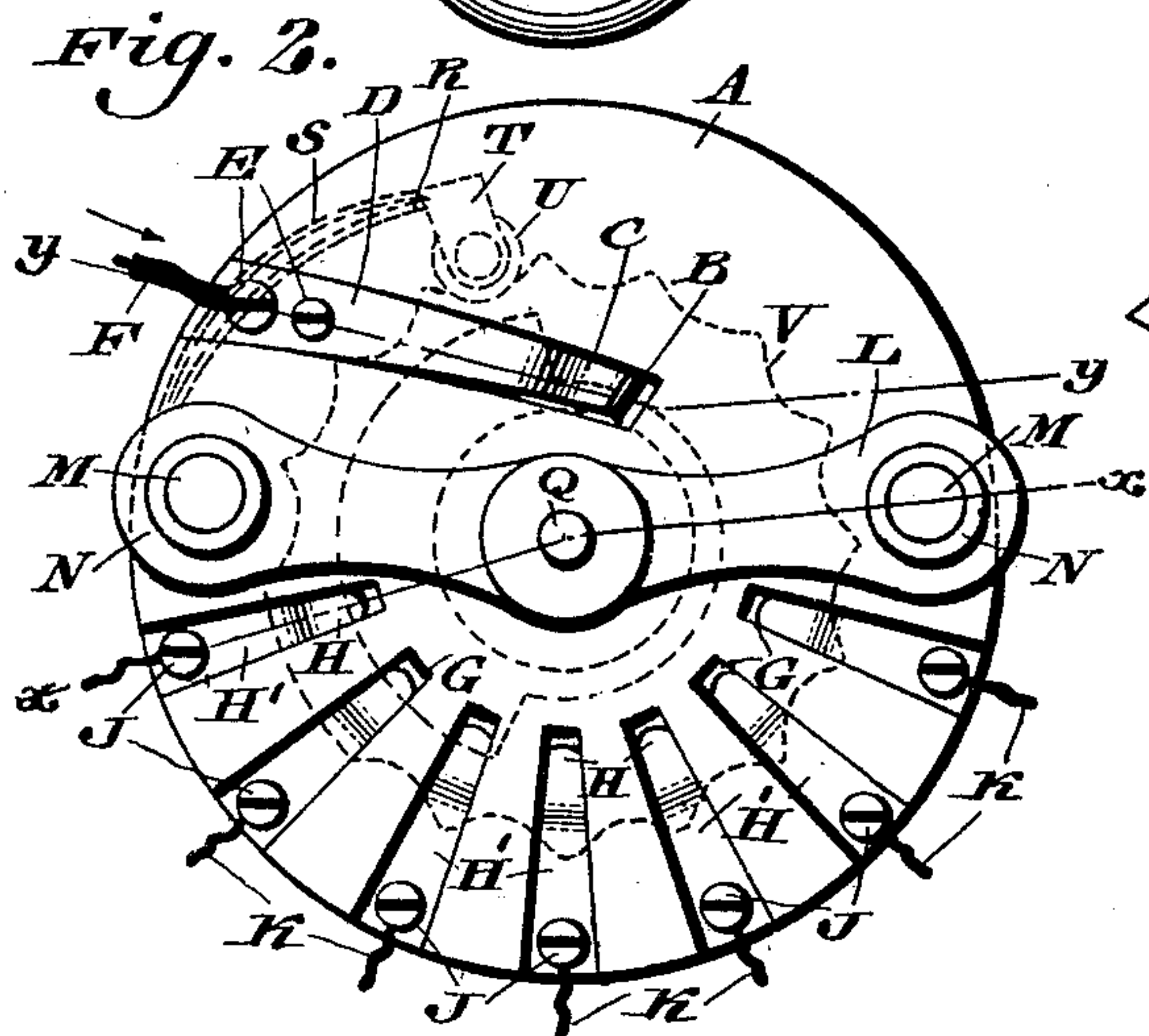
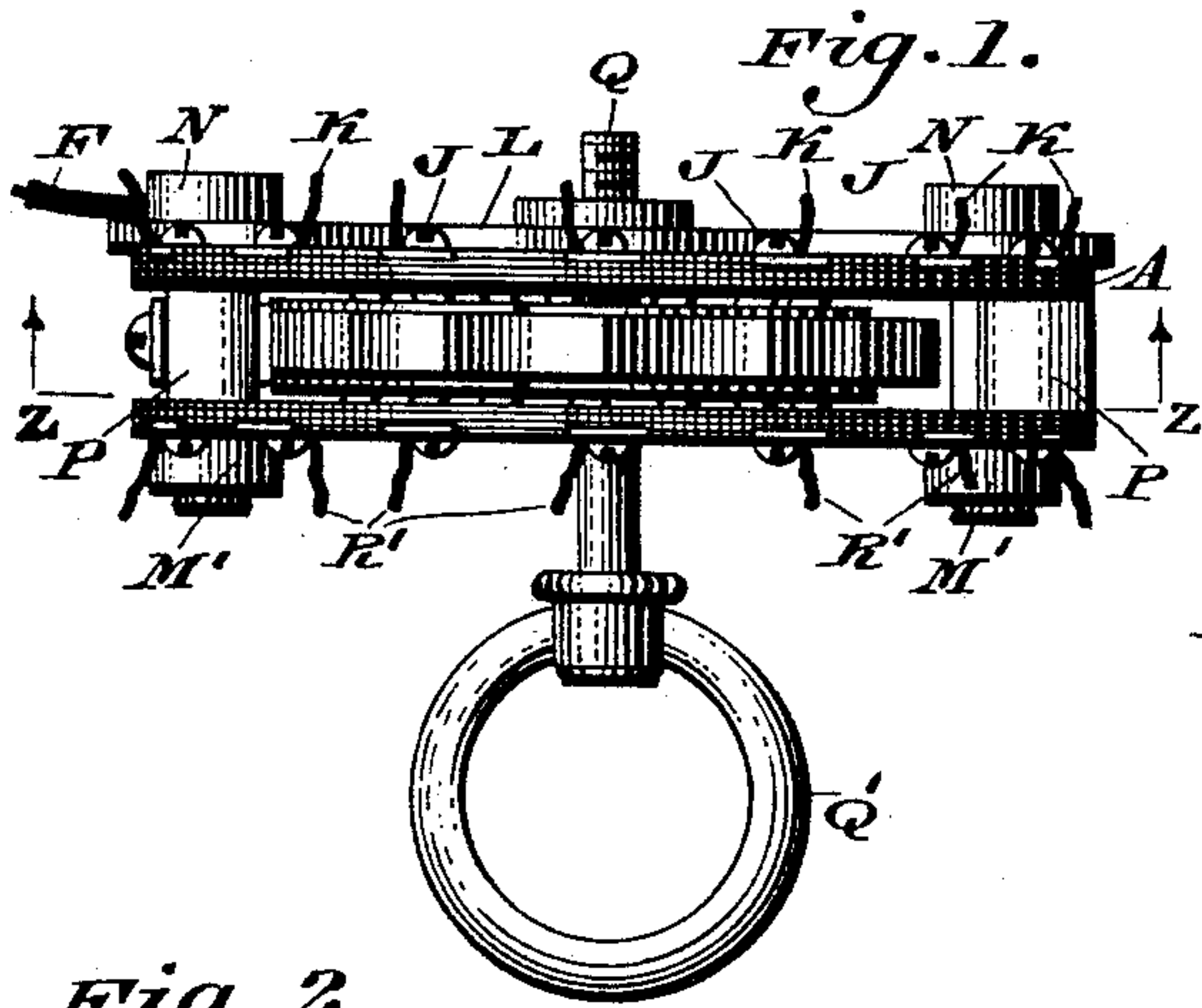


(No Model.)

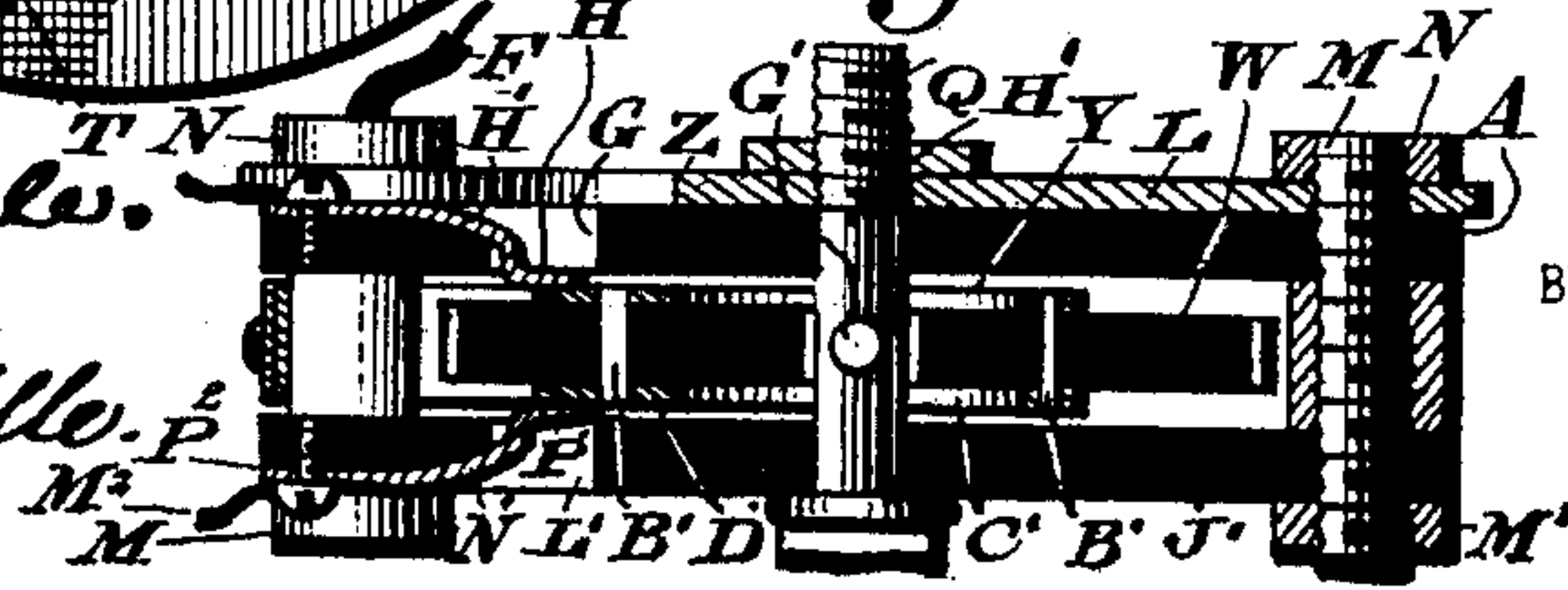
J. W. PARKIN.
ELECTRIC SWITCH.

No. 591,491.

Patented Oct. 12, 1897.



WITNESSES
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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 591,491, dated October 12, 1897.

Application filed January 21, 1897. Serial No. 620,020. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. PARKIN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric Switches, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of electric switch which is especially adapted for controlling the operation of several lights, as an electrical chandelier or similar lighting device, provision being made for readily making and breaking the continuity of the current from a main feed-wire to the several lamps in the circuit.

It further consists of novel details of construction, all as will be hereinafter set forth, and specifically pointed out in the claims.

Figure 1 represents a side elevation of an electric switch embodying my invention. Fig. 2 represents a top plan view of the same. Fig. 3 represents a section on line *z z*, Fig. 1. Fig. 4 represents a section on line *x x*, Fig. 2. Fig. 5 represents a section on line *y y*, Fig. 2. Fig. 6 represents a perspective view showing the parts constituting the switch in separated position and the manner of assembling the same.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the upper disk of a switch, the same consisting of a suitable body portion of non-conducting material which has at a point intermediate its center and periphery the recess B, in which the main contact strip or spring D is located, the free end C of said spring projecting through and beyond the under side of said disk A, as will be evident from Figs. 5 and 6.

The spring D is secured to the disk A by means of the screws or similar devices E, one of which is adapted to serve as a binding-post and have attached thereto an end of the main conductor F, the latter of course being provided with suitable insulations.

G designates a series of recesses which are located oppositely to the recess B and are in the present instance seven in number, the number of said recesses B corresponding to the number of lights employed which it is

desired to control, said number being varied according to requirements.

H' designates auxiliary springs or contact-strips, which are secured in position by means of the screws or similar devices J, which also serve as binding-posts and have the conductors K leading therefrom to the several lights in the circuit, the terminals or free ends H of said springs projecting through the recesses J, as will be evident from Figs. 4 and 6.

L designates a strap extending across the top of the disk A and having the threaded stems M projecting therethrough, said stems having washers or nuts N secured upon their upper portions and in contact with the strap L, as is best seen in Fig. 4.

P designates spacing-blocks which engage the stems M and are in contact with the under side of the disk A.

Q designates a threaded stem or plug which engages the top of the strap L and has its inner end substantially flush with the outer face of said strip L, as will be seen in Fig. 4.

R designates a spring or resilient arm which has one end suitably attached to one of the spacing-blocks P, while its other end carries a head T, in which the roller U is journaled, said spring R having bearing thereupon the free end of the spring S, the other end of the latter being suitably attached to an adjacent point, in the present instance the block P.

V designates corrugations or depressions at or near the periphery of the disk W, which are adapted to be engaged by the roller U, whereby said disk is held in locked position, said disk being composed of non-conducting material and provided with the uncorrugated portion X, the location of which is best understood from Figs. 3 and 6.

Y designates a ring or plate of conductive material which is attached to the upper portion of said disk W, it being noted that said ring Y is of reduced width the greater portion of its area, while for the remaining portion of its area, as indicated at Z in Fig. 6, said ring Y is of increased width.

C' designates a ring of conductive material which is located on the under side of the disk W, as will be understood from Fig. 3, said ring being of reduced width for a portion of its area and for the remainder thereof pro-

vided with the widened portion D', as will be understood from Fig. 3, the portions Z and D' and Y and C' of the rings being in alinement with each other and said rings being in electrical communication with each other through the medium of the pin B'.

A' designates an opening through the disk W, the under side of the latter being provided with a recess E', which has its opposite edges arc-shaped, as indicated in Fig. 3, while its other edges F' converge toward the center of the disk and toward each other, as will be understood from Fig. 3, thereby allowing a certain amount of play for the pin G', which is inserted in the stem H', the extremity of the latter passing through the opening A' of the disk W and entering the alining opening or seat A² in the disk A, so as to be in substantial contact with the extremity of the plug Q, as indicated in Fig. 4.

J' designates the lower disk, composed of non-conducting material, the same being provided with an opening K', through which the stem H' passes, it being of course understood that the pin G' is removed from said stem H' prior to the insertion of the latter through said opening.

L' designates a series of recesses or openings in the disk J', through which project the terminals or free ends P' of the strips, springs, or contact devices N', the latter being attached at their other extremities to the disk J' by means of the screws or other fastening devices P², which also serve as binding-posts and have the conductors M² leading therefrom.

L² designates oppositely-located openings in the disk K', through which the threaded stems M pass, the ends of the latter, when the parts are in assembled position, being engaged by the threaded washers or nuts N'.

Q' designates a ring or handle attached to the lower portion of the stem H' for the purpose of rotating the same, and also in unison with the disk W, as will be explained.

The operation is as follows: The manner of assembling the parts will be best understood from Fig. 6, the top of the disk W being first placed in juxtaposition with the bottom of the disk A, the opening A' being in alinement with the seat A², the roller U engaging one of the corrugations V, and the ends H of the contact-strips H' resting upon the disk W or the widened portion Z of the ring Y, while the end C of the main strip D is in contact with the ring Y or its widened portion Z at all times. The pin G' having been removed from the stem H' the latter is inserted through the opening K' of the disk J', after which said pin G' is placed in position and is caused to enter the recess E' in the manner indicated in Fig. 3, the extremity of the stem H' passing through the opening A' into the seat A² and being now substantially in contact with the threaded plug Q, as indicated in Fig. 4. The threaded stems M are inserted in the openings L² and the washers or nuts

M' placed in position, the parts now appearing as seen in Figs. 1 and 4. The free end C of the strip or spring D is always in contact with the conductive ring Y Z and electricity can be conducted to said strip through the medium of the conductor F. It will be apparent that the current will be taken therefrom by whichever of the terminals H are in contact with the widened portion Z of the strip Y, which is attached to the disk W, the latter being locked in any desired position by the engagement of roller U with a corrugation or recess V, the course of the current being through the conductor F, the terminal C, ring Z to the terminal H, thence through the strip H' to the binding-post J, and thence by the conductors K to the lamp or lamps which are to be lighted. In like manner the current is taken from the ring Y Z through the medium of the conductor B' to the similarly constructed and located ring C' D', the contact being made through the terminal or terminals P' to the proper strip N', thence to the binding-post P² and the conductor M² to the desired lamp or lamps which are to be lighted.

It will thus be seen from the foregoing that by my invention I make provision for instantly throwing into or out of the circuit any number of lamps, the current being taken from a single conductor, and it will of course be understood that in the present instance fourteen lamps are in the circuit, or as many lamps as there are terminals H and P' in the upper and lower disk A and J', it being apparent that the main contact-strip D is always in contact with some portion of the ring Y Z, while the terminals H or P' become energized only when they contact with the portions Z or D'.

The disk W is locked in desired position by the engagement of the roller U therewith and can be rotated in either direction at will.

The disk W and the disk A and J' are composed of suitable non-conducting material, the only conductive material employed being the strip D, the springs H' N' with their binding-posts, and the rings Y Z and C' D'.

The switch can be readily assembled or disconnected without requiring skilled labor and the liability of accident thereto is reduced to a minimum.

It will of course be understood that changes may be made by those skilled in the art which shall come within the scope of my invention, and I do not therefore desire to be limited in every instance to the exact construction I have herein shown and described.

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

1. In an electric switch, a disk, a contact-strip mounted thereon, one end of which projects through said disk, a plurality of auxiliary contact-strips supported on said disk, and each having an end projecting there-through, a second disk rotatably supported, and a contact-plate mounted on said last-

mentioned disk, which is adapted to contact with said contact-strips and close the circuit.

2. In an electric switch, a disk, a main contact-strip thereon, a series of auxiliary strips
5 on said disk, a second disk, contact-strips thereon, conductors leading therefrom, an intermediate disk, contact-plates on said intermediate disk and having a portion which is adapted to contact with said strips and means
10 for rotating said intermediate disk.

3. In an electric switch, an upper disk having a main contact-strip D attached thereto, the free end of the latter projecting through a recess in said disk, a plurality of auxiliary
15 contact-strips H', supported on said disk and having their free ends H, projecting there-through, a disk W rotatably supported and having a ring attached thereto, having the wide and narrow portions Z, Y, and means
20 for rotating and locking said disk.

4. In an electric switch, an upper disk having a main contact-strip D and series of auxiliary contact-strips H', a lower disk J', having a series of contact-strips N', said strips
25 H', N' having conductors leading therefrom to the lamps to be lighted, an intermediate disk W provided with rings Y, C', on either side thereof, said rings being provided with widened portions C, D' and being in electrical communication with each other, and
30 means for rotating said disk W.

5. In an electric switch, an upper and lower disk A, J', an intermediate disk W, the above being constructed with suitable non-
35 conducting material, a main contact-strip B

and a series of auxiliary contact-strips H', supported upon said upper disk and having their free ends projecting therethrough, a series of auxiliary contact-strips N' supported
40 upon the lower disk J' and having their ends projecting therethrough, rings Y, Z, and C', D' located on opposite sides of said disks W and in electrical communication with each other, a recess E' in one side of said disk W, a stem H' adapted to pass through an open-
45 ing in said disk J' and a pin G', which latter is adapted to engage said recess E', and means for holding said disks in assembled position and for locking said intermediate disk.

6. In an electric switch, an upper and lower
50 disk A, J', a main contact-strip D supported on said upper disk and having auxiliary contact-strips H' supported thereon, their free ends projecting therethrough, an intermediate disk W located adjacent said disk A,
55 and having a corrugated periphery with rings of various thickness on opposite sides thereof and in electrical communication with each other, a resilient arm R having a roller supported therein and adapted to contact with
60 the corrugated periphery of said disk W, a lower disk J', having auxiliary contact-strips N' attached thereto, the free ends of said strips projecting through said disk, means for rotating said disk W and means for hold-
65 ing said disks in assembled position.

JOSEPH W. PARKIN.

Witnesses:

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H. PARKIN.