

No. 641,336.

Patented Jan. 16, 1900.

C. B. SCHULTZ.
CIGAR MACHINE.

(Application filed Jan. 25, 1899.)

(No Model.)

2 Sheets—Sheet 1.

fig. 1.

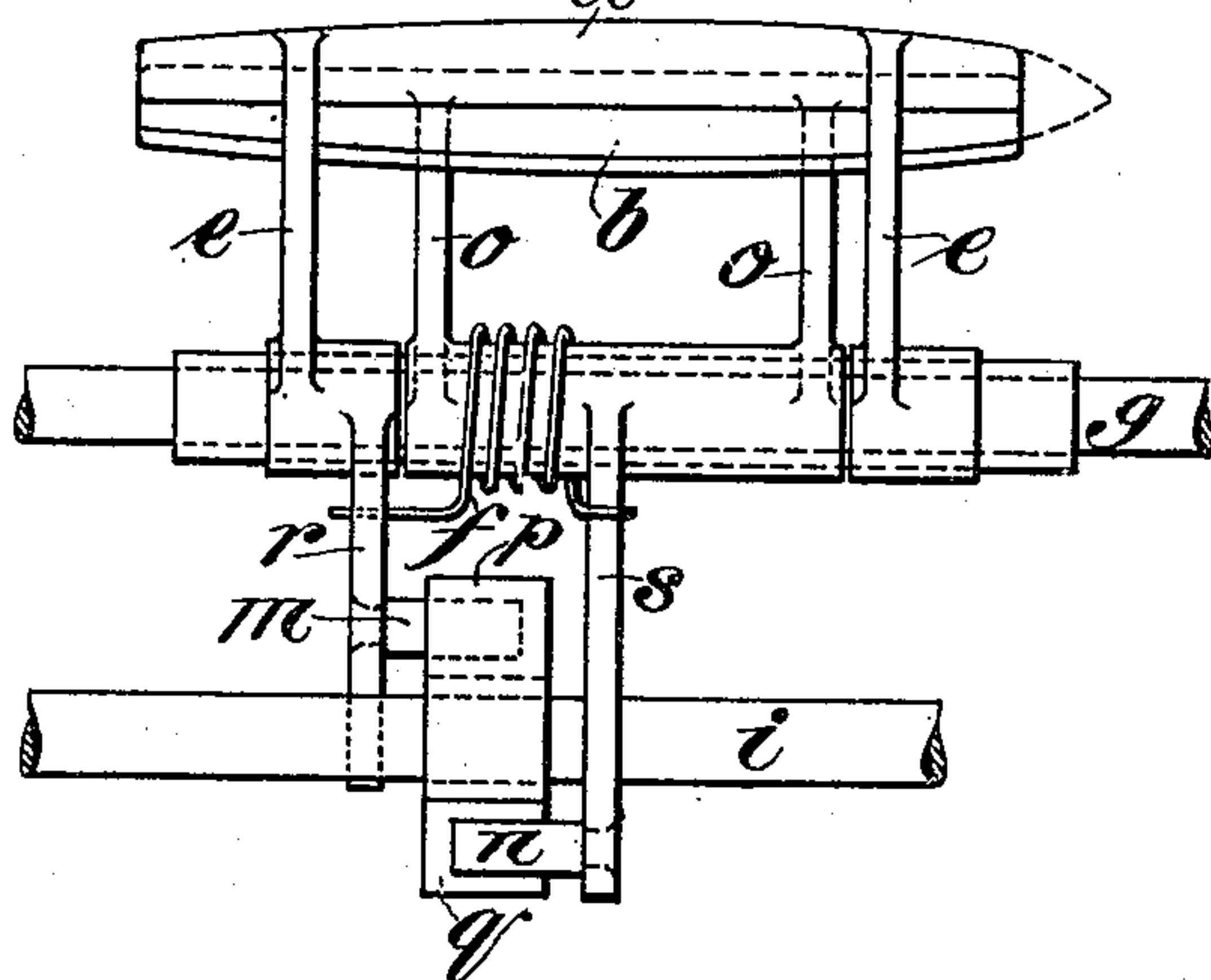


fig. 2.

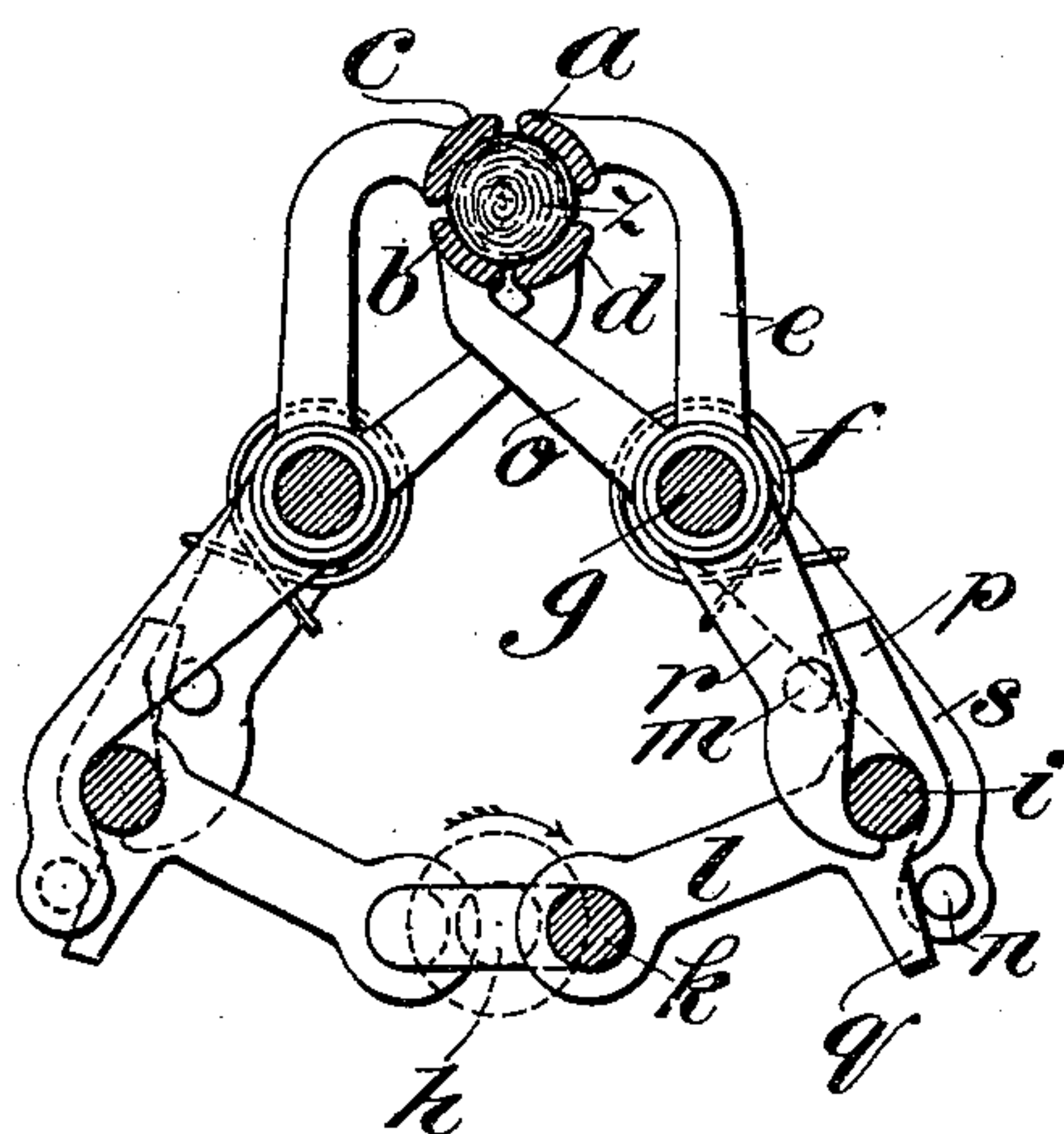


fig. 3.

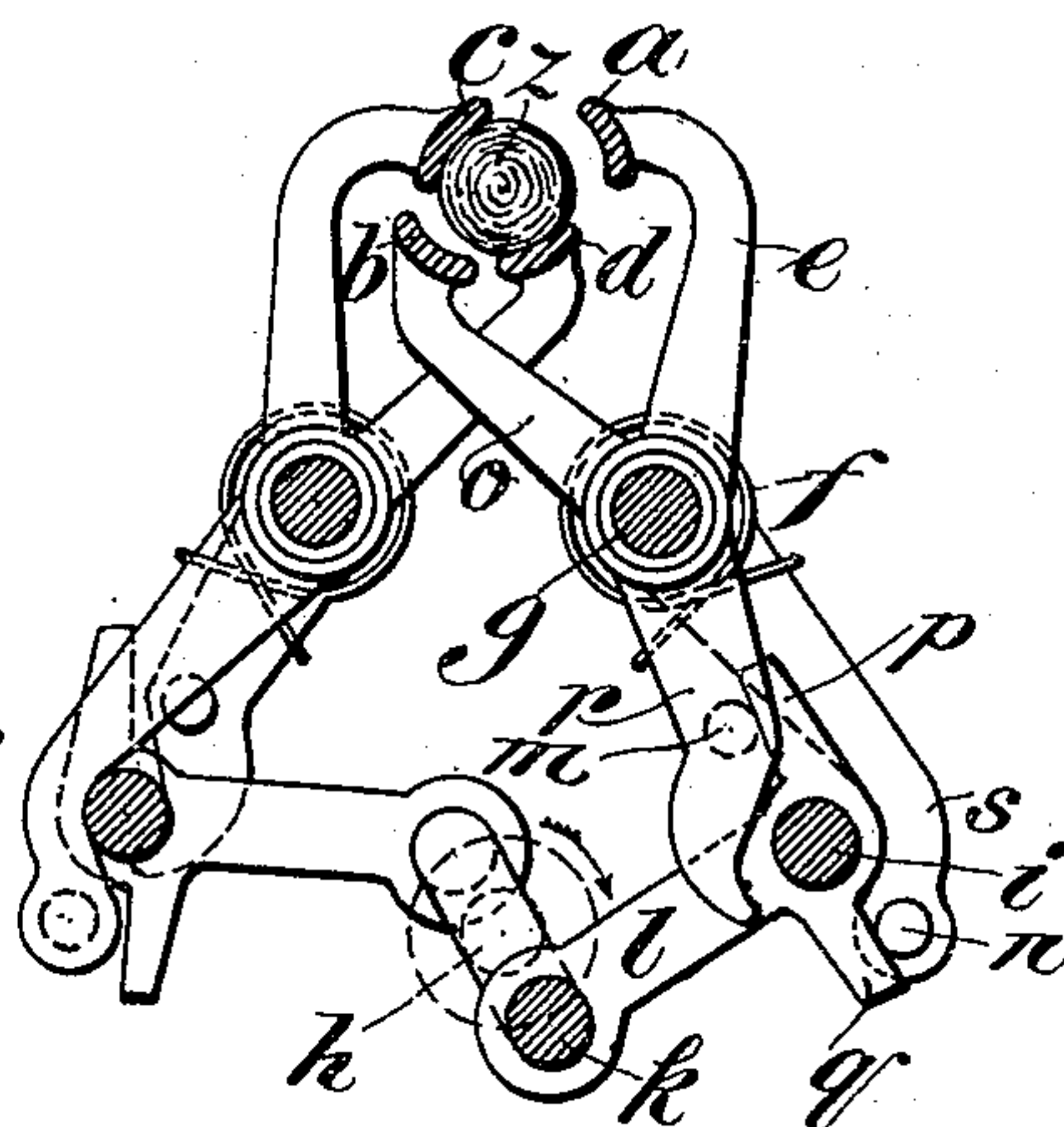
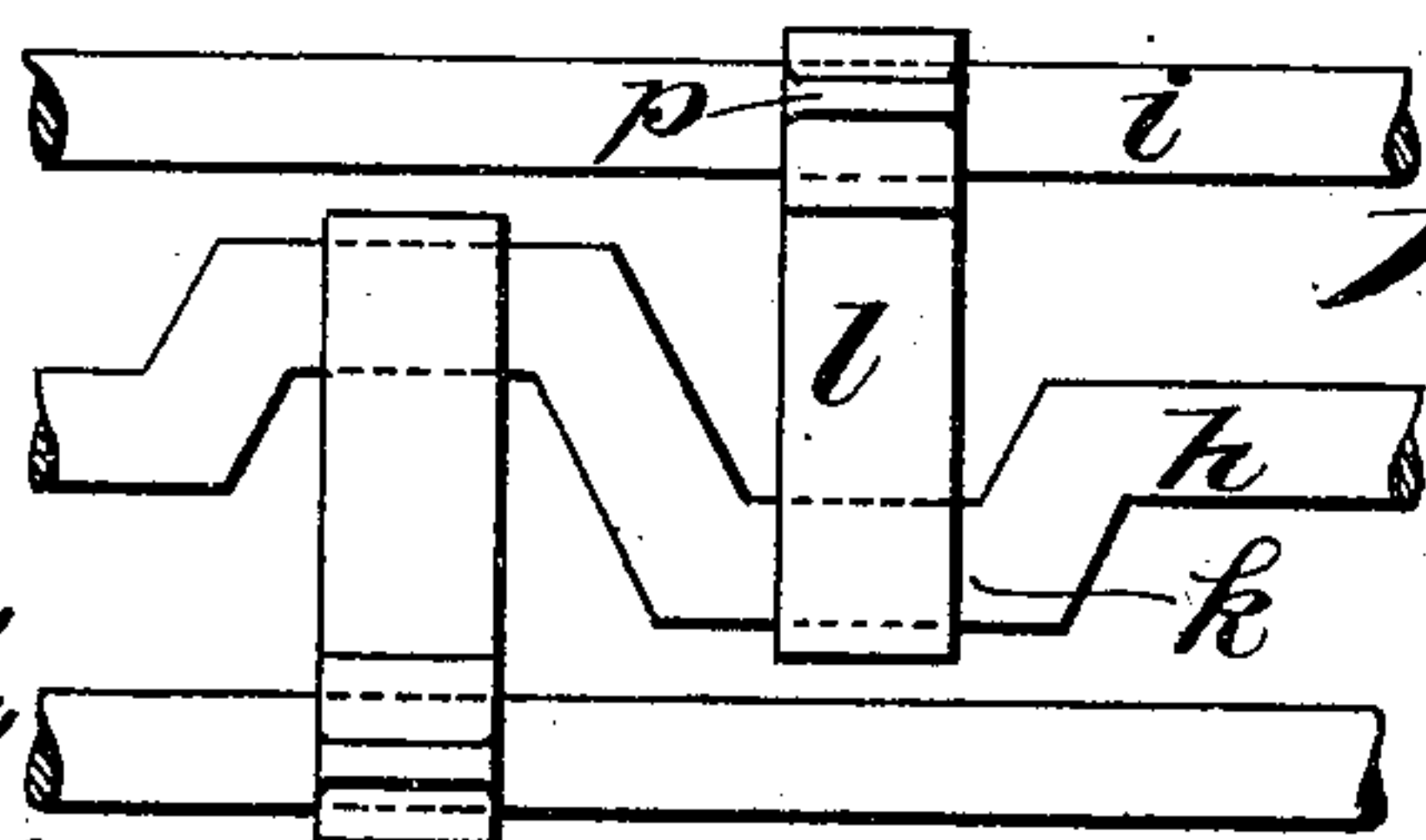


fig. 4.



Witnesses

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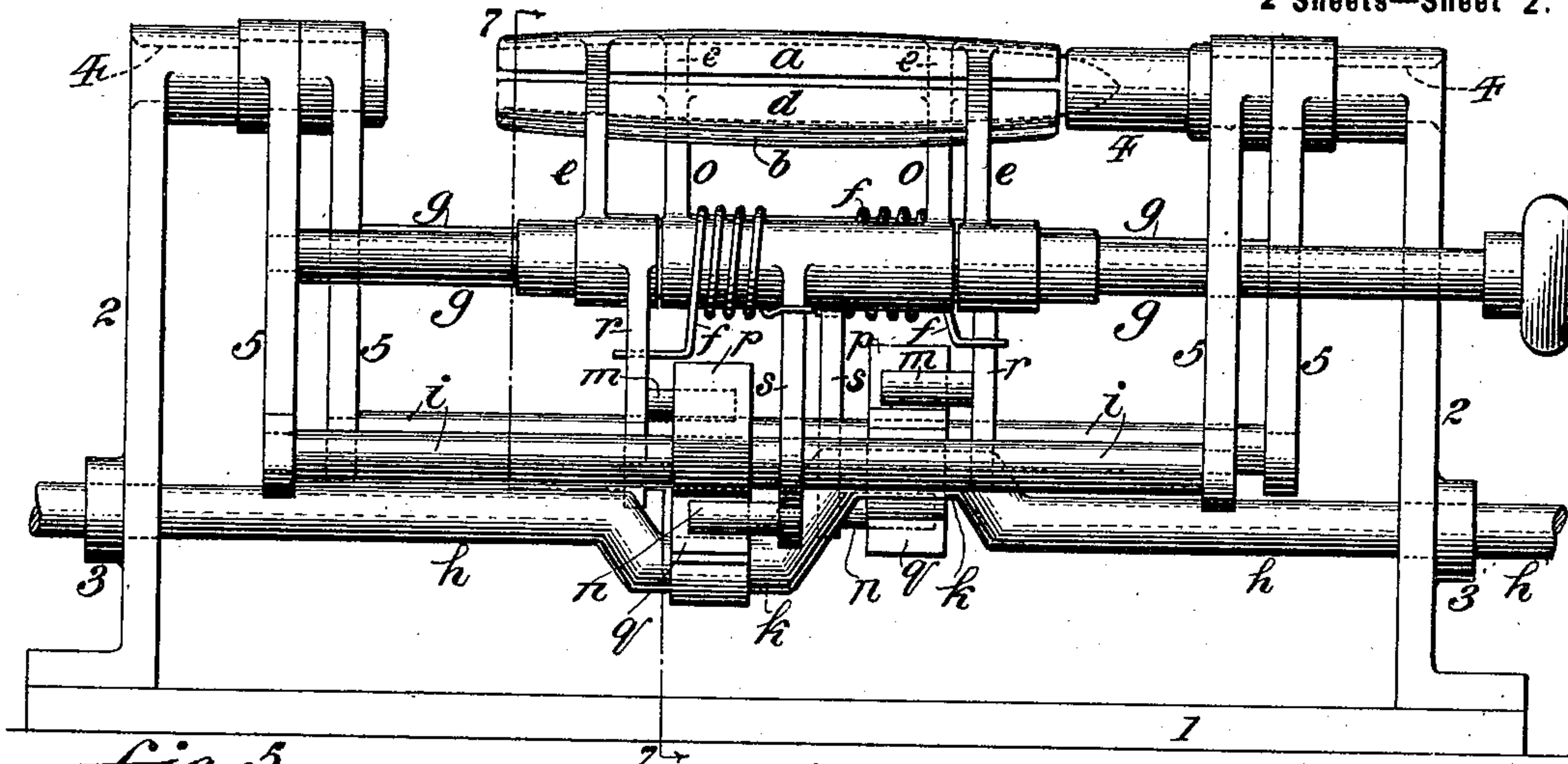


Fig. 5.

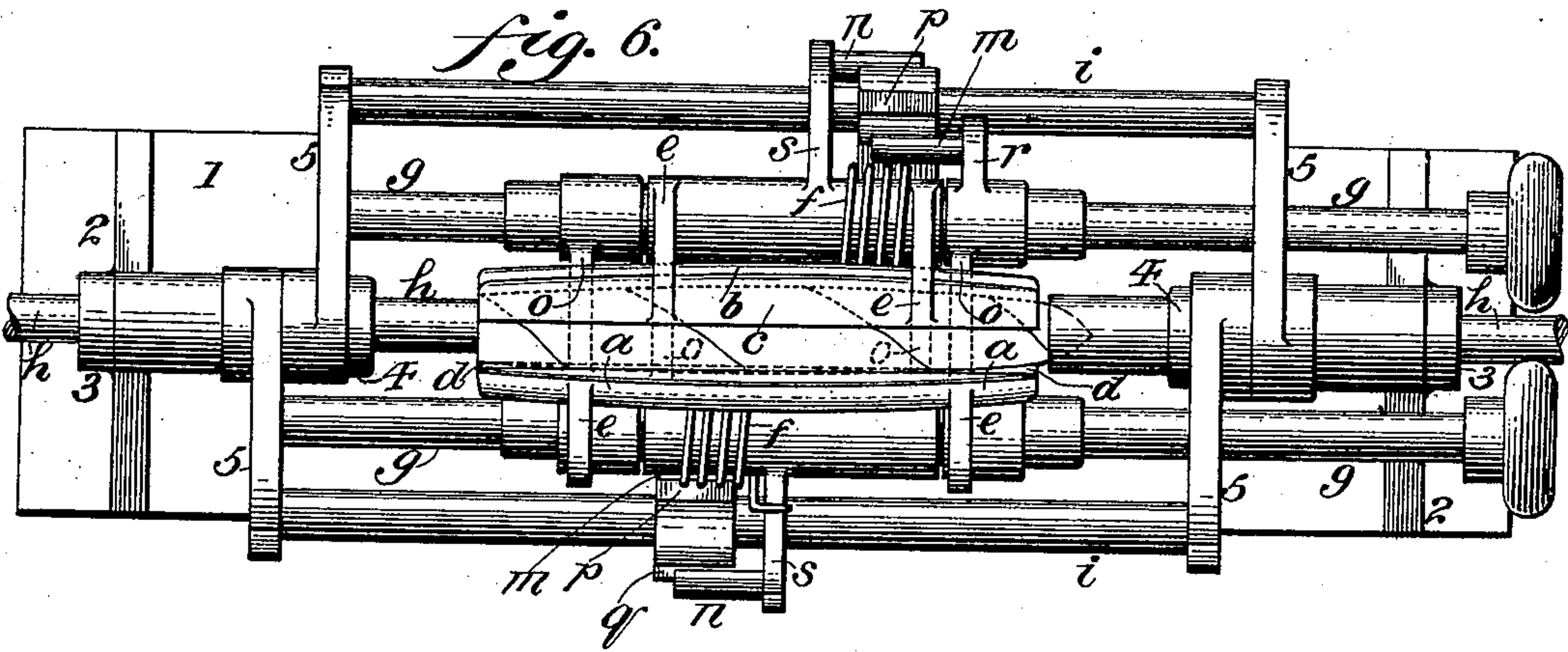


Fig. 6.

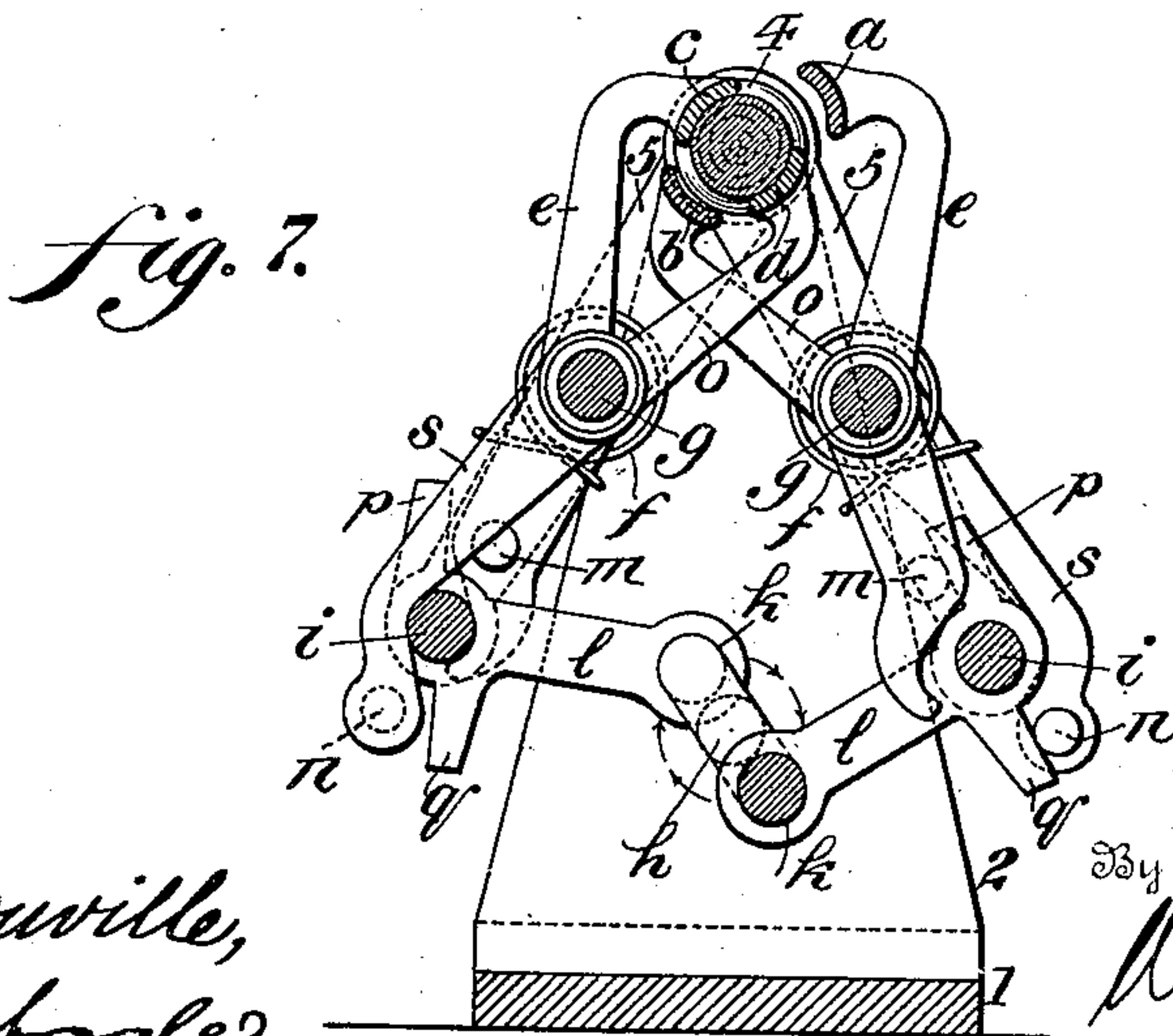


Fig. 7.

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UNITED STATES PATENT OFFICE.

CLARENCE B. SCHULTZ, OF CHARLOTTENBURG, GERMANY.

CIGAR-MACHINE.

SPECIFICATION forming part of Letters Patent No. 641,336, dated January 16, 1900.

Application filed January 25, 1899. Serial No. 703,326. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE B. SCHULTZ, M. E., a citizen of the United States, residing at Charlottenburg, Prussia, Germany, have
5 invented certain new and useful Improvements in Cigar-Rolling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same.

Heretofore the manipulators in machines for rolling cigar-bunches into their wrappers were actuated by rods moved either by gears or by eccentric movement, the manipulators
15 proper being provided with suitably-arranged slots engaging the rods. The wear and tear of these combinations is found to impair the alinement of the wrapping-shapers in their relative position to each other and to the stationary tip-shaper to an objectionable extent.

My invention relates to a new mechanism for operating wrapping-shapers in cigar-rolling machines, insuring permanent alinement by avoiding friction and therefore wear of the
25 controlling parts.

In the accompanying drawings, the mechanism is applied to the type of longitudinal wrapping-shapers for which a United States patent was applied for on May 20, 1898, Serial
30 No. 681,194.

Figure 1 is the elevation of a pair of wrapping-shapers adapted to the present mechanism. Figs. 2 and 3 show the principal positions of the moving elements, and Fig. 4
35 illustrates more fully crank-shaft *h*. Fig. 5 represents a side elevation of a cigar-bunch-rolling machine constructed in accordance with this invention. Fig. 6 represents a top plan view thereof. Fig. 7 represents a vertical transverse section taken on the line 7 7,
40 Fig. 5.

In Figs. 1, 2, and 3, *a b c d* are four shapers, each of which constitutes about one-fifth of a mold of a cigar *z* divided longitudinally.
45 Each two shapers, those diametrically opposite each other, are assembled on shafts *g* by arms *e o* and bushings and can be opened and closed like a pair of nippers. Below the bushings extend arms *r s*, which carry pins *m n*.
50 Around the bushings are wound springs *f*, which tend to close the shapers and which keep the latter at the proper distance apart by

pressing arms *r s* onto rods *i*, thus limiting the stroke. Shaft *g* and rod *i* are connected with the frame of the machine, so as to swing on
55 the axis of the cigar without changing their relative positions. These rocking motions are caused by double-cranked driving-shaft *h*, which, suitably sustained by the frame of the machine, is linked to rods *i* by connecting-
60 rods *l*. The cranks are opposite to each other, and by this arrangement crank-shaft *h* rocks the two pairs of wrapping-shapers in opposite directions.

When arms *r s* are brought up to rods *i*, the
65 shapers hold the cigar-bunch. For opening the wrapping-shapers connecting-rods *l* are provided with levers *p q*, which are arranged so as to press against pins *m n* when crank *k* moves through the lower half of its circular
70 path. (See shapers *a* and *b* in Fig. 3.) As soon as the crank has entered the upper half of the circle levers *p q* leave pins *m n* and springs *f* bring up arms *r s* to the rods *i*, closing the shapers upon the cigar-bunch. (See
75 shapers *c* and *d* in Fig. 3.)

Fig. 2 shows the machine at the moment when the one pair of wrapping-shapers *a b* lets go the cigar-bunch while the other pair *c d*
80 takes hold.

In Fig. 3 the pair of shapers *a b* is pressed open by levers *p q* of connecting-rod *l* against spring *f*. The other pair *c d* is holding and turning the bunch. Following up the motions of the mechanism it will readily be seen that
85 the wrapping-shapers are alternately opened, closed, and swung by the present mechanism, so as to shape and turn the cigar-bunch properly for applying the wrapper to the latter. Thus it appears that while the wrapping-
90 shapers are holding and turning the cigar-bunch—that is, during the time when the cigar-bunch must be held exactly in line with the tip-shaper in order to do good work—the parts controlling the alinement are completely
95 at rest and not influenced at all by the moving parts of the machine.

In Figs. 1 to 4 the shapers are shown in a manner to illustrate the manipulation thereof, while in Figs. 5 to 7 the frame of the ma-
100 chine and the construction by which the various parts are held in operative position and operated are illustrated. In said Figs. 5 to 7, 1 denotes the bed-plate, having the main

uprights 2 at the ends thereof, the crank-shaft *h* being mounted in bearings 3 thereof. At the upper ends of the uprights 2 are trunnions 4, the end of one being recessed to serve as a tip-shaper. The levers 5 are pivotally mounted upon said trunnions 4 and carry the shafts *g* about midway between their ends and the rods *i* at their lower ends. The shapers being carried by the shaft *g* will of course swing about their axis of closure. The manner in which said rods *i* are opened and closed and the means for opening and closing the shapers will be clear from the foregoing description.

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

1. In a cigar-rolling machine, a pair of separable wrapping-shapers, means for opening the same, a spring for closing the same, and means for swinging said shapers about their axis of closure.

2. In a cigar-rolling machine, a pair of separable wrapping-shapers, means for opening the same, stops for limiting the closing thereof, springs for closing said wrapping-shapers, and means for swinging the same about their axis of closure.

3. In a cigar-rolling machine, the coacting pairs of wrapping-shapers, the shapers in each pair being held in a closed position under spring tension, means for separating said shapers, and means for swinging the same about their axis of closure.

4. In a cigar-rolling machine, the separable wrapping-shapers mounted to swing about their axis of closure, a spring for closing said shapers, and vibratory members engaging and separating said shapers.

5. In a cigar-rolling machine, the separable wrapping-shapers mounted to swing about their axis of closure, a spring for closing the same, a vibratory member for swinging said shapers, and provided with vibratory parts for opening said shapers.

6. In a cigar-rolling machine, the separable wrapping-shapers mounted to swing about their axis of closure, a spring for closing the same, rods connected with a rotary driving device and having a pivotal connection with the frame supporting said shapers and having projections or levers engaging the said shapers.

7. In a cigar-rolling machine, the separable wrapping-shapers mounted to swing about their axis of closure, a spring for closing the same against suitable stops, a vibratory member pivotally connected with the frame supporting said shapers and having projections engaging the said shapers, and means for swinging said member on its pivot.

8. In a cigar-rolling machine, the coacting pairs of swinging wrapping-shapers, springs for closing said shapers, rods swinging with said shapers and situated between the end portions thereof, a double-crank shaft, connecting-rods connected with said crank-shaft and with the swinging rods of said shapers, levers upon said connecting-rods, and projections upon shapers situated in the path of said levers.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CLARENCE B. SCHULTZ.

Witnesses:

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