

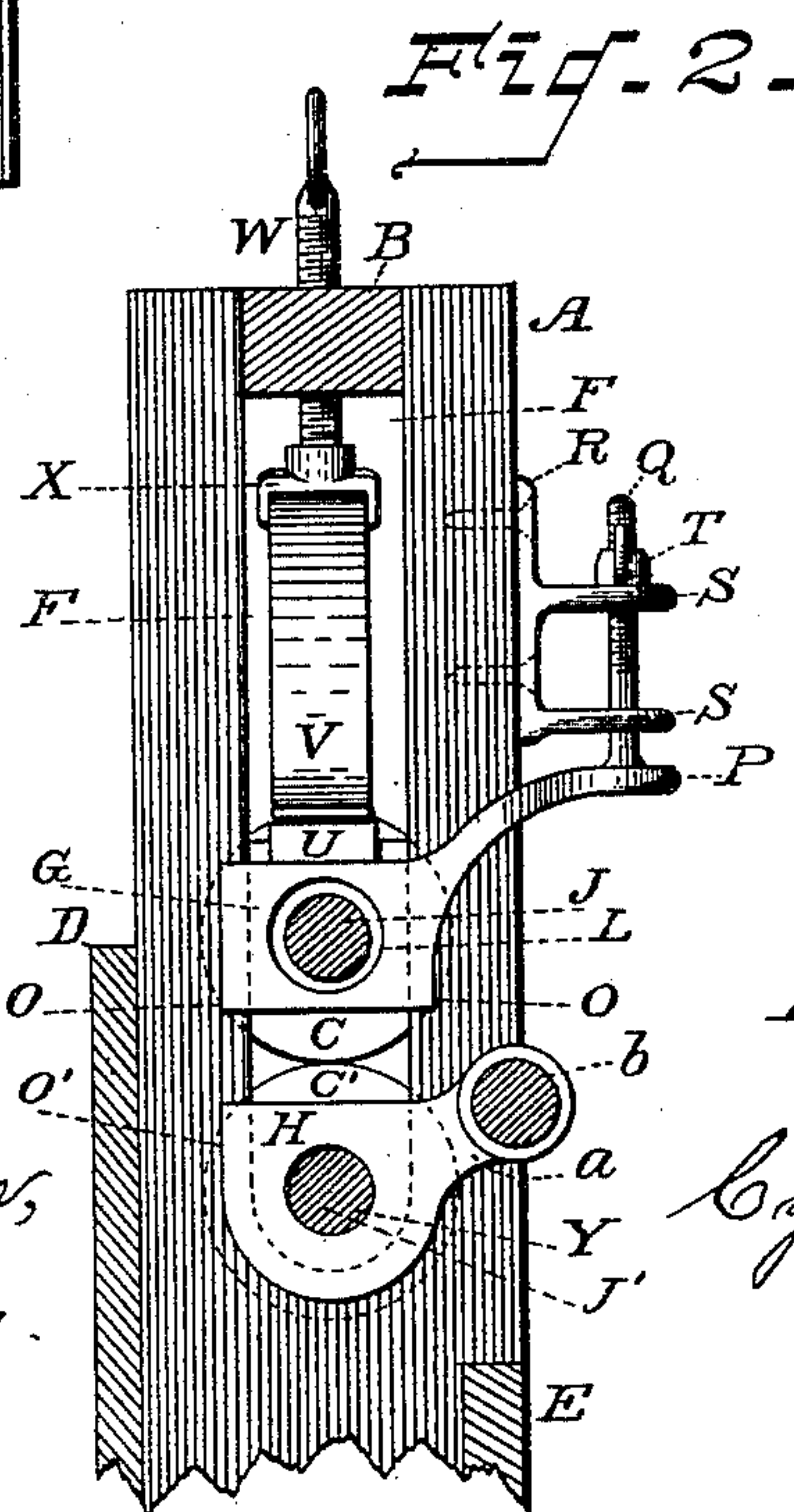
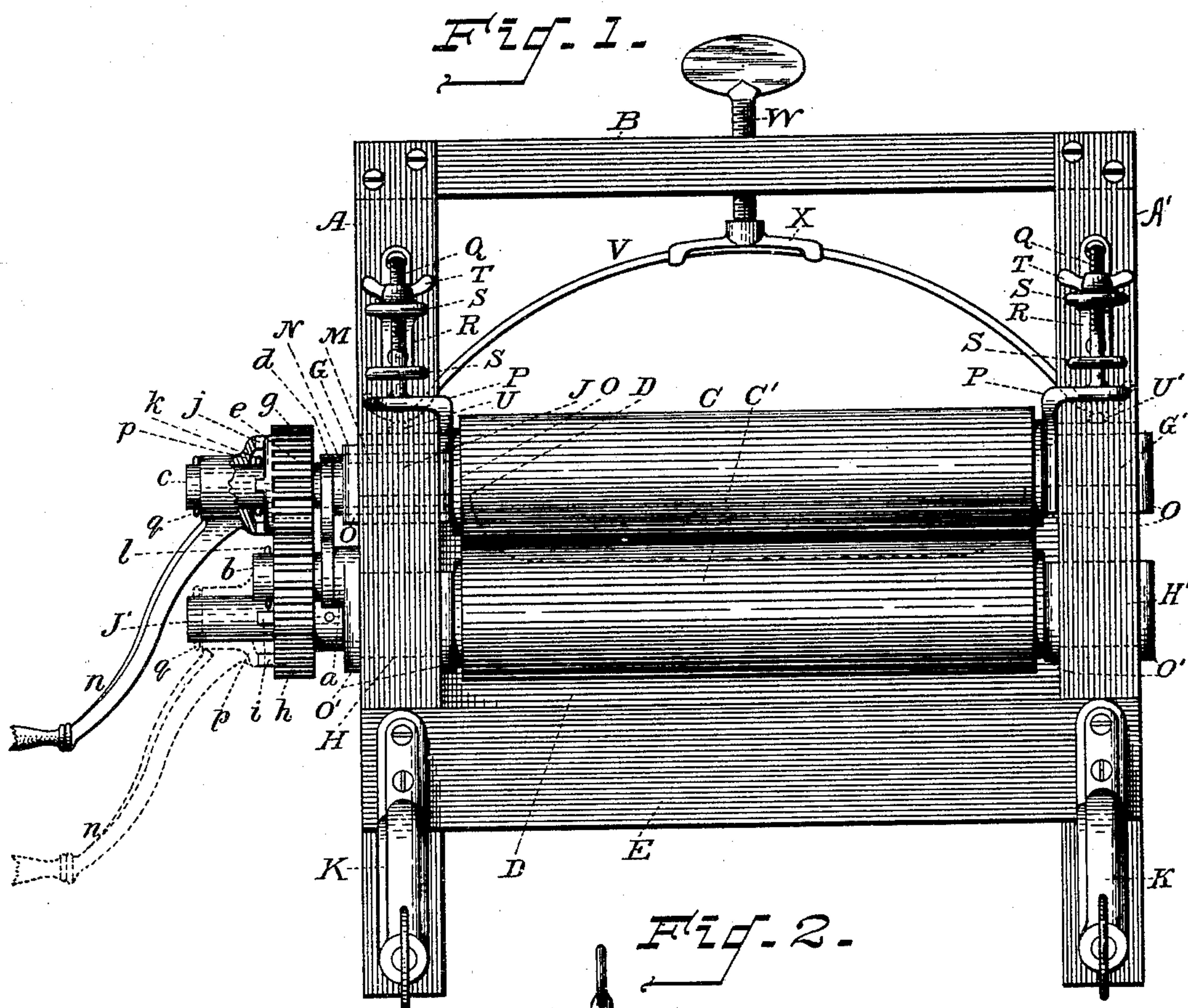
(No Model.)

3 Sheets—Sheet 1.

C. WHEELER, Jr.
CLOTHES WRINGER.

No. 459,244.

Patented Sept. 8, 1891.



Witnesses:

Frank B. Rathbun,
Mary A. Morris.

Inventor:

Cyrus Wheeler

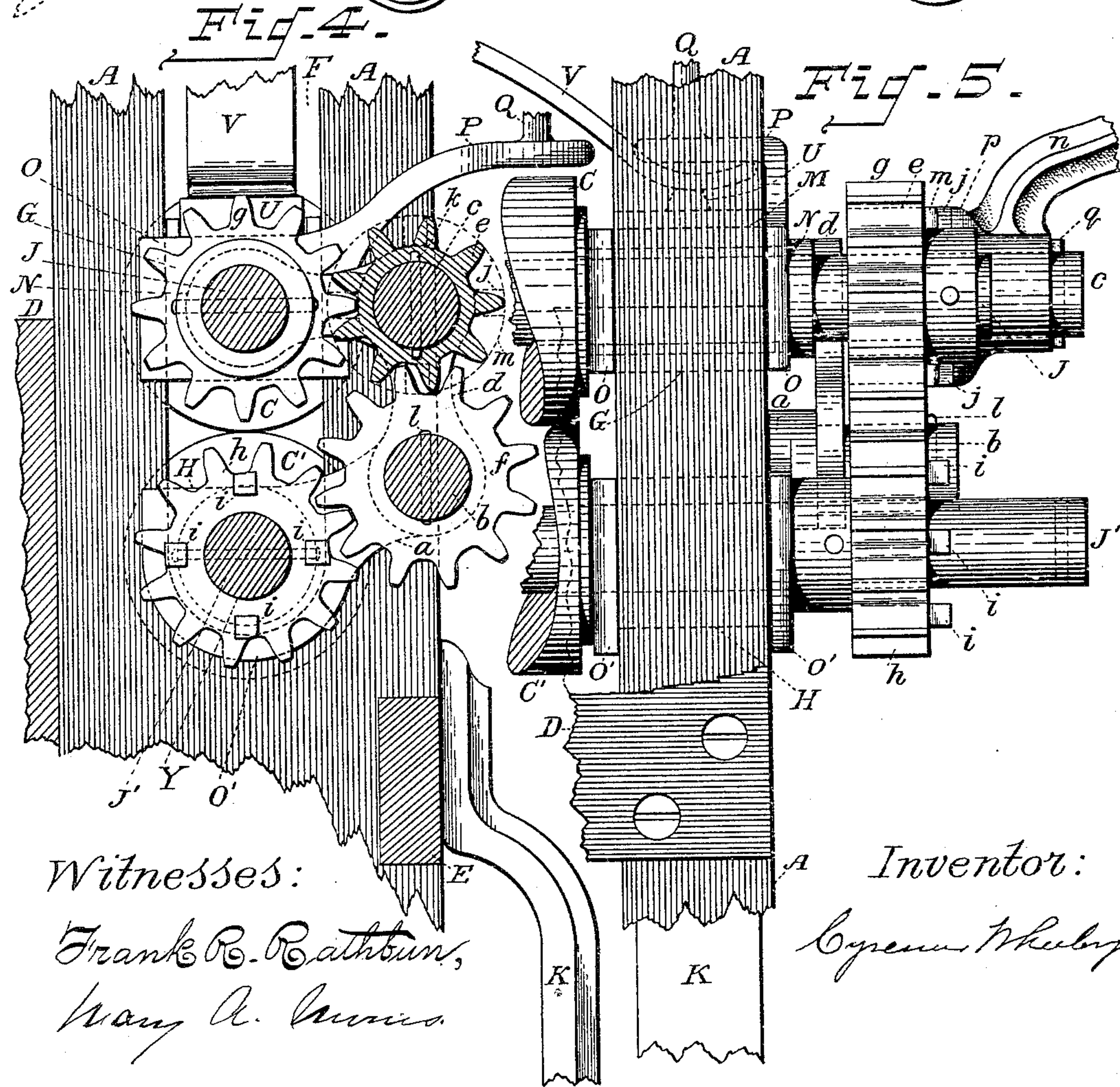
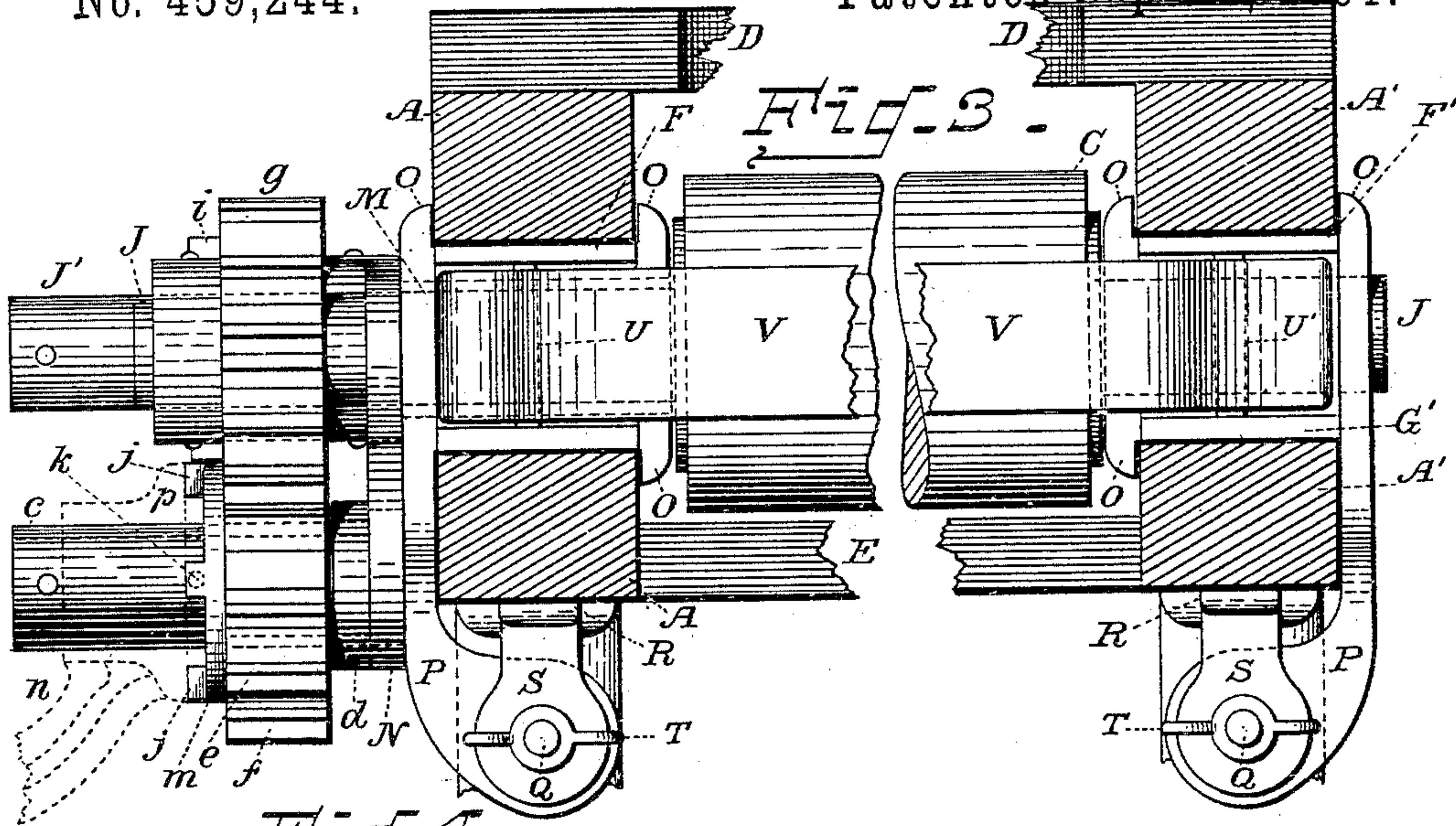
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3 Sheets—Sheet 2.

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Witnesses:

Frank B. Bathum,
May A. Ames.

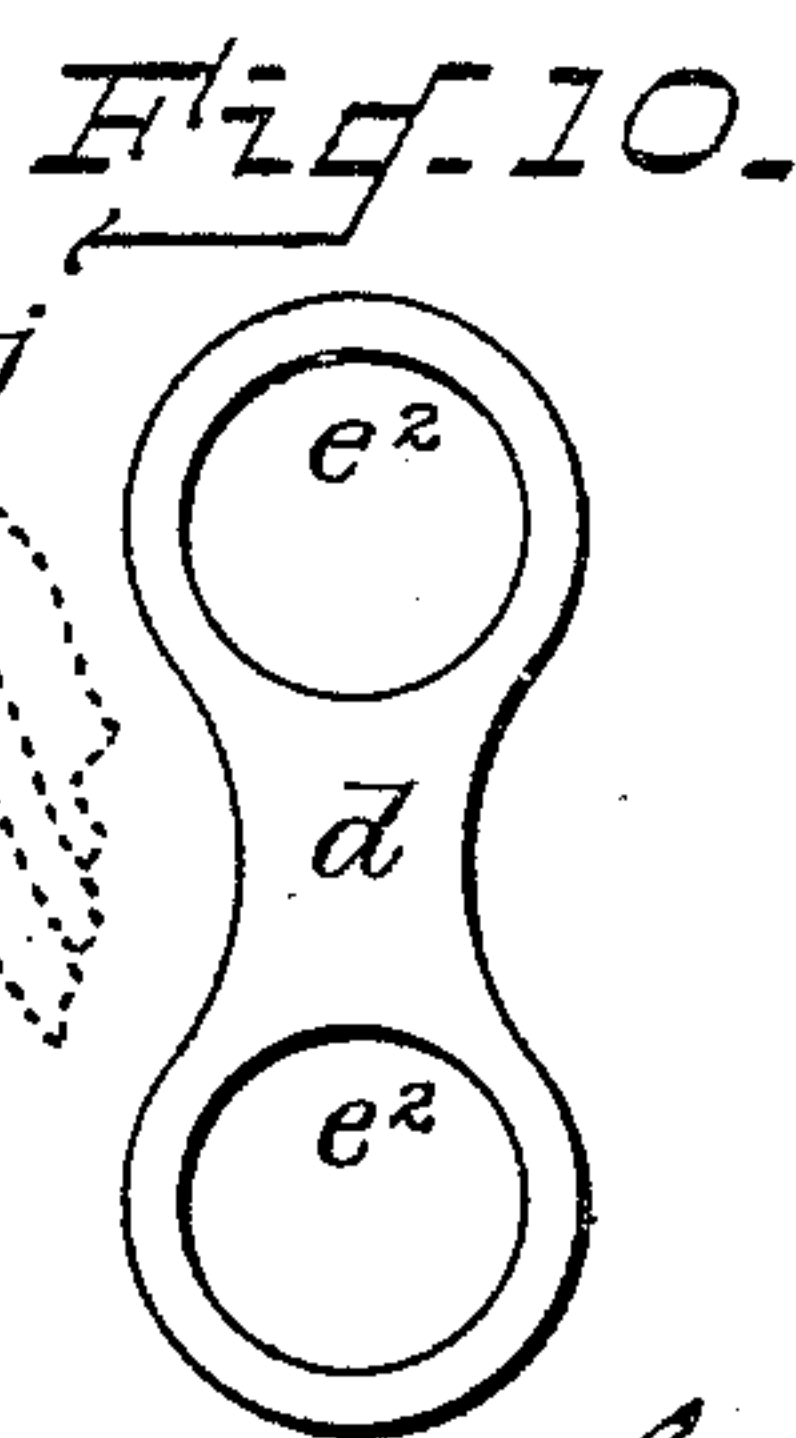
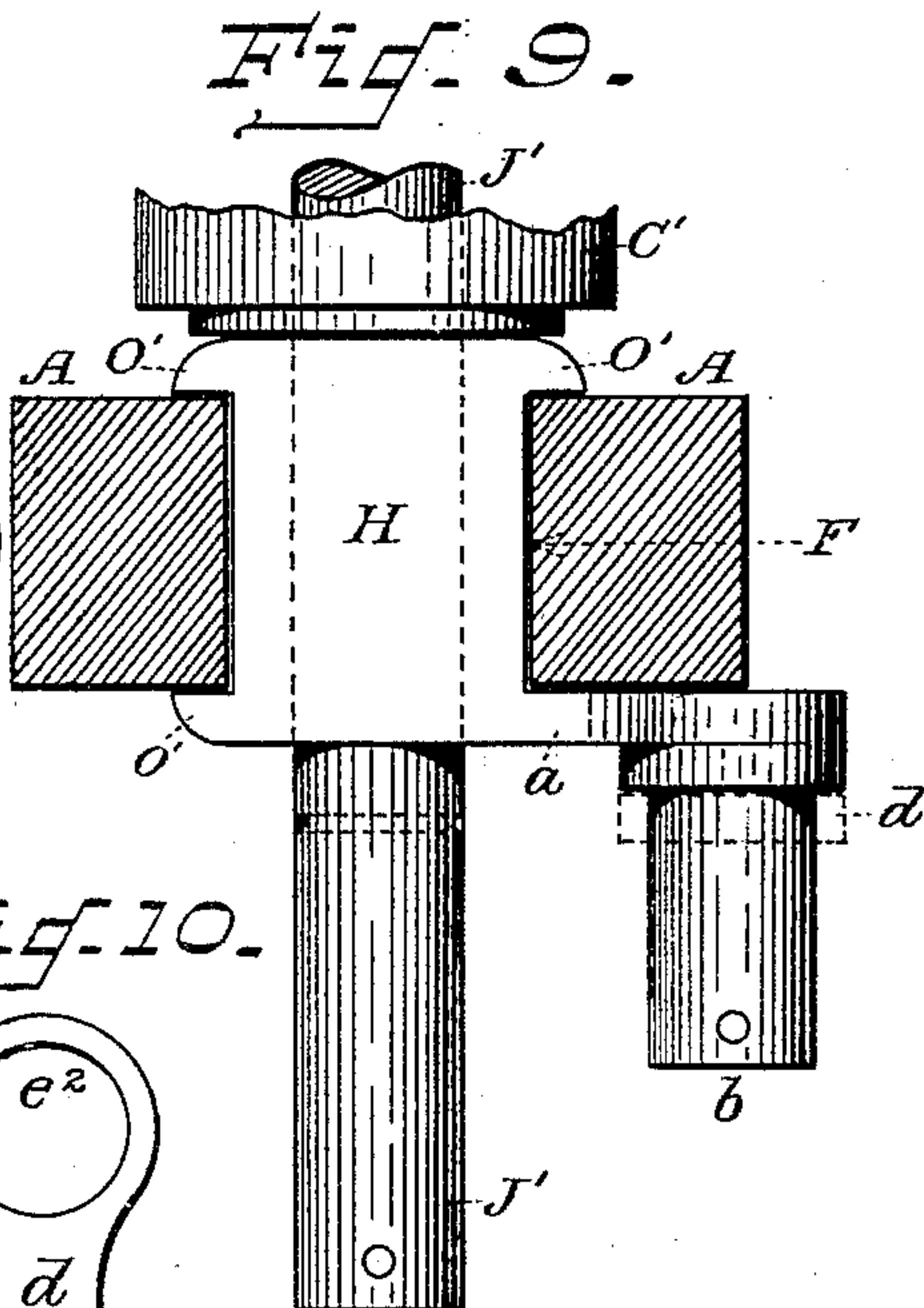
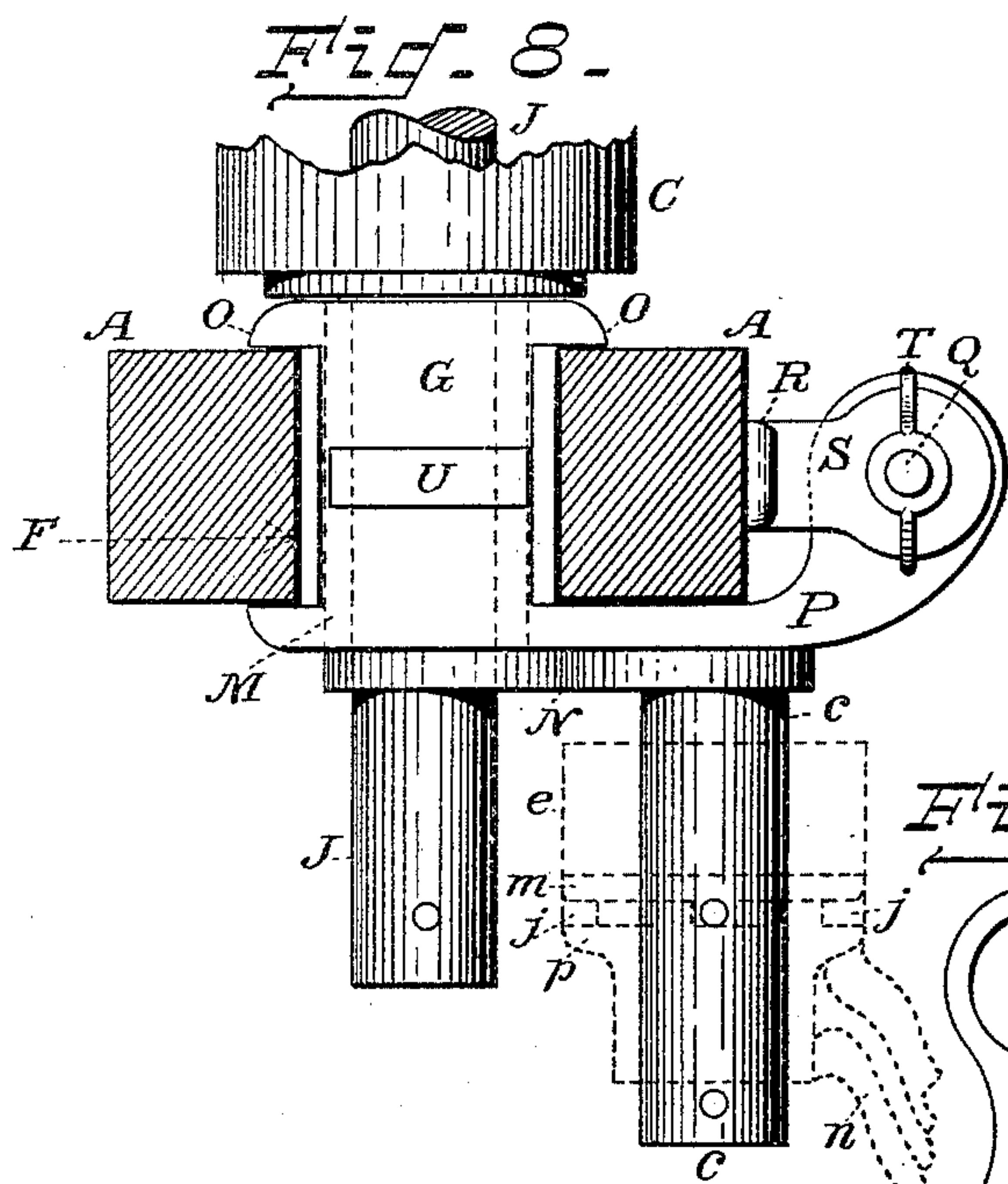
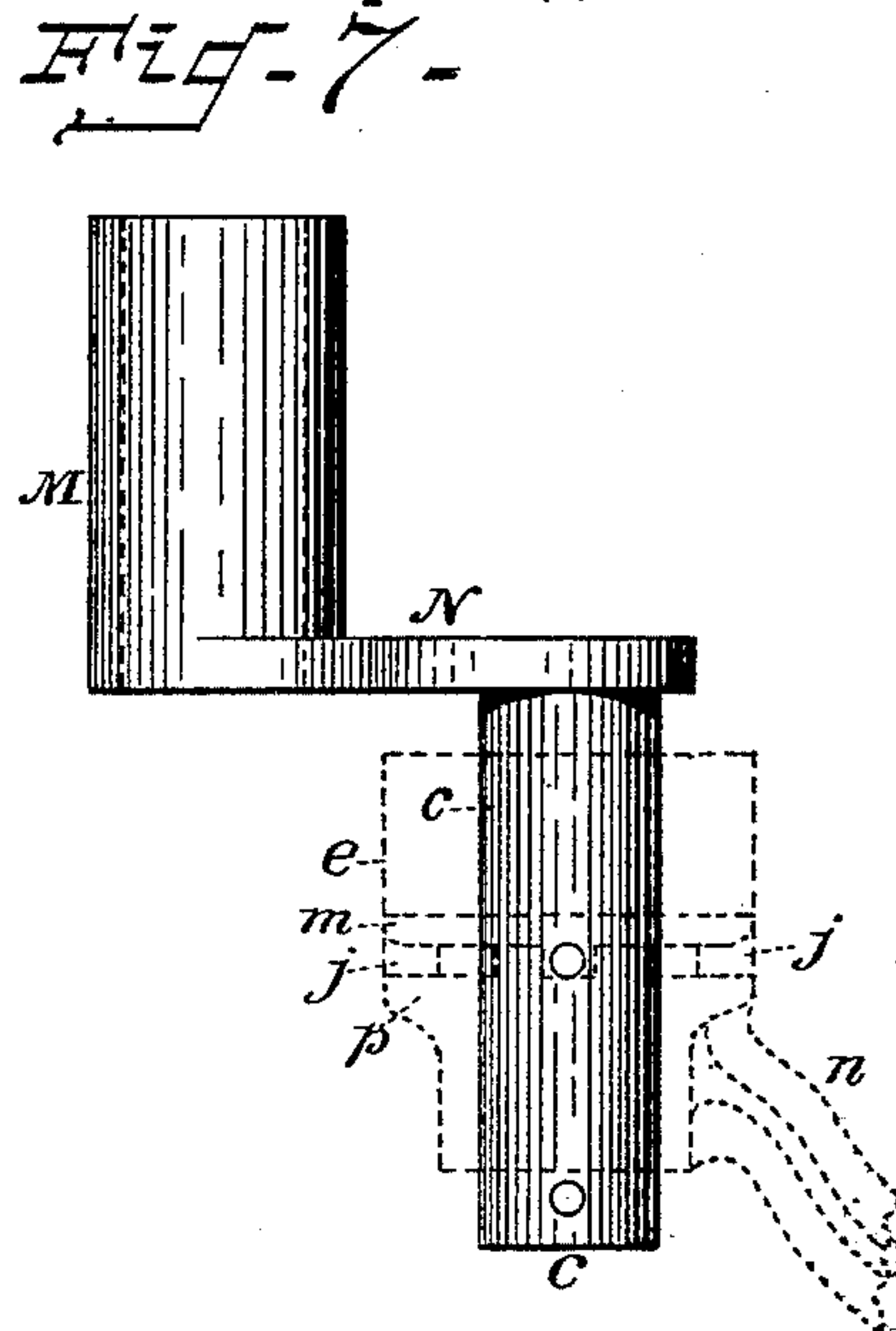
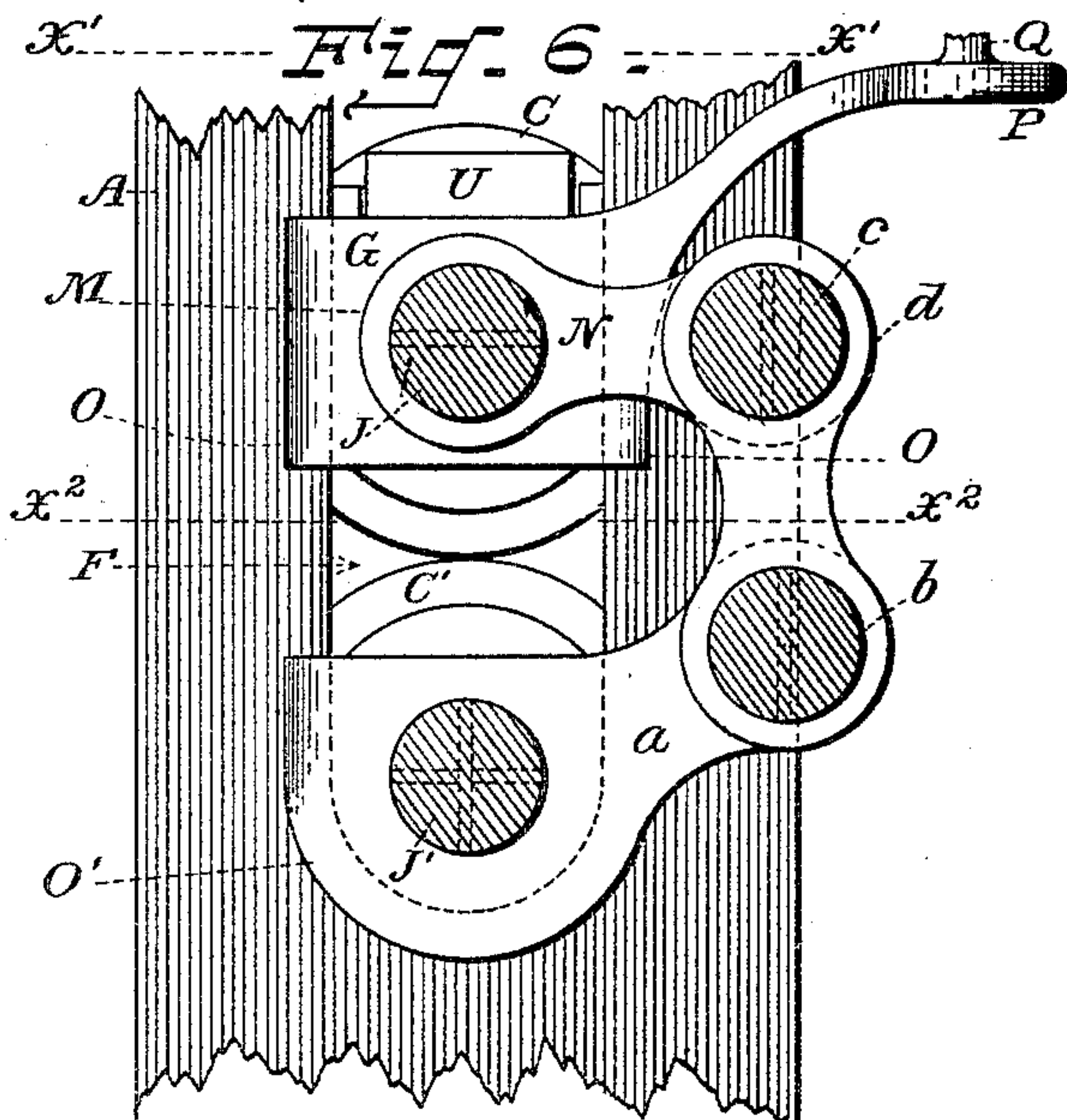
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UNITED STATES PATENT OFFICE.

CYRENUS WHEELER, JR., OF AUBURN, NEW YORK.

CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 459,244, dated September 8, 1891.

Application filed August 16, 1888. Serial No. 282,945. (No model.)

To all whom it may concern:

Be it known that I, CYRENUS WHEELER, Jr., a citizen of the United States, residing at the city of Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Clothes-Wringers, of which the following is a specification.

My invention relates to clothes-wringers; and it consists of certain improvements to be hereinafter pointed out.

In order that my invention may be the better understood, I have shown it embodied in a mechanism which is illustrated in the accompanying drawings on three sheets, in which—

Figure 1 is a rear elevation of an entire wood-frame wringer having my improvements thereon. Fig. 2 is an elevation of the front or crank end of the wringer, the gearing being removed therefrom in order to show the subjacent parts. Fig. 3 is a semi-sectional top plan view of the wringer, drawn to a full-size scale. Fig. 4 is a semi-sectional view of the front or crank end of the wringer, drawn also to a full-size scale. Fig. 5 is a front elevation of Fig. 4. Fig. 6 is a semi-sectional elevation of the crank end of the wringer, the gearing being removed to show more clearly the parts subjacent thereto. Fig. 7 is a detail view of the thimble, link-piece, and stud, which is carried in the upper crank-end box of the wringer. Fig. 8 is a sectional plan view of Fig. 6, taken through the line $x'x'$. Fig. 9 is a sectional plan view of Fig. 6, taken through the line x^2x^2 ; and Fig. 10 is an elevation of the link connection arranged between the stud of the thimble-link and the stud of the projection of the lower box of the crank end of the wringer.

Similar letters refer to similar parts throughout the several figures.

A A' are the end posts of the frame-work, which are connected at the top by a cross-piece B, at the front side by a guide-piece D, and at the rear side by a cross-piece E. The end posts A A' are provided throughout their upper lengths with slots F F', which serve to carry the boxes G G' and H H'.

C is the upper roller, and C' is the lower roller.

J is the upper-roller shaft, and J' is the lower-roller shaft.

K K are clamping-pieces, whereby the wringer is held in working position on the side of the tub or other vessel used.

The box G is provided with a bearing L, which is larger than the diameter of the upper-roller shaft J and in which is passed the thimble M of the link-piece N, said thimble M passing onto and affording a bearing for the upper-roller shaft J and completely through the box G, into which it is fitted. The box G' is provided with a bearing for the rear end of the upper-roller shaft J. Both of the said boxes G G' are provided with lips O O on either side thereof, whereby their working vertical and lateral position is assured in the slots F F' of the end posts A A'.

The boxes G G' have upwardly-turned extensions P P, the ends of which are turned at right angles, and thence continued on the rear sides of the end posts A A' into vertical threaded spindles Q Q. The said upwardly-turned extensions P P may be carried up from either side of their respective boxes G G', and may thus be brought on the inner sides of the end posts A A', as shown in Fig. 1, or may be brought on the outer sides of the said end posts A A', as shown in Figs. 2, 3, 4, 5, and 6.

To the rear of the end posts A A' are fastened, in suitable working position above the extensions P P, the pieces R R, which are provided near either end with the guides S S, through which pass the vertical threaded spindles Q Q. The vertical threaded spindles Q Q are provided at their top ends with the thumb-nuts T T, by the screwing down of which upon the vertical threaded spindles Q Q the boxes G G' may, through the several connected parts already described, be raised sufficiently to act as stops to limit the pressure of the surfaces of the rollers C C' against each other when the wringer is not in use. The boxes G G' are provided also on their upper surfaces with centrally-located lugs U U', upon which rest the ends of the semi-elliptic spring V, the object of which said semi-elliptic spring is to increase or diminish at the pleasure of the operator the pressure between the rollers C and C'. This is accomplished by means of the thumb-screw W, which is centrally located on and screwed through the cross-piece B, the lower end of said thumb-

screw W being seated in a lipped piece X, which is secured to the central portion of the spring V. The boxes H H' are also provided with lips O' O', similar to those on the boxes G G' on either side, which serve to assure the lateral placement of the said boxes H H' within the slots F F' of the end posts A A'. The boxes H H' are of a semicircular form on their bottom parts and rest on the semicircular bottom ends of their respective slots F F', formed in the end posts A A', as already described. The box H is provided with a bearing Y for the lower-roller shaft J' of the lower roller C'. It is also extended upward and rearward on the side of the end post A of the frame-work into a projection a, which is provided with a stud b, the object of which will presently be defined. The box H' is provided with a bearing for the rear end of the lower-roller shaft J' of the lower roller C'.

The link-piece N, Fig. 7, (the thimble M of which passes on the upper-roller shaft J and through the box G,) is provided at its rearward end with a stud c, the object of which will be presently defined. A link-piece d, provided with holes e^2 e^2 at either end, connects the studs b and c. The said link-piece d is passed on the studs b and c, so as to be free to act thereon between the link-piece N and the spur-gears, which are respectively carried on the studs b and c and which will be presently described.

On the crank or front end of the upper-roller shaft J is secured the spur-gear g, which is of a diameter less than that of the roller C, and on the crank or front end of the lower-roller shaft J' is likewise secured the spur-gear h, which is of the same diameter as the spur-gear g.

e is the smaller of the two intermediate gear-wheels which are arranged between the spur-gears g and h. It is loosely mounted upon a movable support connected with the shaft of the movable roller so as to move when it does, such movable support consisting, by preference, of the studs c of the link-piece N.

f is the larger of the intermediate gears mounted loosely upon a fixed support—that is, one having a fixed position relative to the support for the lower-roller shaft J', and which, by preference, consists of the stud b of the projection a from the lower bearing-box H. The said smaller intermediate gear e and the said larger intermediate gear f are thus free to rotate on their respective studs c and b and are held thereon in proper working position by the pins k and l. The smaller intermediate gear e is provided on its outer side with a disk m, upon which are formed the outward-projecting spurs j j. Similar and corresponding spurs i i are also formed on the outer face of the spur-gear h of the lower-roller shaft J'.

An operating hand-crank n is provided, having a hub p, in which are formed notches for engaging with the outward-projecting

spurs j j of the smaller intermediate gear e and with the corresponding spurs i i of the spur-gear h of the lower-roller shaft J'. The hub p of the operating hand-crank n can thus be passed and interchanged upon and between the stud c and the lower-roller shaft J', both of which are sufficiently extended for its accommodation, and thus be brought into engagement with the spurs j j of the smaller intermediate gear e or with the corresponding spurs i i on the outer side of the spur-gear h, as the operator may desire. The operating hand-crank n is assured of its working position by the pin q, which is arranged to pass through the end of either the stud c or the end of the lower-roller shaft J'.

The several spur-gears are substantially arranged upon their respective shafts and studs so as to be in line with each other, the intermediate gear e being smaller in size than either of the others. The spur-gears g and h are of uniform size, and the intermediate gear f is arranged as such between the smaller intermediate gear e and the spur-gear h of the lower-roller shaft J'. The smaller intermediate gear e and the intermediate spur-gear f engage with each other, gear e also engaging with the spur-gear g of the upper-roller shaft J and gear f also engaging with the spur-gear h of the lower-roller shaft J'. It will thus be seen that by this arrangement of spur-gears and their severally-connected parts that I am enabled, by the interchangeability of the operating hand-crank n, already described, to communicate a greater or lesser speed to the rollers C C', as the exigencies of the case may require. By the arrangement of the link-piece d, as already described, it will also be seen that the engagement between the two intermediate gears is maintained unbroken.

I do not in this application claim, broadly, the combination, in a wringer having substantially the characteristics of the wringer herein described and illustrated, of the rollers, the gear-wheels mounted on the roller-shafts, the lower gear-wheel being adapted to receive a hand-crank, the two intermediate gear-wheels, one larger than the other, forming a connection between the said gear-wheels, the smaller of the said intermediate gear-wheels being adapted to receive a hand-crank, and the link connecting the upper or movable roller-shaft with one of the said gear-wheels, as substantially this claim is embraced in, and forms the part of another application of mine, Serial No. 282,946, of even date herewith.

Having thus described the several parts of my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a clothes-wringing machine the rollers of which carry gear-wheels of the same size, but of less diameter than the rollers upon their shafts and arranged in the same plane, the upper roller being movable toward and

from the lower one, an intermediate gear-wheel *f*, meshing with the gear-wheel on the lower roller and mounted on a fixed support, a link piece or arm having a projecting tube or thimble at one end which extends through the bearing-box for the upper-roller shaft and in which is mounted the shaft of the upper roller and a stud or axle at the other end, a small intermediate gear mounted upon this stud and meshing with the gear of the upper roller and also with the intermediate gear-wheel *f*, a link connecting the stud on which is mounted the small gear with the support of the gear *f* to hold them in proper working relation, and a hand-crank adapted to be connected with the small intermediate gear to rotate it, substantially as set forth.

2. In a clothes-wringing machine, the combination of the frame-work having the slotted side pieces, the rollers having their shafts supported by boxes arranged in the slotted side pieces, the upper roller and its boxes being movable, the laterally-projecting arm formed with the box for the lower-roller shaft at the gear end of the wringer and having at its end a stud or axle, the gear-wheel *f*, mounted loosely on this axle and meshing with the gear on the lower-roller shaft, the link-piece having at one end a tubular or thimble portion surrounding the shaft of the upper roller and at its other end a stud or axle, a small gear *e*, mounted on this last said axle and

meshing both with the gear *f* and with the gear on the upper-roller shaft, and the link connecting the studs or axles of the gears *f* and *e*, substantially as set forth.

3. The combination, with the thimble-bearing, of the vertically-sliding box at the front or crank end of the upper roller provided with a link-piece and stud, as described, the box for the front or crank end of the lower-roller shaft provided with an extension and stud, as described, and an intermediate link-piece *d* for preserving the engagement of the intermediate gears carried on the said studs, substantially as set forth.

4. In a clothes-wringing machine, the combination, with the frame-work consisting of end posts and suitable connecting cross-pieces, of the rollers, the sliding boxes for one of the rollers, the laterally-projecting extensions carried by the said sliding boxes and terminating in screw-threaded spindles, the guides in which the spindles are held, and the nuts on the said spindles, whereby the movable roller may be held away from the other roller when they are not in use, substantially as set forth.

In testimony whereof I have hereunto set my hand this 11th day of August, A. D. 1888.

CYRENUS WHEELER, JR.

Witnesses:

FRANK R. RATHBUN,
MARY A. MORRIS.