

No. 659,896.

Patented Oct. 16, 1900.

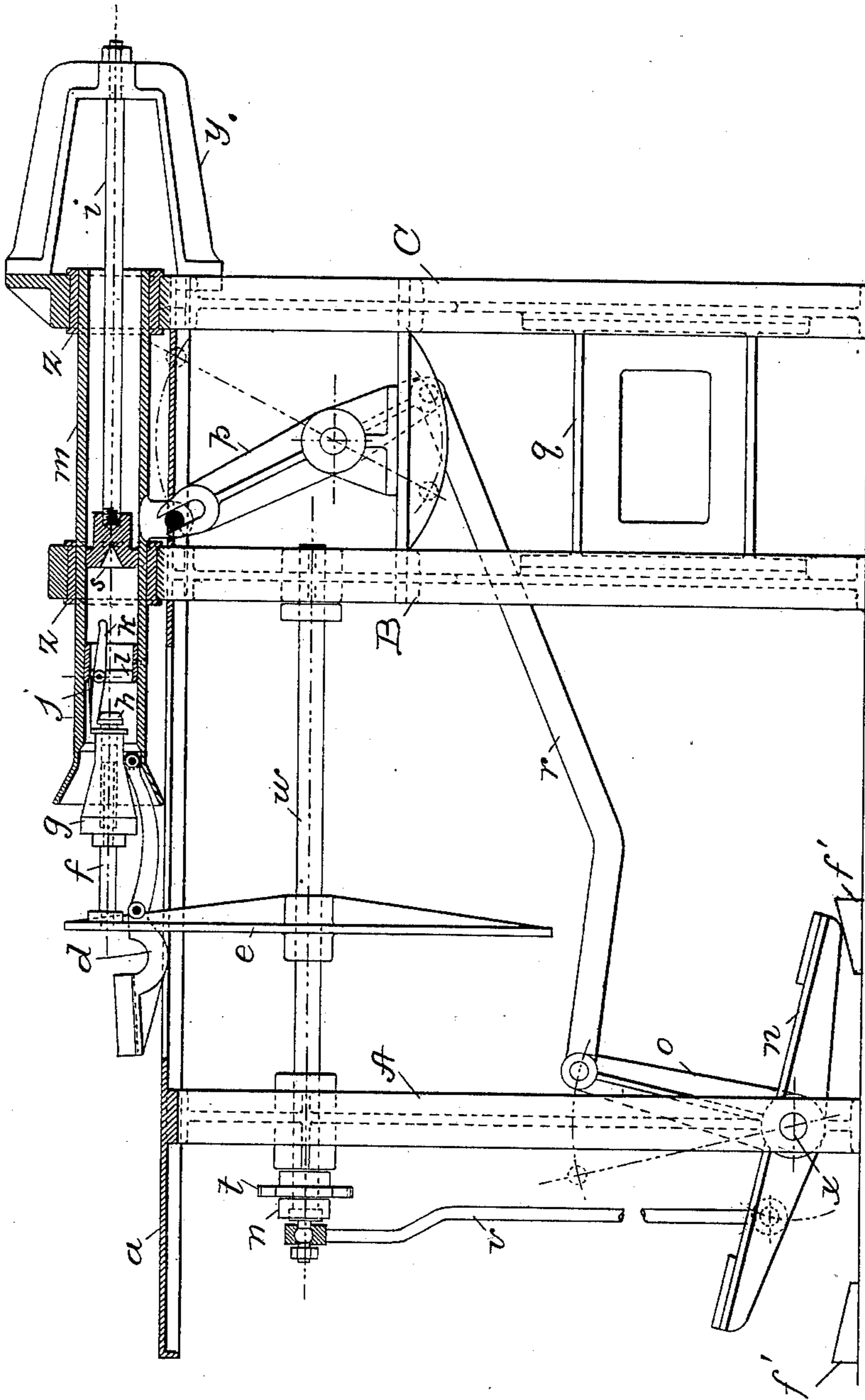
C. PHILLIPS & J. LACROIX.
CIGAR BUNCH SHAPER.

(Application filed June 28, 1897.)

(No Model.)

4 Sheets—Sheet 1.

Fig 1.



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Fig. 3.

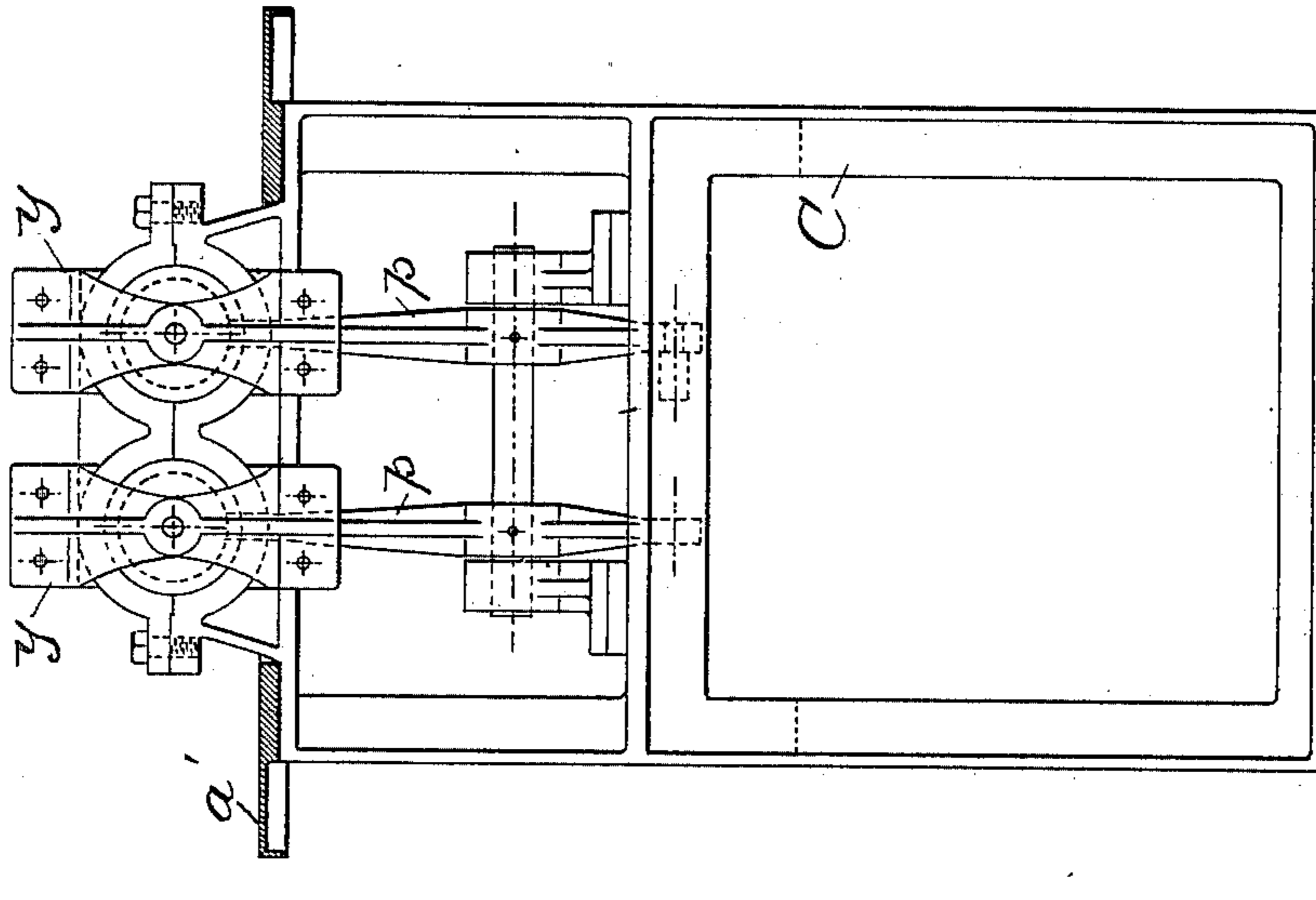
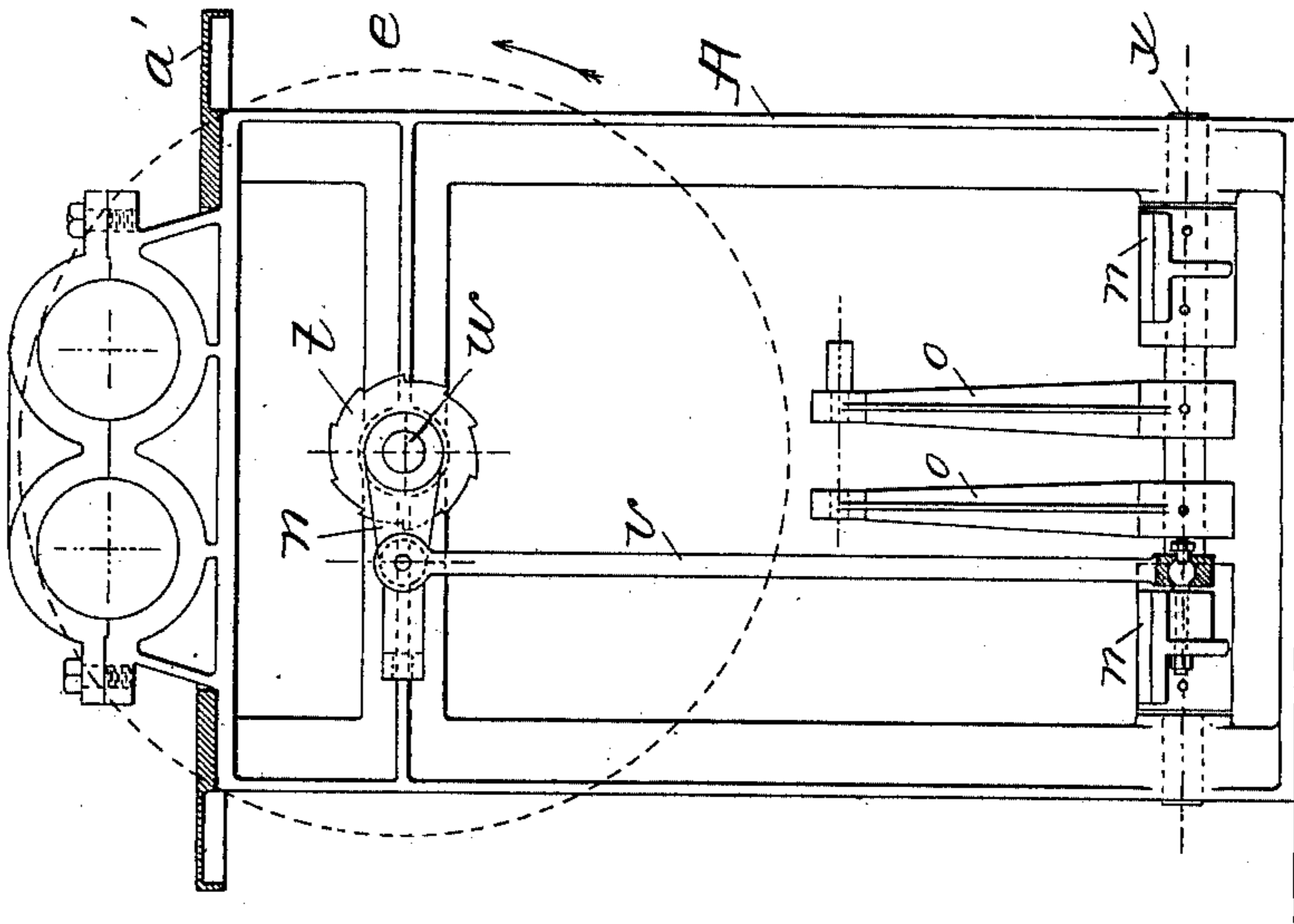


Fig. 2.



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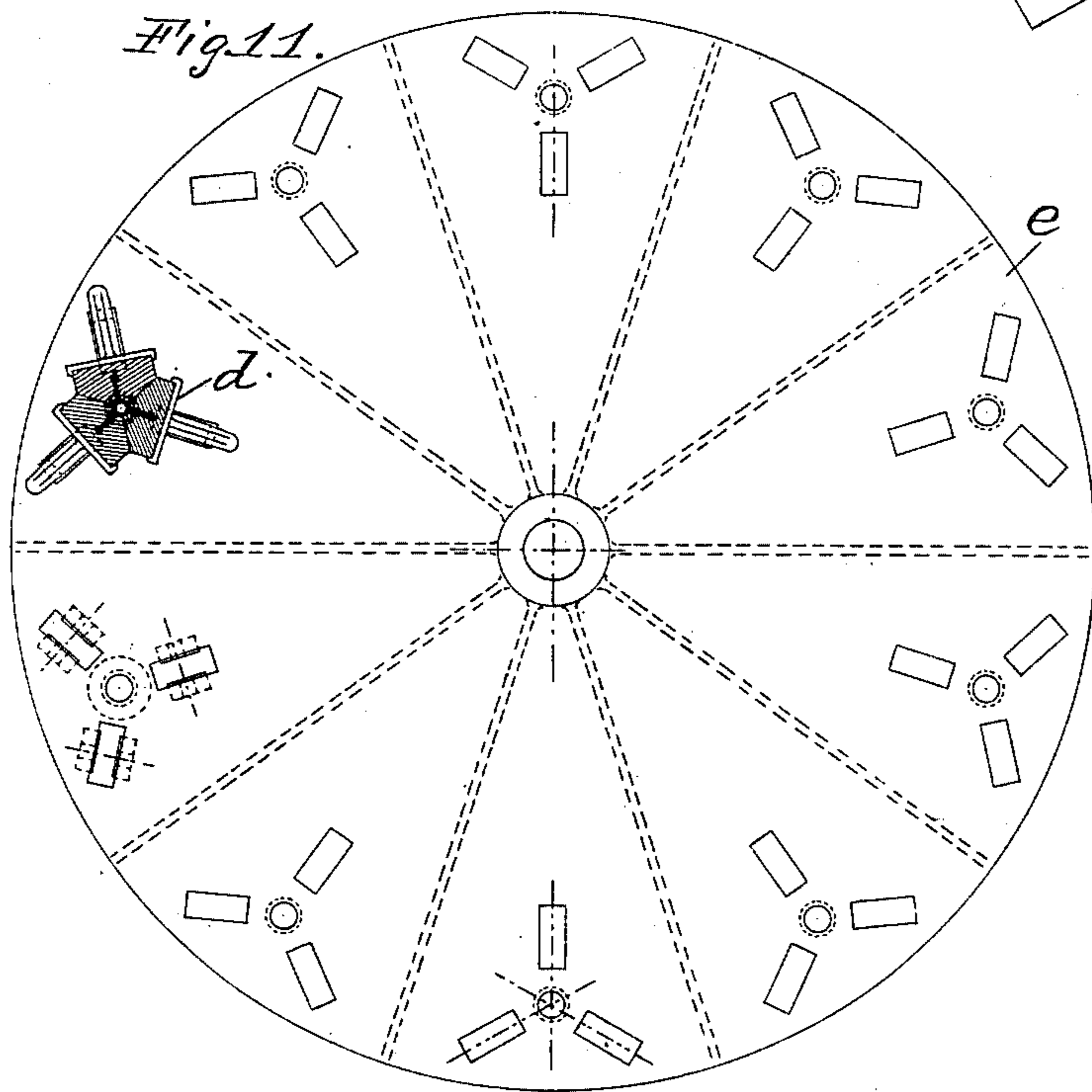
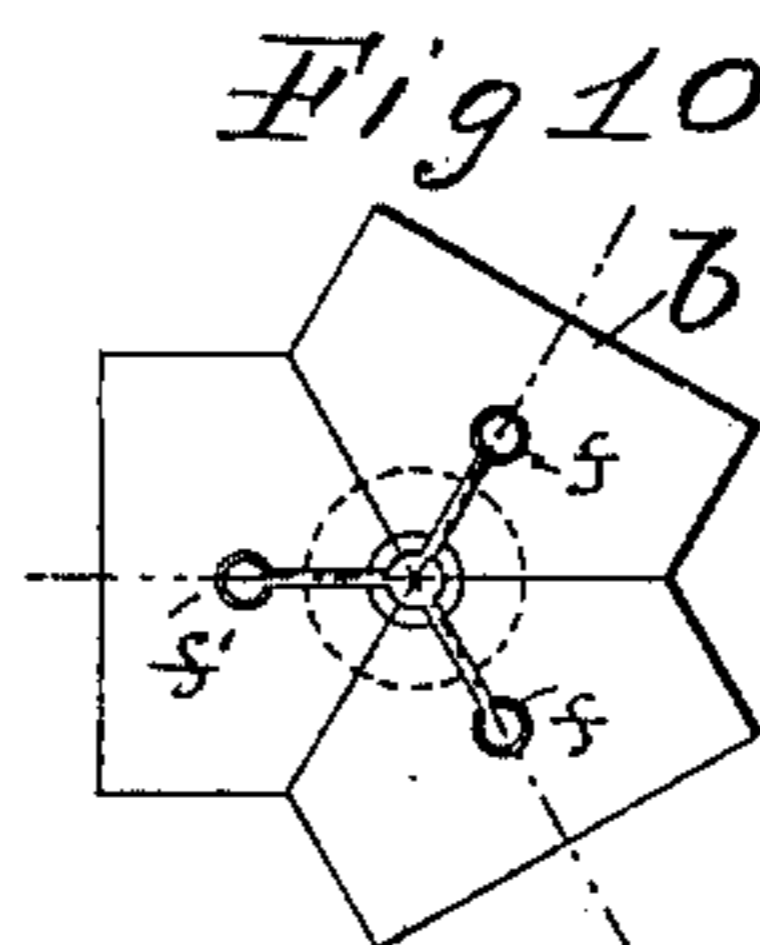
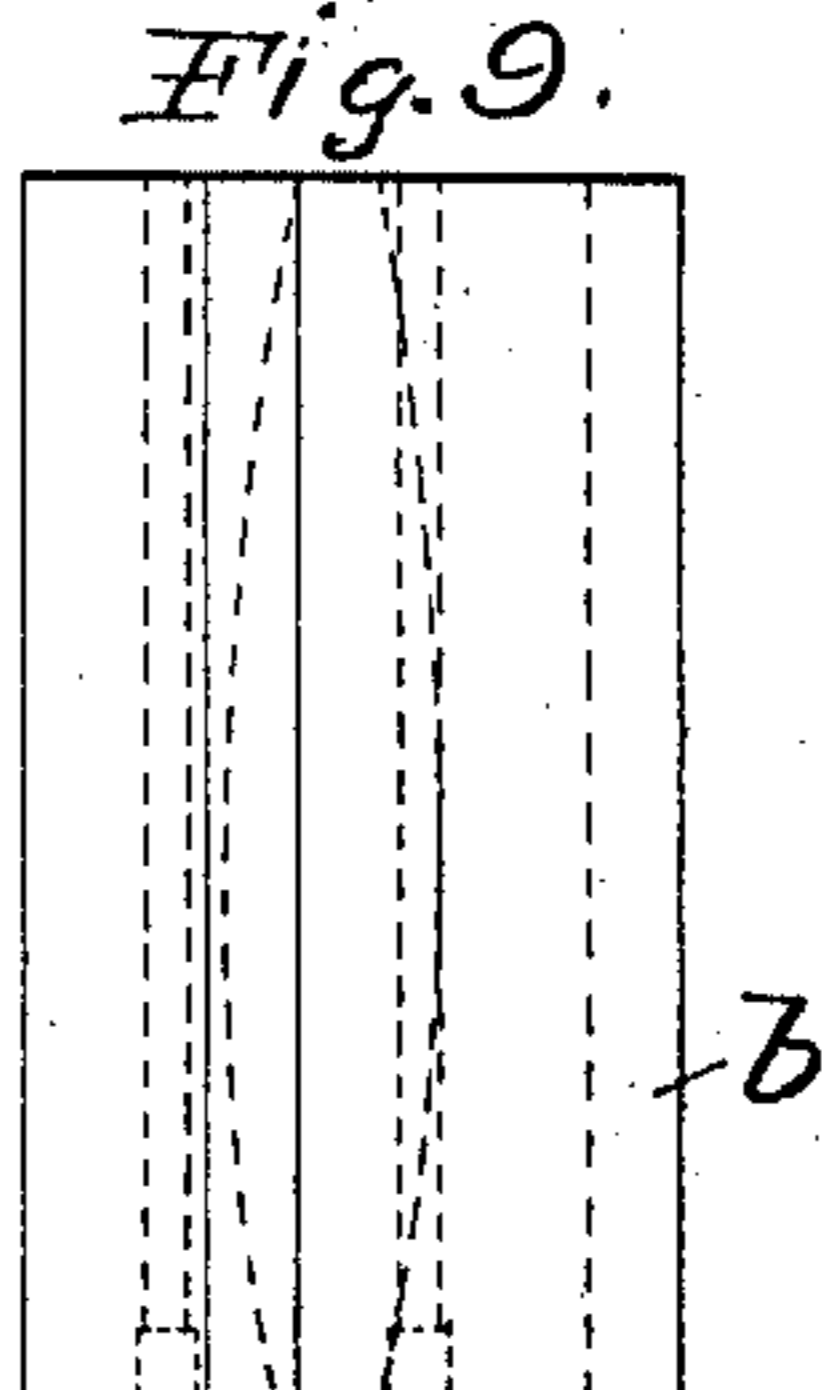
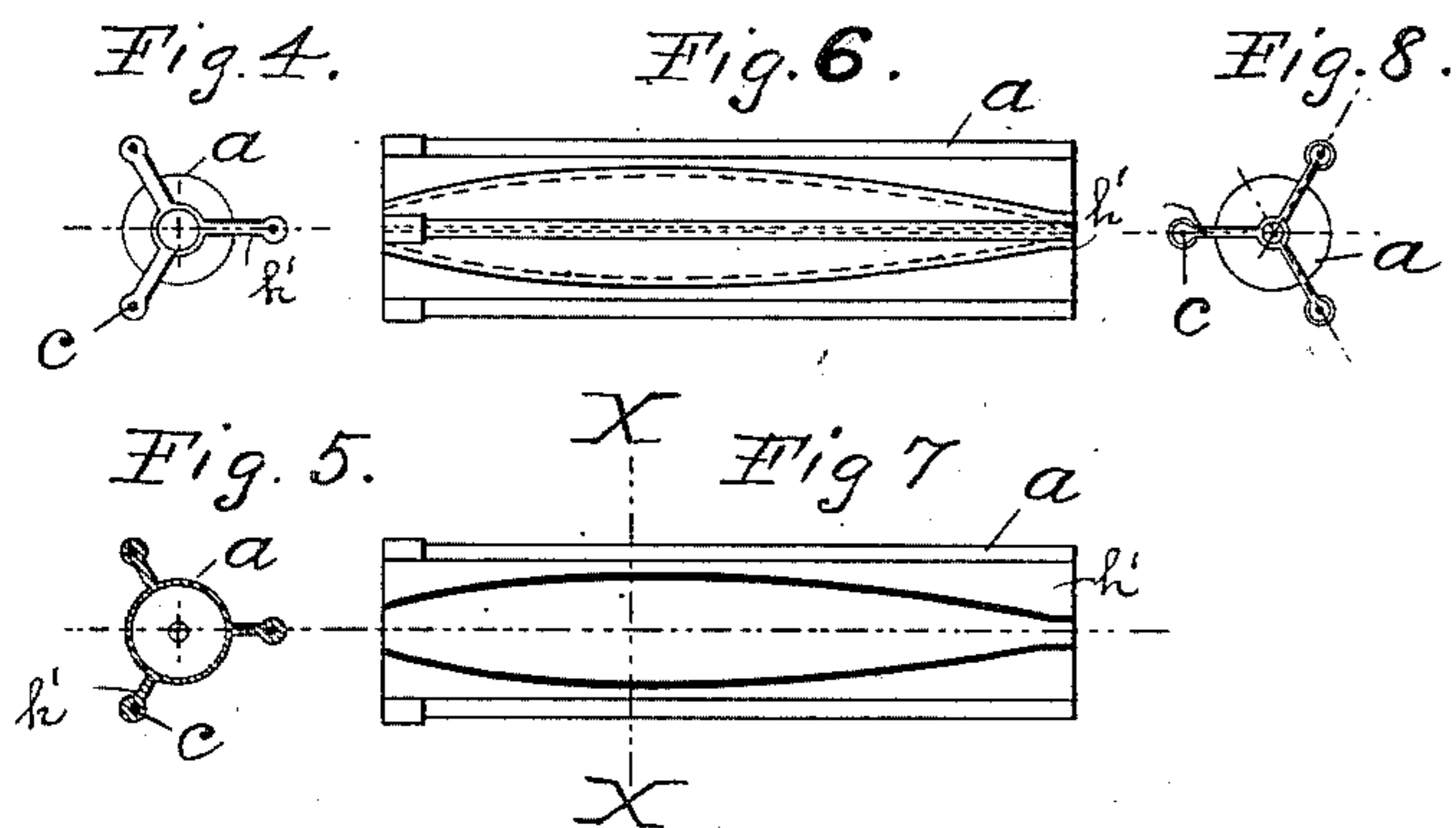
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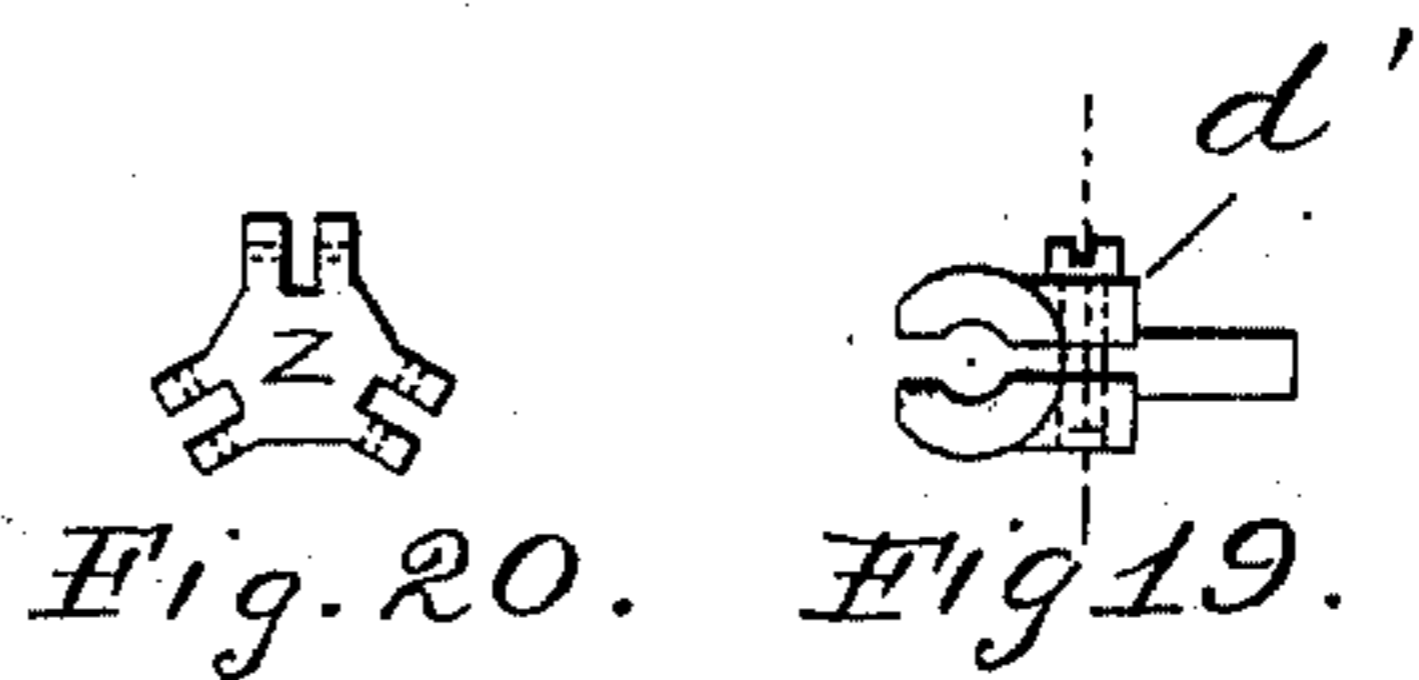
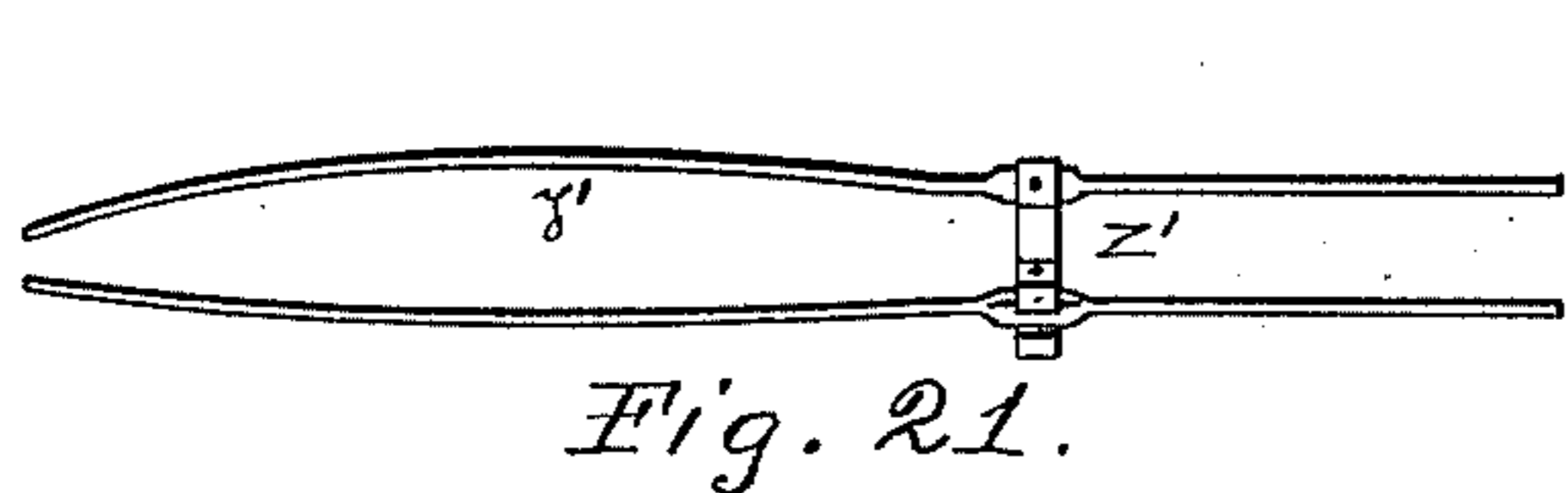
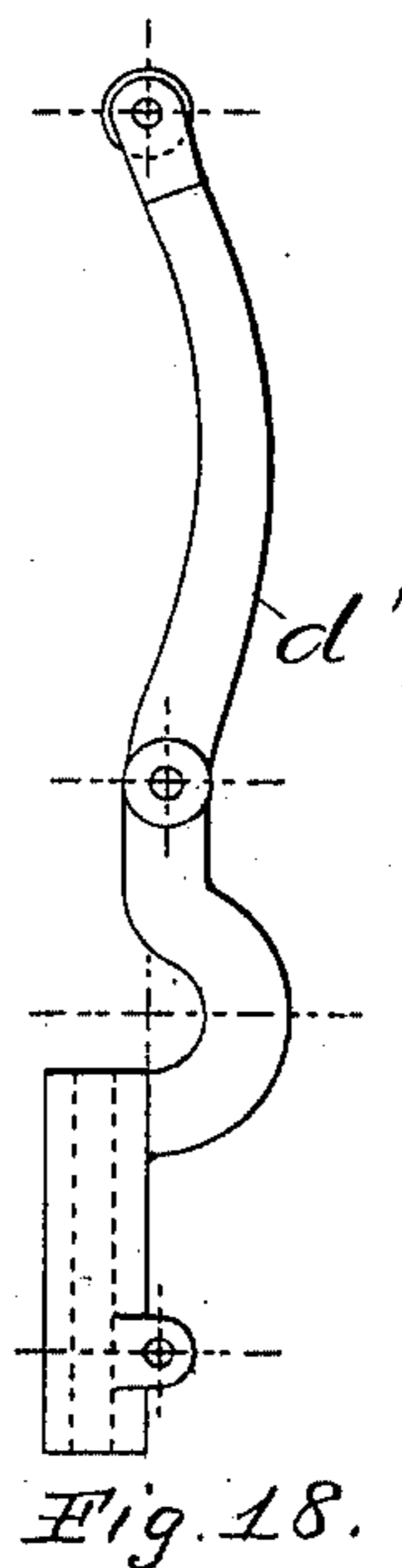
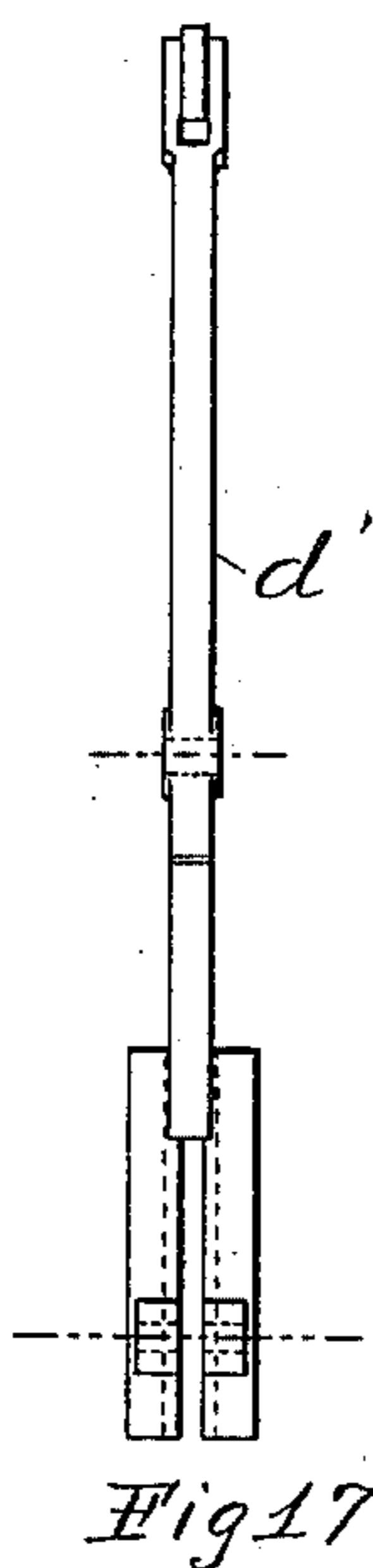
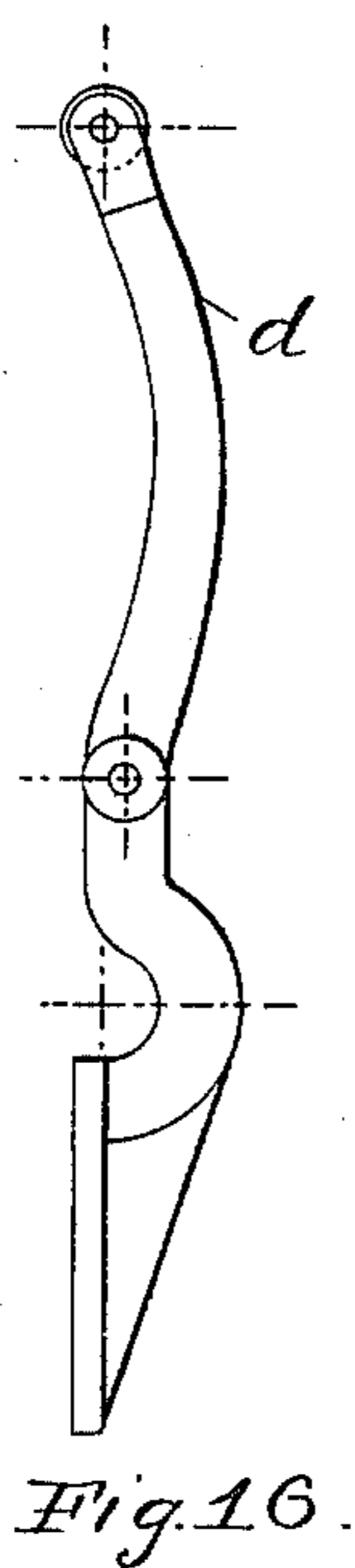
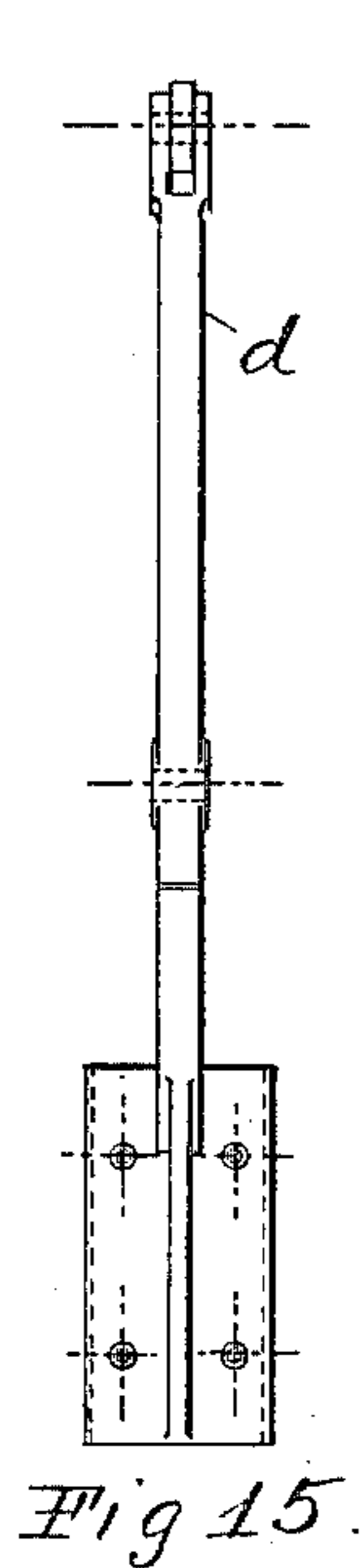
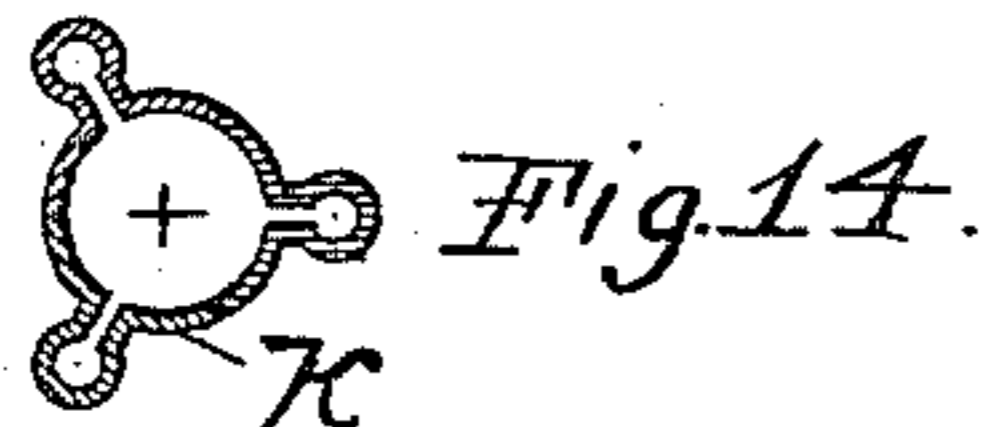
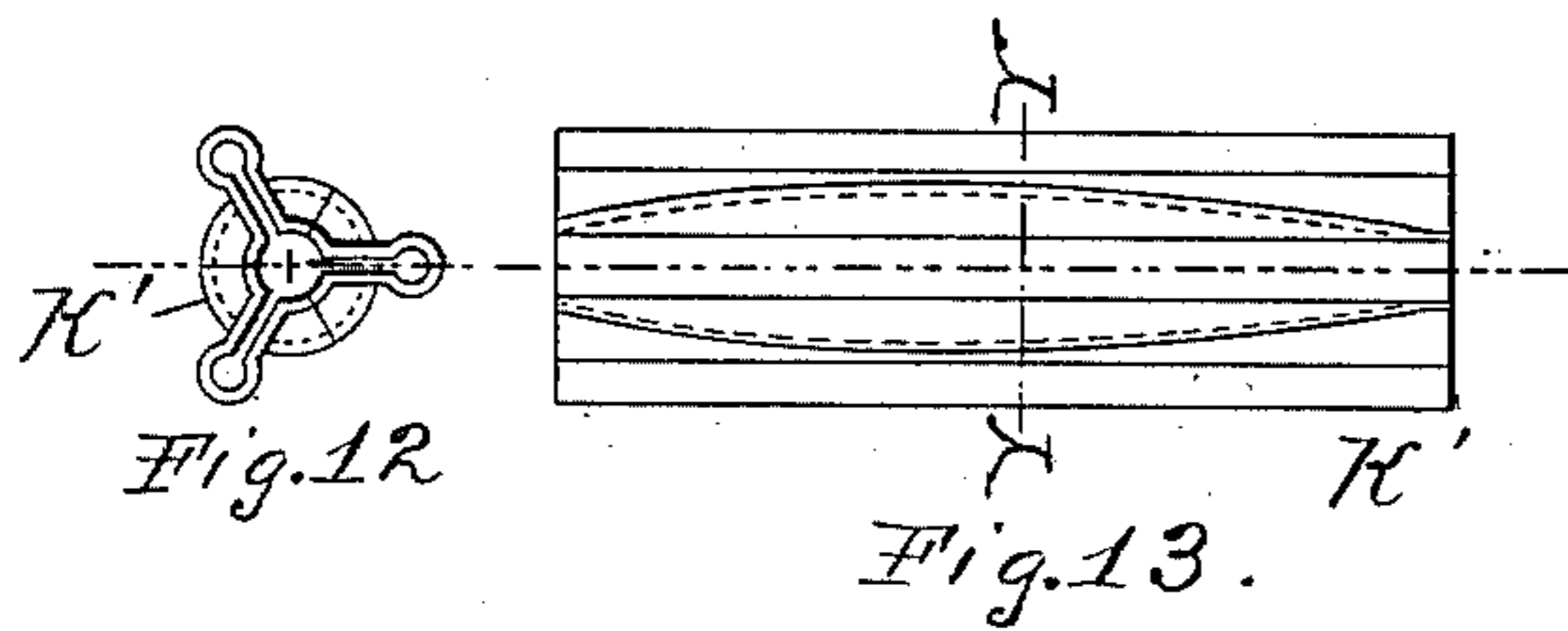
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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

CHARLES PHILLIPS AND JOSEPH LACROIX, OF NEW ORLEANS, LOUISIANA.

CIGAR-BUNCH SHAPER.

SPECIFICATION forming part of Letters Patent No. 659,896, dated October 16, 1900.

Application filed June 28, 1897. Serial No. 642,651. (No model.)

To all whom it may concern:

Be it known that we, CHARLES PHILLIPS and JOSEPH LACROIX, citizens of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Cigar-Bunch Shapers, of which the following is a specification.

Our invention belongs to that class of mechanism employed in the molding or shaping of cigars, and such generally consisting of molds made in several parts and which being operated by hand are limited in capacity by the manual skill of the operators.

The object of our invention is to devise a shaper employing a series of mechanically-operated elastic molds, thereby increasing the output of the operators and facilitating the production of a superior quality of cigars.

In the accompanying drawings, Figure 1 is an elevation of our machine with the controlling mechanism shown in section. Fig. 2 is an end view looking at the frame A. Fig. 3 is an end view looking at the frame C. Fig. 4 is an end view looking at the elastic molds *a*. Fig. 5 is a section through the same on the line *x x*, Fig. 7. Fig. 6 is a side view of the mold. Fig. 7 is a longitudinal section of the mold. Fig. 8 is a view looking at the end opposite that shown in Fig. 4. Fig. 9 is an elevation of a set of mold-blocks. Fig. 10 is an end view of the same. Fig. 11 is a plan of the disk *e*, showing the several slots, also a set of mold fingers and blocks in position. Fig. 12 is an end view of a modified form of mold-block. Fig. 13 is a side view of same. Fig. 14 is a section through the same on the line *Y Y* on Fig. 13. Fig. 15 is a plan of one of the mold-fingers *d*. Fig. 16 is a side view of same. Fig. 17 is a plan of a mold-finger to fit the mold-block *k'*. Fig. 18 is an elevation of same. Fig. 19 is an end view of the mold-finger *d'*. Fig. 20 is an elevation of the spider *z*, which forms a part of the forceps shown in Fig. 21. Fig. 21 is an elevation of a forceps employed in introducing the cigar-bunch into the molds *a*.

The same letters of reference designate similar parts throughout the different views.

The mechanism hereinafter to be described is employed in molding or shaping the body of a cigar, or what is technically known as

the "bunch," this bunch comprising the fillings covered by a binder.

The mold *a*, Figs. 4 to 7, consists of a seamless cigar-shaped pocket and is open at both ends. The outer surface of the mold is provided with longitudinal fins projecting radially, each fin being beaded or enlarged at its edge, the purpose of the fins being to attach the mold to the several sectional blocks, longitudinal holes being provided in the beaded edges of the fins for the introduction of wire rods, which serve to swell out and lock the beads into the several sectional blocks. The mold is composed of an elastic material, preferably gum-rubber, so as to permit of its being distended when the cigar is to be introduced or taken out of the mold through one of the open ends. The fins *h'* taper from one end to the other for the purpose of allowing the filling end (shown in Fig. 4) to stretch more freely than its opposite end, (shown in Fig. 8,) this not being distended to the same extent as the former. A stop or head is formed at one end of each bead to prevent the mold from being driven into the mold-blocks beyond its proper position therein. The mold-blocks *b* constitute a three-part mold and are recessed to receive the mold *a*, so that when this is in position it may be dilated as the blocks are drawn apart. The mold-blocks are fastened in any suitable manner to the fingers *d*, the latter being fulcrumed in the disk *e*, as shown in Fig. 1, in which only one of the fingers *d* appears for convenience of illustration.

Figs. 12, 13, and also 14 show a set of skeleton mold-blocks *K'*, such as might be stamped from sheet metal, and are designed to be used instead of the solid blocks *b*. A special finger *d'* is shown in Figs. 17, 18, and 19, this being shaped to receive the skeleton blocks *K'*. The disk *e* is slotted, as shown in Fig. 11, a pair of lugs being provided at each slot in which to pivot the fingers *d*. A rod *f* is fixed into the disk between each set of slots, and upon this the cone *g* slides in either direction as the mold is to be closed or opened, the closing being effected by drawing the cone away from the disk, a collar and a head being fixed at each end, respectively, of the travel of the cone, the head being attached at the end of the rod and fitted into a counterbored por-

tion of the hole in the cone *g*. The small end of the cone is fitted with a grooved plug *h*, the end thereof being tapered in order to spread the clutch-arms *k*, these being pivoted in a cage *l*, which is fitted into the sliding funnel *m*.

The action of the machine may now be described.

When it is desired to close the mold, the foot-power treadles *n* are depressed at the left side, which in turn throws the cranks *o*, these transmitting their motion to the levers *p* by means of connecting-rods *r*, said rods being attached to the ends of the levers *p* and *p'*, respectively. The forked end of the lever *p* engages a pin fixed between lugs at the under side of the funnel *m*, and thus imparts its motion to the funnel. The clutch-arms being thrown into the groove in the plug *h* and held in position by springs *j* serve to draw the cone to the right until the free ends of the clutch-arms are forced into the conical cavity in the piece *s*, the same being adjusted in the proper position to disengage the clutch-arms as soon as the mold has been closed. When the molds are to be opened, the direction of the travel of the funnel *m* is reversed and the conical mouth of the funnel draws together the free ends of the fingers *d* and opens the mold. An operator is seated at each side of the machine, the disk being rotated in the direction shown by the dotted circle in Fig. 2, the operator at the left side being engaged in filling the molds and the other one emptying them, thus allowing the "bunches" to remain in the molds a sufficient length of time to assume their shape. The forceps shown in Figs. 20 and 21 consists of a spider *z'*, around which the wire levers *y'* are pivoted. By drawing together the short arms of the levers the long arms, which are curved to the shape of the cigar, are opened sufficiently so as to grasp the cigar, which is then conveniently introduced into the mold without the possibility of breaking the cigar-bunch or tearing the binder. A ratchet-wheel *t*, with pawl *n* and connecting-rod *v*, serves to rotate the disk. The cone *g* and funnel *m* must necessarily be disengaged when the disk is to be rotated and in order to insure their coöperation at the proper moment, the pedals being both worked simultaneously by the operators, thus avoiding the possibility of any damage to the machine due to the interference of the parts fitted to the disk and to the funnel, respectively.

The entire mechanism is mounted on frames A, B, and C, the frames A and B being provided with bearings for the disk-spindle *w*, the frame A having additional bearings at the lower end for the treadle-pin *x*. Both frames B and C are provided at their upper ends with split bearings for the funnel *m*, which slides in the bearings *z*. The yokes *y* are bolted to the face of frame C, and into these are fitted the rods *i*, which serve to hold the pieces *s* in position in the funnels *m*. The

frames B and C also carry the bearings for the levers *p*. A brace *q* is fastened between the frames B and C to hold them rigidly together. A suitable table *a'* is supported upon the frames, openings being provided therein for the passage of the disks and operating-levers *p*. In order to limit the travel of the pedals in either direction, and thereby prevent the funnel and disk from traveling beyond the proper distance, the adjustable wedges *f'* and *f'* are fastened to the floor beneath the pedals.

What we claim, and desire to secure by Letters Patent, is as follows:

1. In a cigar-bunch-shaping machine, an elastic mold consisting of a seamless cigar-shaped pocket open at both ends; radially-projecting longitudinal fins being provided at the outer surface of said mold, the fins having longitudinal beads at outer edges, a longitudinal hole in each bead; the mold and fins being formed in one, seamless piece, and composed of a suitable elastic material to permit of distention of mold: substantially as described.

2. In a cigar-bunch-shaping machine, the combination of a cigar-shaped mold of elastic material with open ends, longitudinal fins having hollow beaded edges being provided at the outer surface of said mold; the mold being inclosed by sectional blocks, suitably recessed to fit around mold, the fins outside of the mold fitting into corresponding grooves in the recesses in said sectional blocks; wire rods driven into the hollow beads serving to swell out and lock the fins into said sectional blocks: substantially as described.

3. In a cigar-bunch-shaping machine, the combination of sectional blocks recessed to fit around and inclosing an elastic cigar-shaped mold having longitudinally-projecting fins at its outer surface, fitting and locked into grooves in the recesses of said sectional blocks, with finger-bars pivoted at their middle, one end of bars being flattened out and attached to said sectional blocks; said elastic mold being opened and closed respectively by drawing together, or spreading apart the other ends of finger-bars: substantially as described.

4. In a cigar-bunch-shaping machine, the combination of centrally-pivoted finger-bars; sectional blocks to which the fingers are attached recessed to receive a mold; an elastic mold provided with projecting fins on its outer surface fitting grooves in the recesses of said blocks; a fork at the end of the finger-bars; a roller journaled in said fork; a funnel-ended cylinder around which said fingers are grouped; and means for sliding the cylinder for the purpose set forth.

5. In a cigar-bunch-shaping machine, the combination of centrally-pivoted finger-bars; sectional blocks to which one end of said fingers are attached; an elastic cigar-shaped mold provided with radially-disposed projecting fins fitting grooves in the recesses of said

blocks; a fork formed at the opposite end of the fingers; a roller journaled in said fork; a slidable cone-shaped device for moving said fingers; a slidable hollow cylinder having a funnel-shaped end coöperating with said cone; clutch-bars within said cylinder, adapted to grasp the cone-shaped device; and mechanism for sliding the cylinder.

6. In a cigar-bunch-shaping machine, the combination of a flat disk having a central hub and formed with oblong slots: a pair of lugs adjacent to each of said slots: finger-bars arranged in said slots and pivotally se-

cured between said lugs; sectional blocks recessed to receive a mold; an elastic cigar-shaped mold having radially-arranged fins on its outer surface which fit grooves in the recesses of said blocks; a spindle upon which the disk is mounted; means for holding the disk stationary; and means for progressively rotating said disk.

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Witnesses:

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