

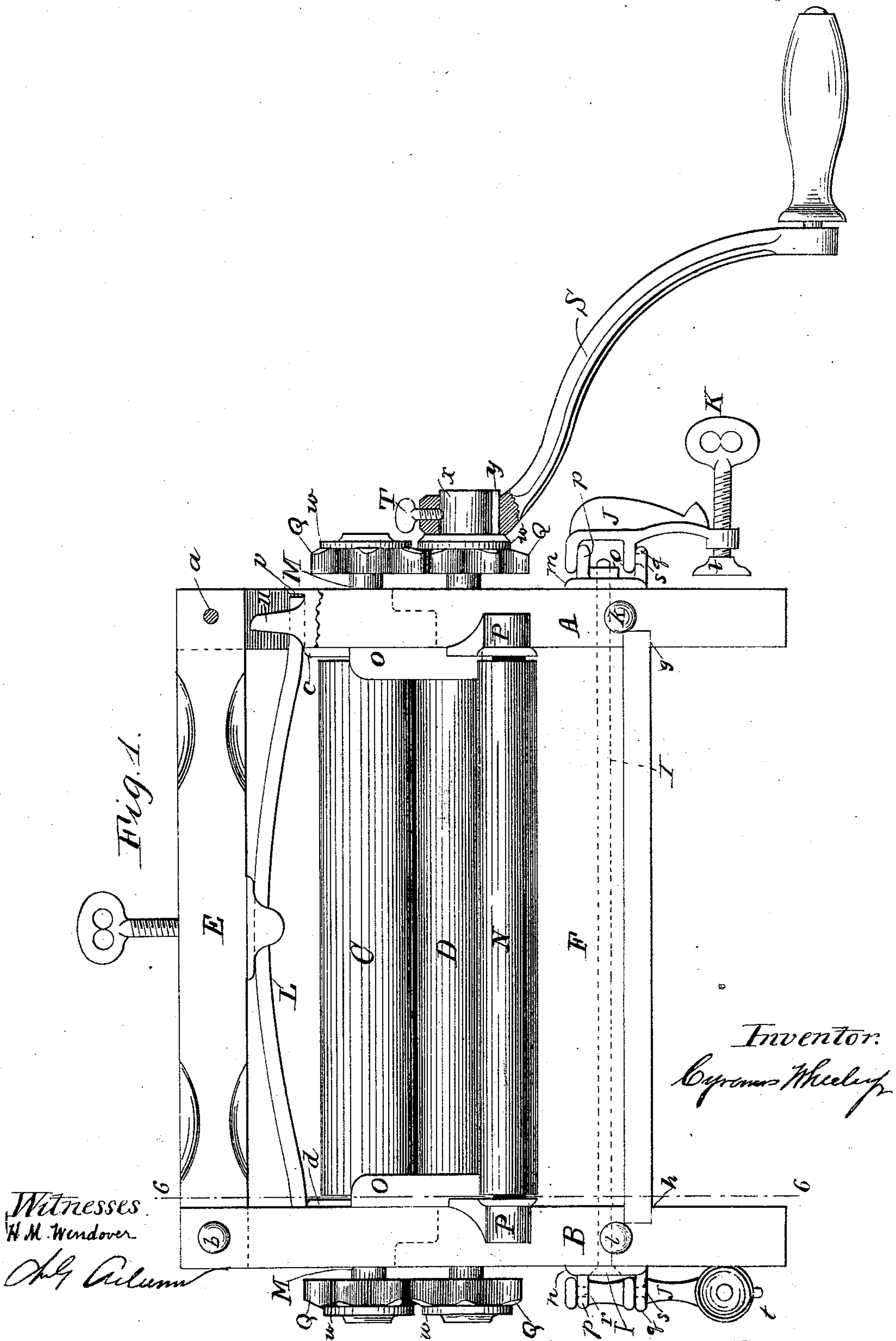
(No Model.)

4 Sheets—Sheet 1.

C. WHEELER, Jr.
CLOTHES WRINGER.

No. 517,785.

Patented Apr. 3, 1894.



(No Model.)

4 Sheets—Sheet 2.

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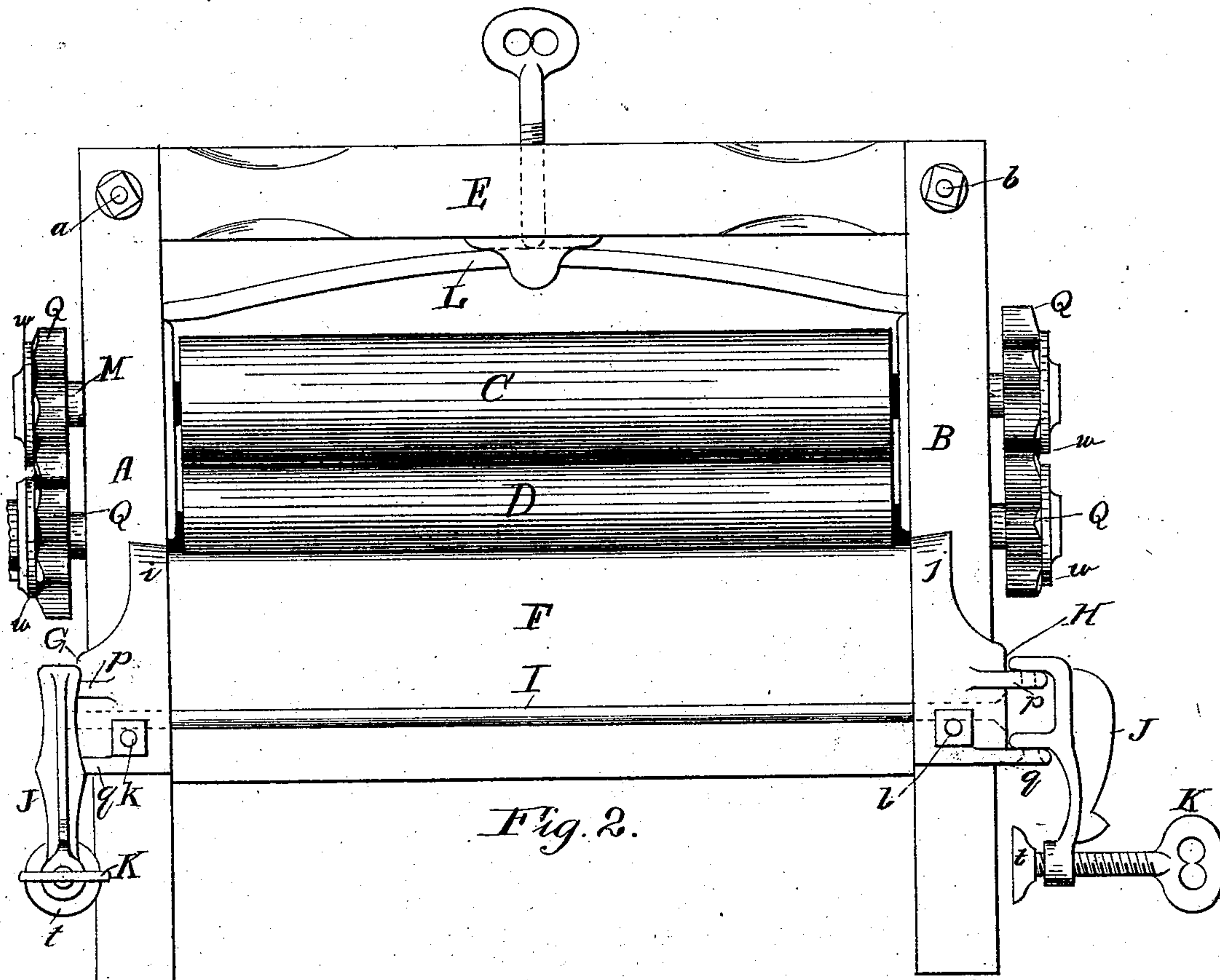


Fig. 2.

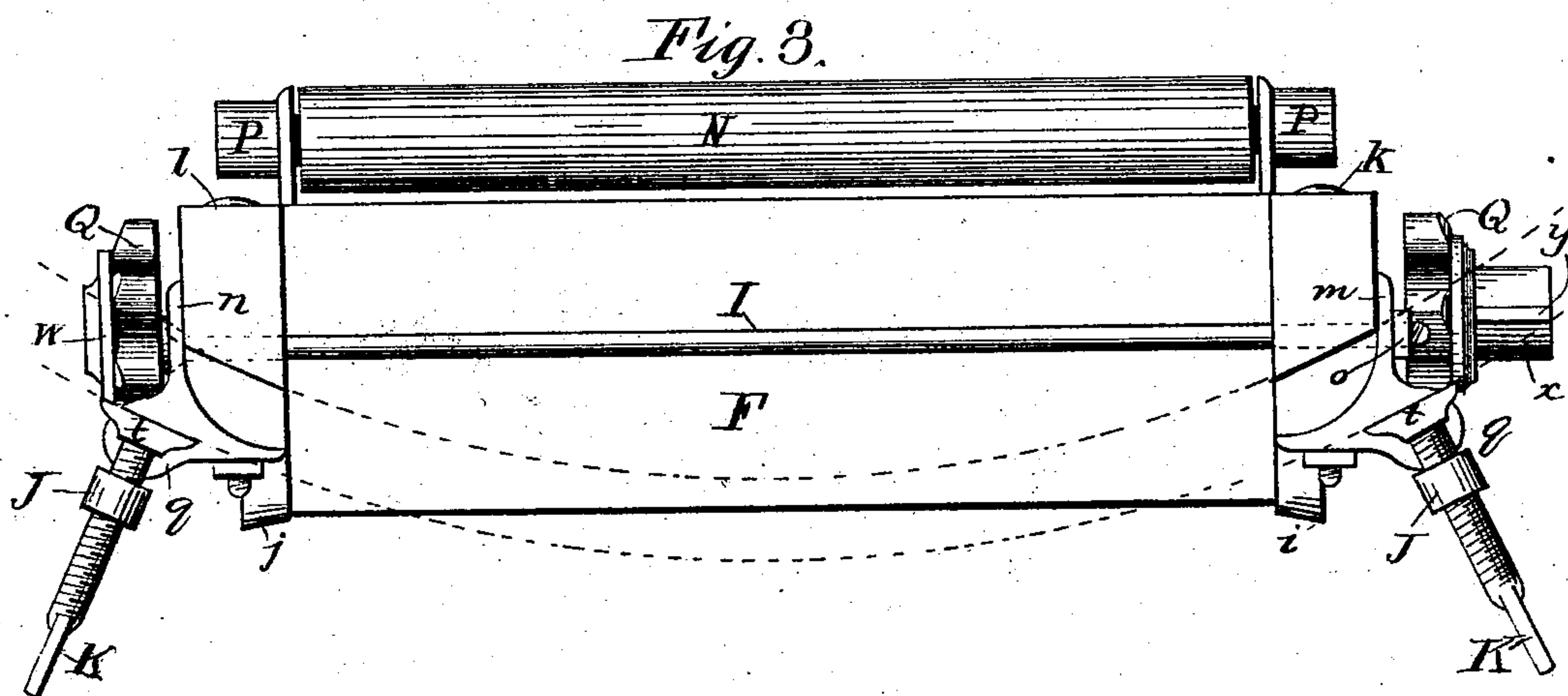


Fig. 3.

Witnesses

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Fig. 6.

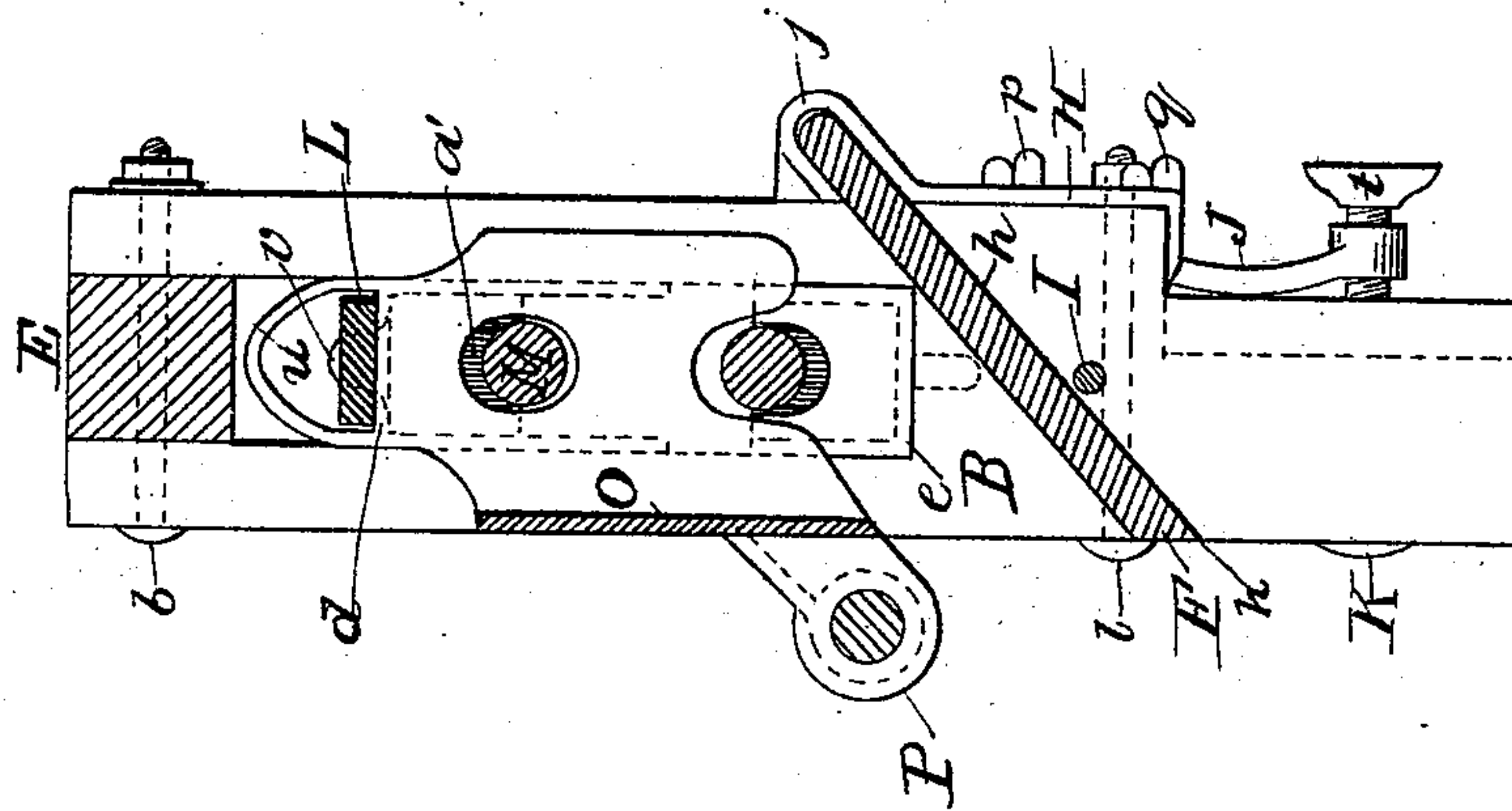


Fig. 5.

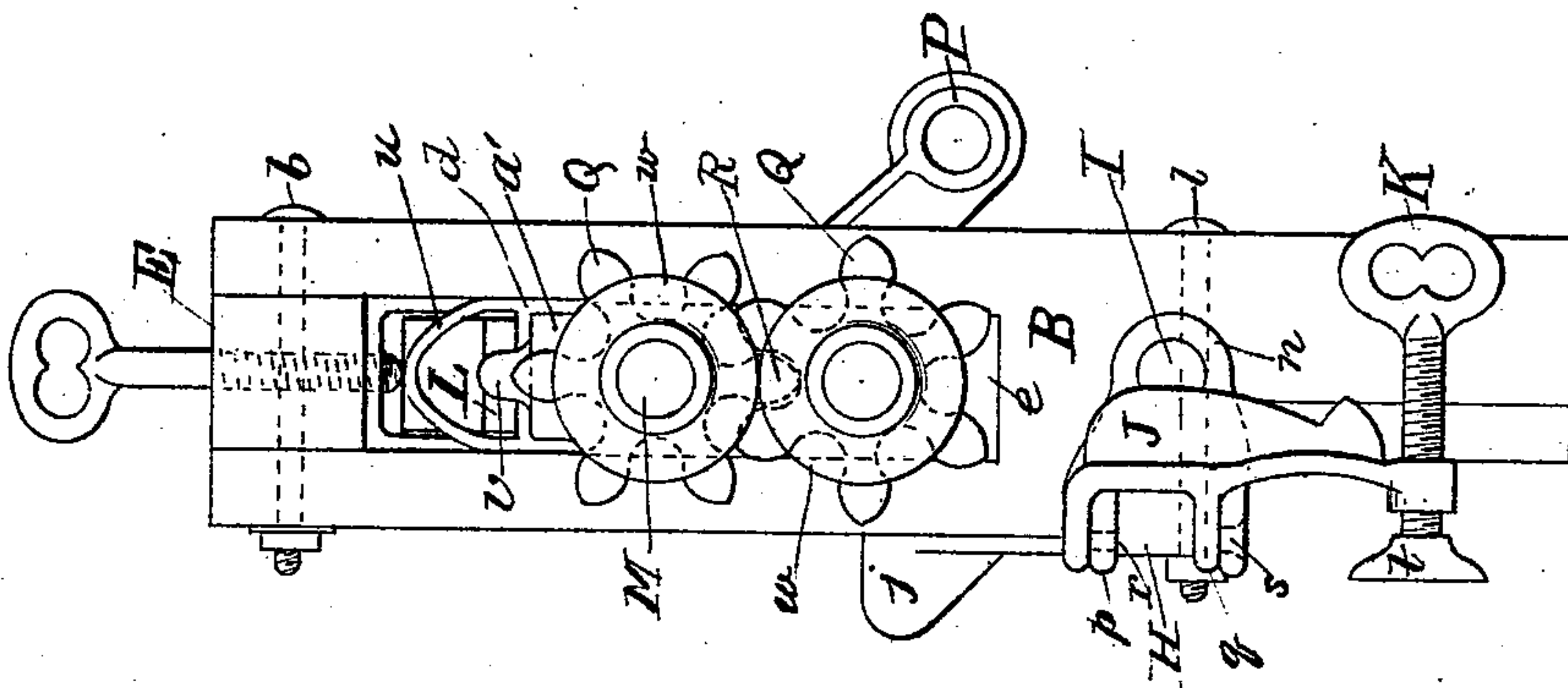
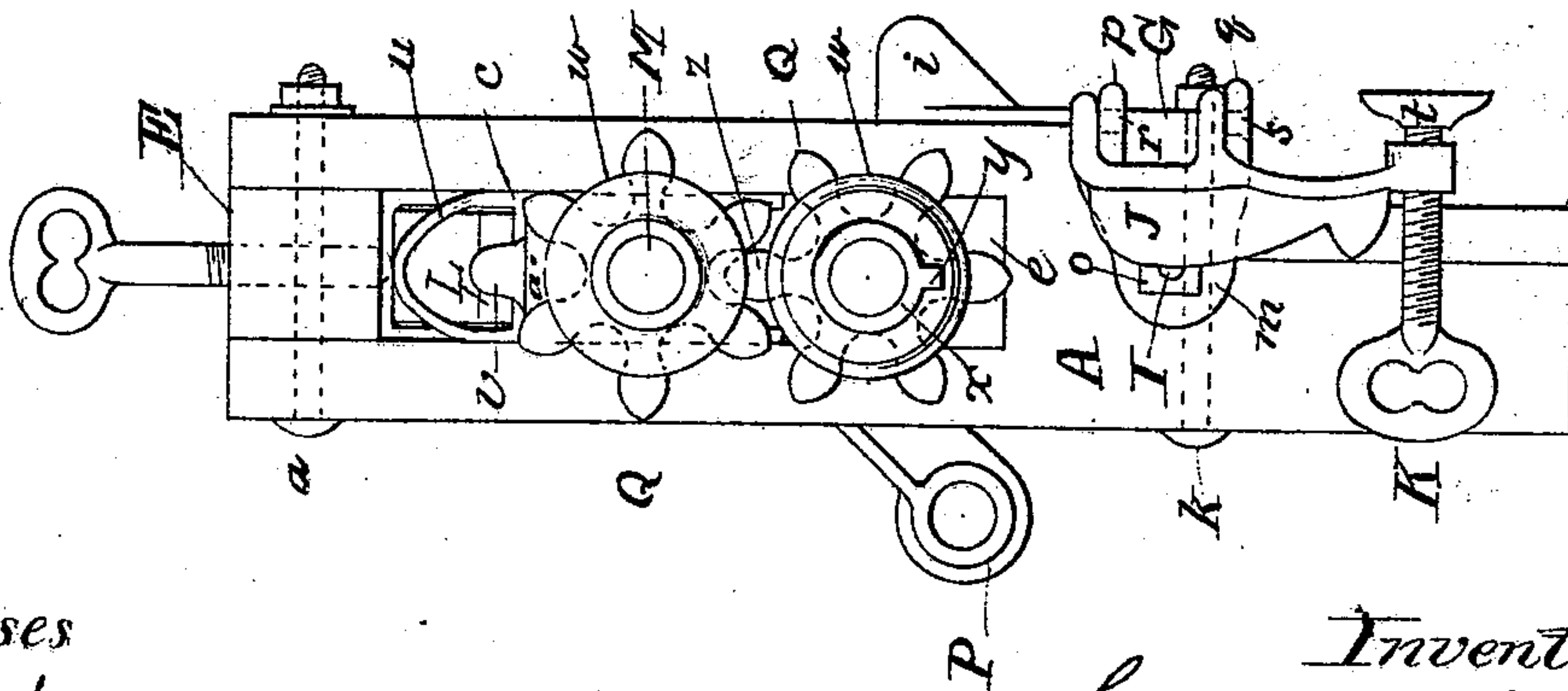


Fig. 4.



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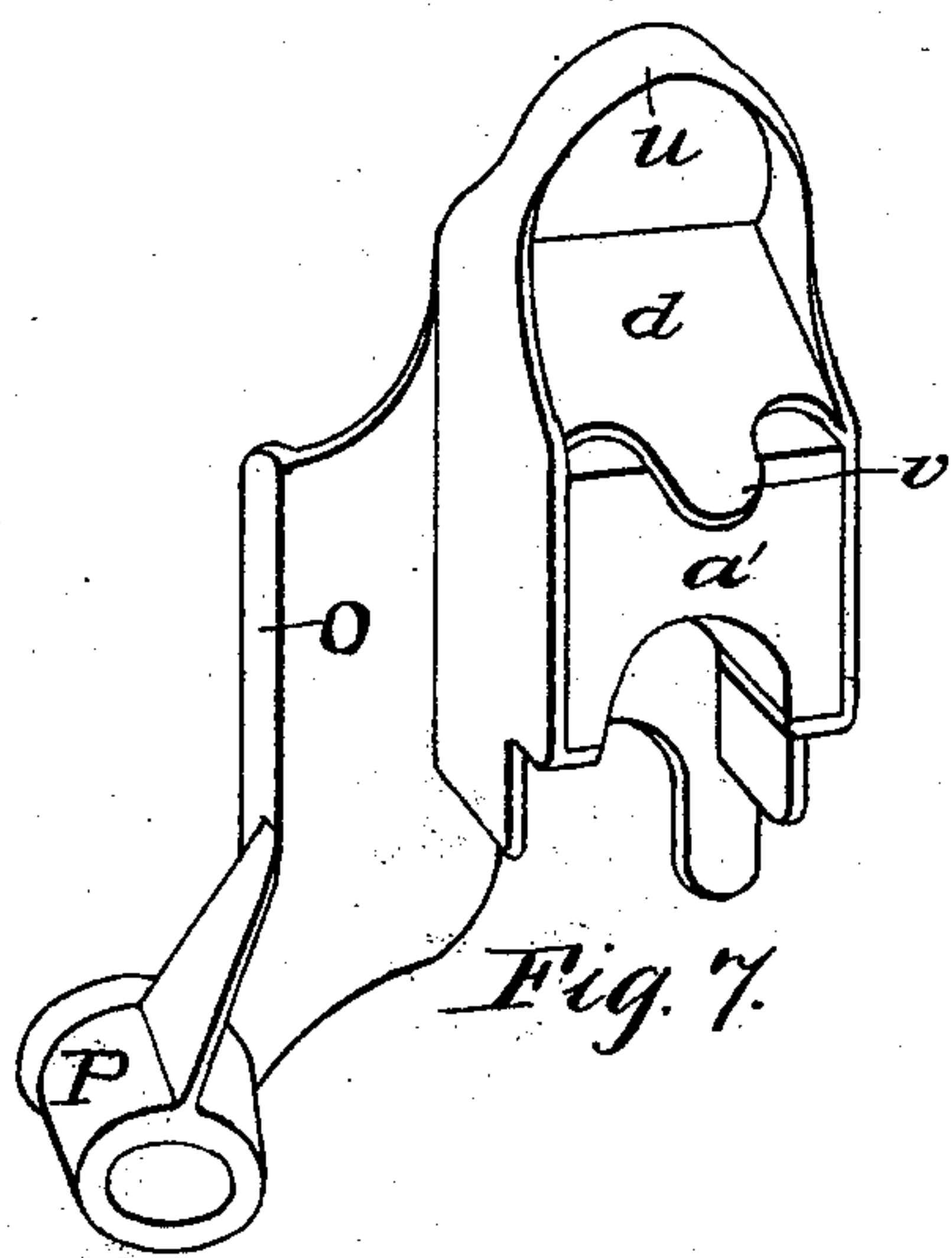


Fig. 7.

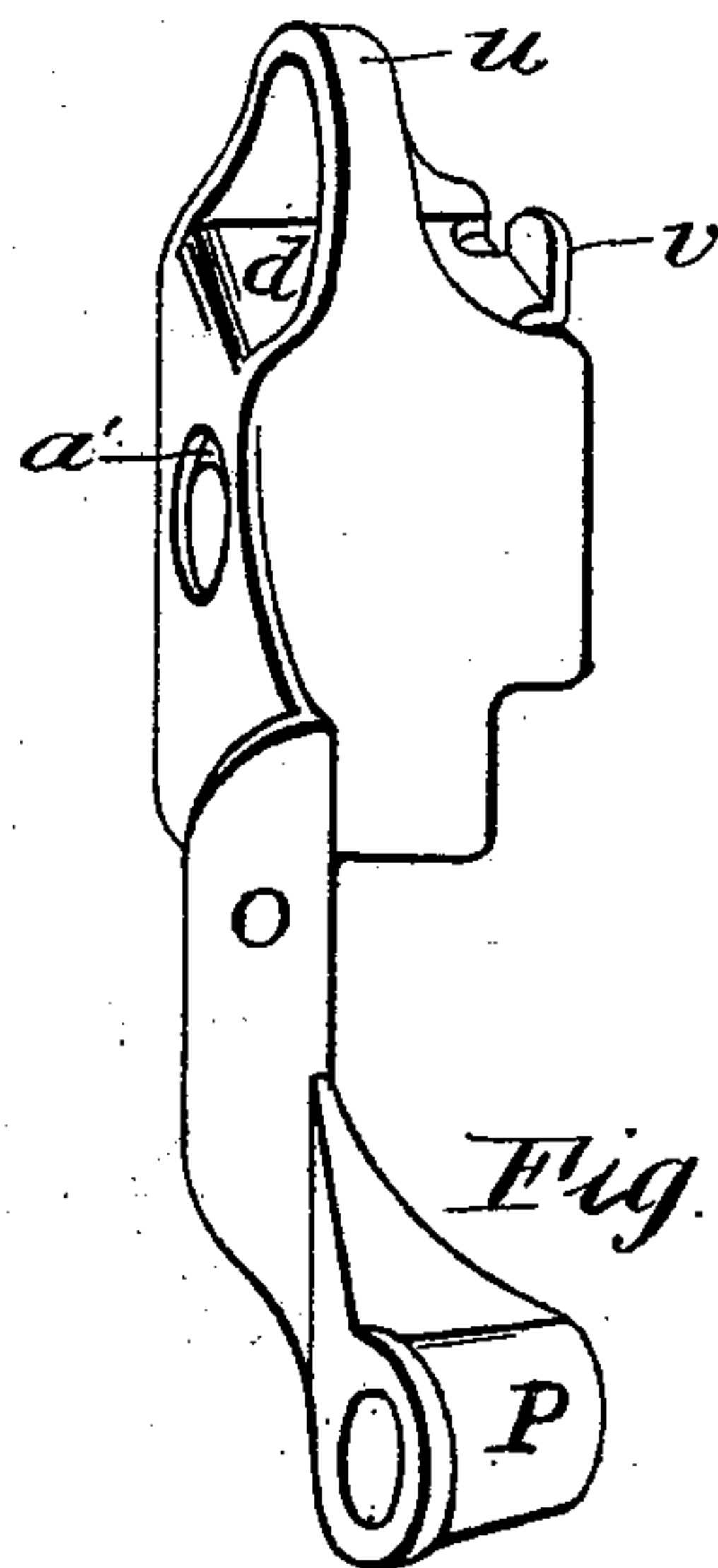


Fig. 8.

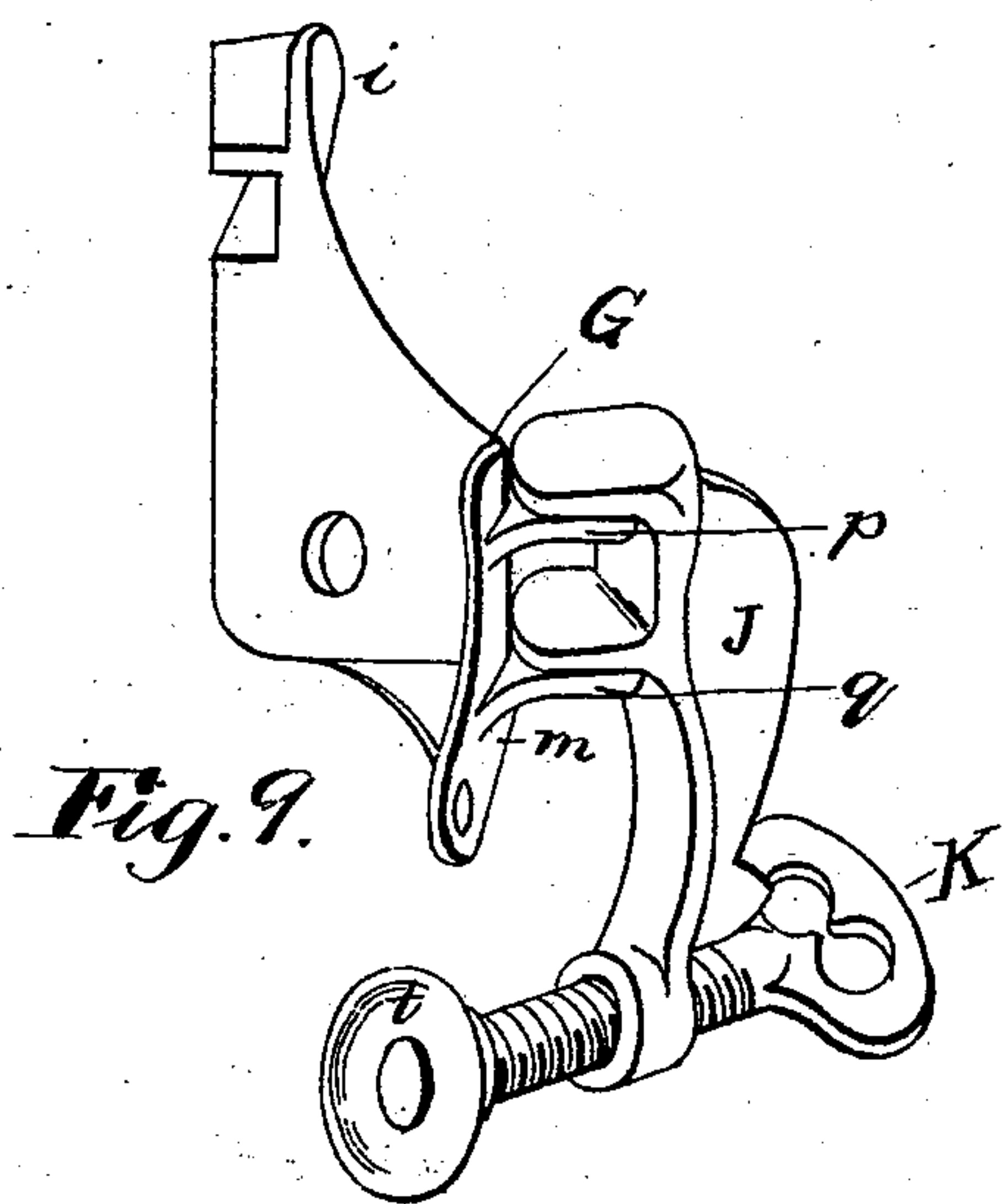


Fig. 9.

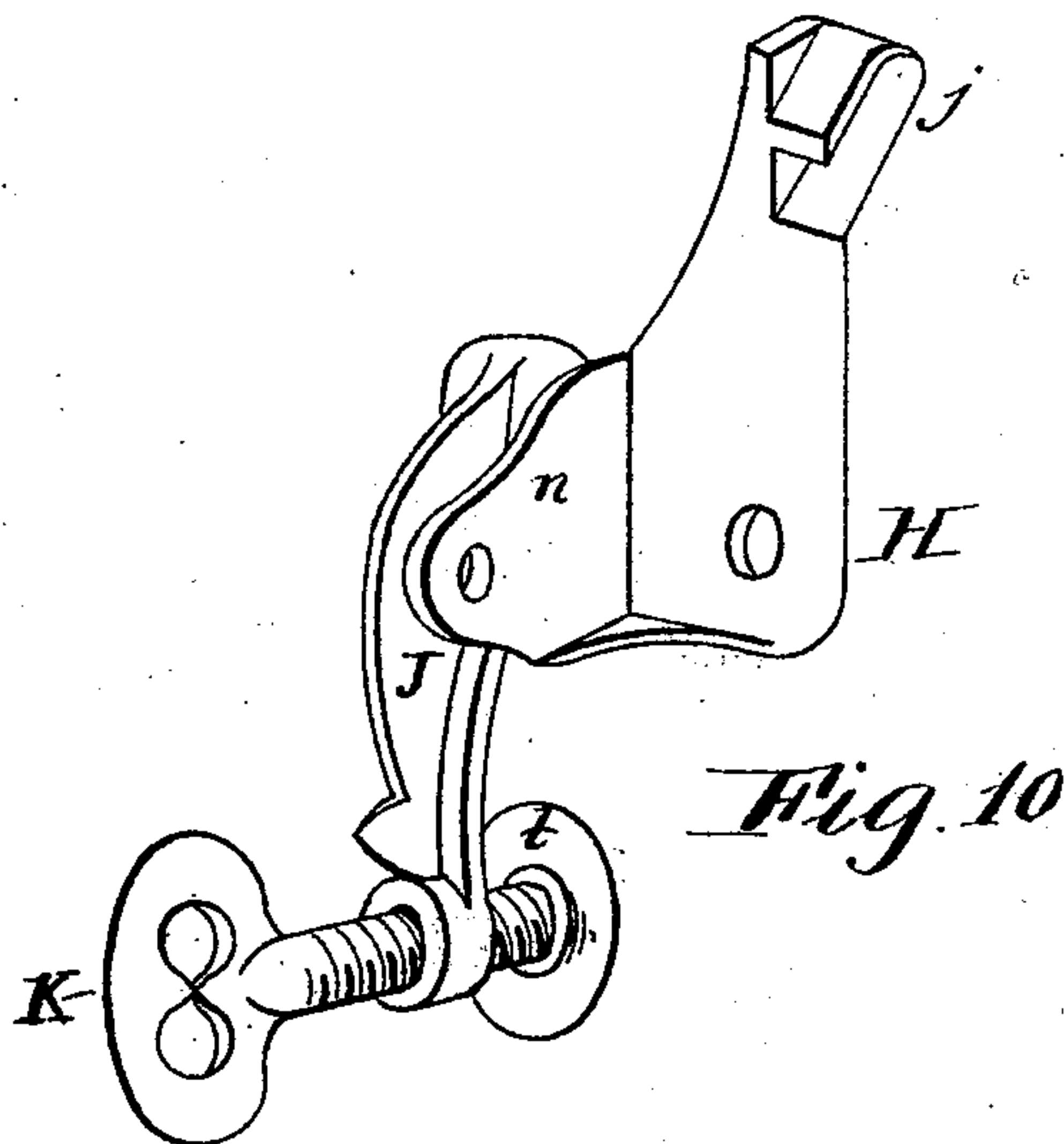


Fig. 10.

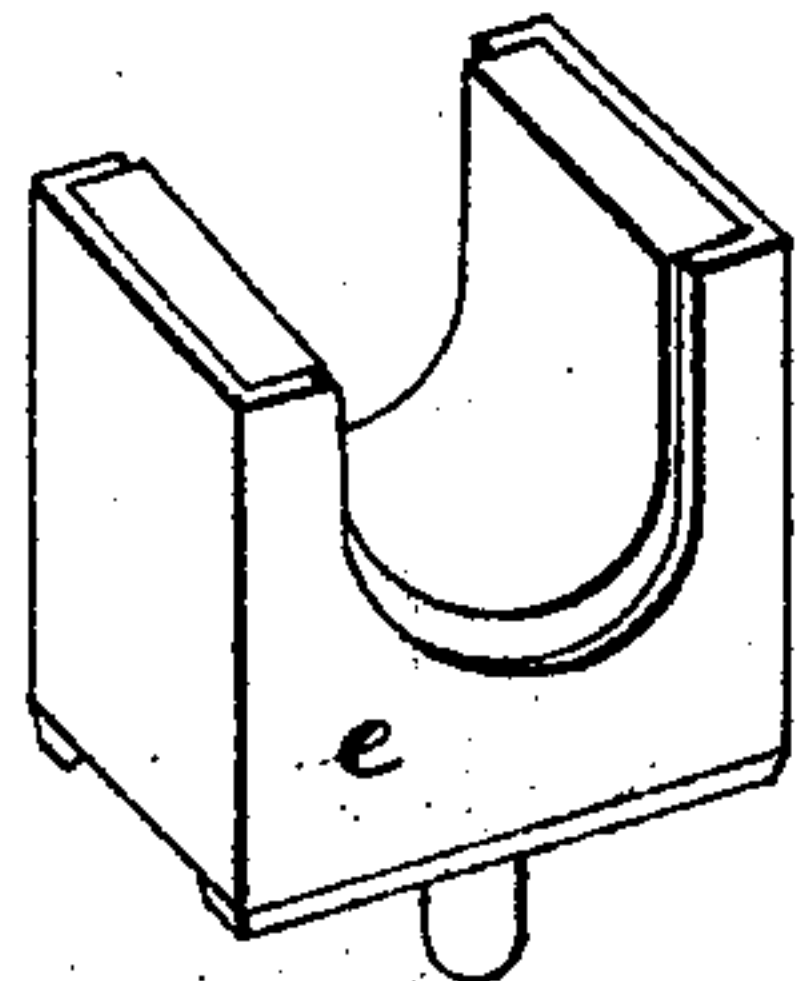


Fig. 11.

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UNITED STATES PATENT OFFICE.

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

CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 517,785, dated April 3, 1894.

Application filed September 12, 1893. Serial No. 485,368. (No model.)

To all whom it may concern:

Be it known that I, CYRENUS WHEELER, Jr., a citizen of the United States, residing at 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 the construction thereof to be hereinafter pointed out and claimed.

In the drawings, Figure 1, is a front view of the machine. Fig. 2, is a rear view. Fig. 3, is an inverted plan view of the same. Fig. 4, is an end view showing positions of gear wheels and collars with light pressure of the spring. Fig. 5 is a view of the opposite end showing the position of gear wheels and collars under strong pressure of the spring. Fig. 6 is a vertical section taken on the line 6—6, Fig. 1. Fig. 7 is a perspective view of a casting for one of the movable journal boxes, before the prong is bent up. Fig. 8 is a perspective view of the same casting, from another direction, in its completed form. Figs. 9 and 10 are perspective views of the corner and socket pieces, and pivoted clamping pieces shown in different positions. Fig. 11 is a perspective view of one of the boxes.

The same letters indicate like parts in all the views.

In describing the machine, the side where the clothes enter the rolls, will be called the front side; and the opposite, the back or rear side. The crank end will be called the right hand end, and the other, the left hand end.

The frame for supporting the rollers and their appliances is composed of four pieces of wood, and to give it firmness so that it will remain in shape, and the separate parts preserve their proper alignment, they are united in the following manner: The end pieces A, and B, are slotted to receive the rolls C, and D, and their supporting boxes *c*, *d* and *e*. The cross piece E, unites the tops of the end pieces, and is held firmly in place by bolts *a*, and *b* through it, and the end pieces. The drip board F, is supported at each end by grooves, *g* and *h*, made in the inner faces of the end pieces. This drip board, crosses the end pieces at an angle, and its rear edge projects beyond the end pieces, and its back edge is nearly as high as the center of the lower

roll. The projecting corners of the drip board, are supported by metal socket pieces, *i*, and *j*, which are attached to the back edges of the end pieces by bolts *k* and *l*. These socket pieces are made wide enough, to form with the connecting plates *m* and *n*, corner pieces *g*, and *h*, which embrace and fit the outer rear corners of the end pieces and through which, and the end pieces, below and close to the drip board, the long bolt I is inserted. The nut on the bolt I being screwed snugly against the plate *m*, holds the several parts of the wringer frame firmly in place. These corner pieces have eye pieces, *p* and *q*, which project outward from the corners of the said corner pieces for receiving the pintles *r* and *s*, of the clamping pieces J, which are provided with thumb screws K, and bearing buttons *t*. The pintles are long enough to admit of upsetting one or more of their ends, to hold them in place. By pivoting the clamping pieces J, to the corner pieces as shown; when on the tub and tightened by the thumb screws, the pressure is made on lines radiating from the center of the tub, see Fig. 3. When removed from the tub, the clamping pieces can be turned forward against the outside of the end pieces, and made to lie directly below the gearing on the roller shafts making the wringer more compact, less space being required in packing for shipment, see Figs. 1, 2, 4 and 5. This results from the fact that the eye-pieces or plates *p* and *q* to which the clamps are secured, are on the outside, instead of in rear of, the end pieces of the frame. The movable metal boxes *c*, and *d*, which are provided for the upper roller have chambers or recesses, for holding the tallow soaked linings *a'* in which the shaft M revolves. The wooden linings can be dispensed with, and the bearing formed in the metal, but the wood lining is preferred. On the top of the boxes, on each side of the end of the spring L, elevations, *u*, are formed which unite over the spring, and serve as arch-shaped stops to protect the spring from the excessive strain, by striking against the under side of the cross piece E.

In order to protect the bearing boxes and journals from water, and keep the clothing from spreading over the end of the rolls, the boxes are provided with guard plates O, on

their inner ends, which rest against the inner surface of the end pieces, between them and the ends of the rolls; their front edges extending in front of the rolls, far enough to be
 5 turned at right angles, to keep the clothes from spreading over the end of the rolls; see Figs. 1 and 8. The plates project past the slot in the end pieces, and have holes for the upper shaft, and their lower ends are hollowed
 10 out for the lower shaft.

In place of a fixed board attached to the end pieces, for guiding and supporting the clothes, and which causes friction and wear of the clothing, a revolving support is used,
 15 consisting of a small roller N, and for its support in front of the lower roller, the guard plates O, are provided with journal boxes P, in which the roll N, freely revolves. As these journal boxes are carried by the guard plates,
 20 the weight of the wet clothes is added to the force of the spring L; the larger the article of clothing, the greater the pressure; the roll N, moving up and down with the boxes c, and d. As the ends of the spring L, rest upon the
 25 tops of the movable boxes, it is important that it be kept in proper position to perform its work properly. For this purpose, the boxes c, and d, are cast with spurs or prongs v, which project outward from that part of the boxes
 30 on which the ends of the springs rest, as shown in Fig. 7, and after being malleableized or annealed, is bent upward as shown in Fig. 8, and serves to keep the spring from getting out of place. The rolls are provided with gear wheels
 35 Q, each of which has a collar w; that on the crank end of the lower roll, also having a hub x, provided with a rib y, to receive a hand crank. The collars w, of the gear wheels are of less diameter than the rolls, and still large
 40 enough to limit the pressure of the spring upon the rolls, so as to admit of a greater pressure being applied through the thumb screws, than is required for ordinary work; the collars coming together, and acting as revolving stops,
 45 to limit the pressure between the rolls, to the requirements of ordinary use, and at the same time permit, when required, the necessary pressure for an increased quantity of clothes. For the different positions of the collars see
 50 Fig. 4 showing the collars, separated; and Fig. 5, with full pressure, and the collars in contact. Gearing of various kinds have a pitch line, for their teeth or cogs, and operate more perfectly, when revolving on the

pitch lines. In gearing mounted on shafts, 55 like that of clothes wringers, the axle centers of which, when in use separate, there is a tendency to crowd out of mesh, when the teeth or cogs are out of pitch. This tendency is to a degree overcome, by arranging the gear 60 wheels Q, as shown in Figs. 4, and 5, where it will be seen that the cog z, of the gear wheel Q on the right hand end of the lower roll, points to the axle center of the shaft of the upper roll; and the cog R, of the gear wheel 65 Q, on the left hand end of the upper roll, points to the axle center, of the lower roll shaft. From this it will be seen, that no two cogs of the gear wheels on the same shaft, will be in full mesh, with the gear wheels on 70 the other shaft. In this connection, the stops which protect the spring from excessive strain, also serve to prevent the cogs of the gear wheels from crowding entirely out of mesh, which they would do occasionally, if not thus 75 restrained.

To reduce the dimensions of the machine when not in use, in addition to the pivoted clamps, the gear wheel Q, on the right hand end of the lower roll, is provided with the 80 hub and a rib y, and a hand crank S, having a thumb screw T, is applied to the hub, and when not in use, can be readily removed.

Having described the invention, what I claim as new, and desire to secure by Letters 85 Patent, is—

1. In a clothes wringer, in combination with the rolls and their bearing boxes, the frame work supporting the same, consisting of the slotted end pieces, the cross bar connecting 90 the tops of said end piece, the inclined drip board supported by the end pieces, and below the rolls in grooves, and projecting back of the end pieces, the metal socket pieces embracing the corners of the drip board, and 95 united to the end pieces by bolts, substantially as shown and described.

2. In a clothes wringer, the combination of the frame work, the rolls, and spring, the movable boxes provided with guard plates 100 having journal boxes for the clothes supporting roller, substantially as described and shown.

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Witnesses:

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