

(No Model.)

3 Sheets—Sheet 1.

F. C. MILLER.  
CIGAR MOLD.

No. 400,868.

Patented Apr. 2, 1889.

FIG. I.

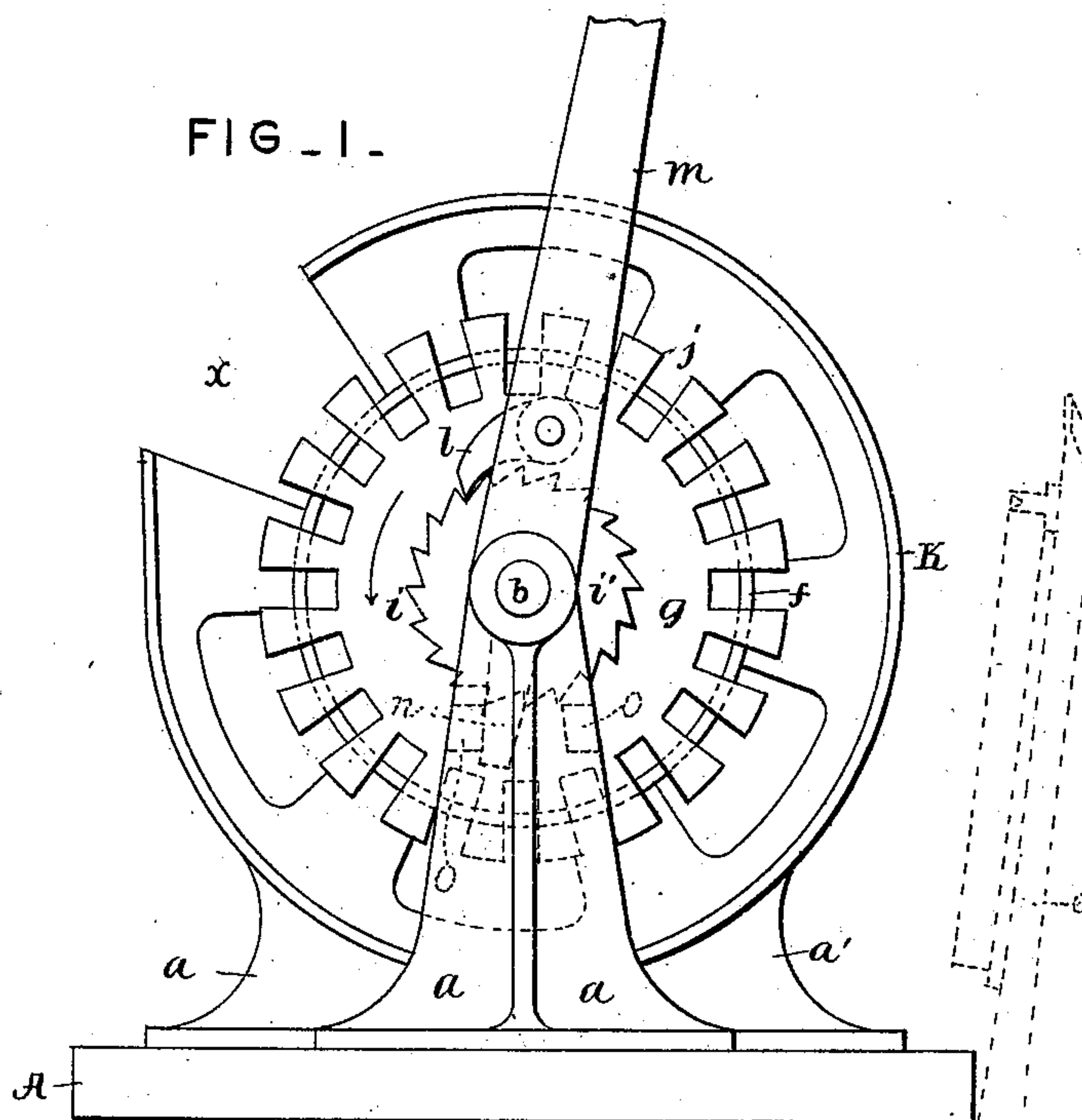
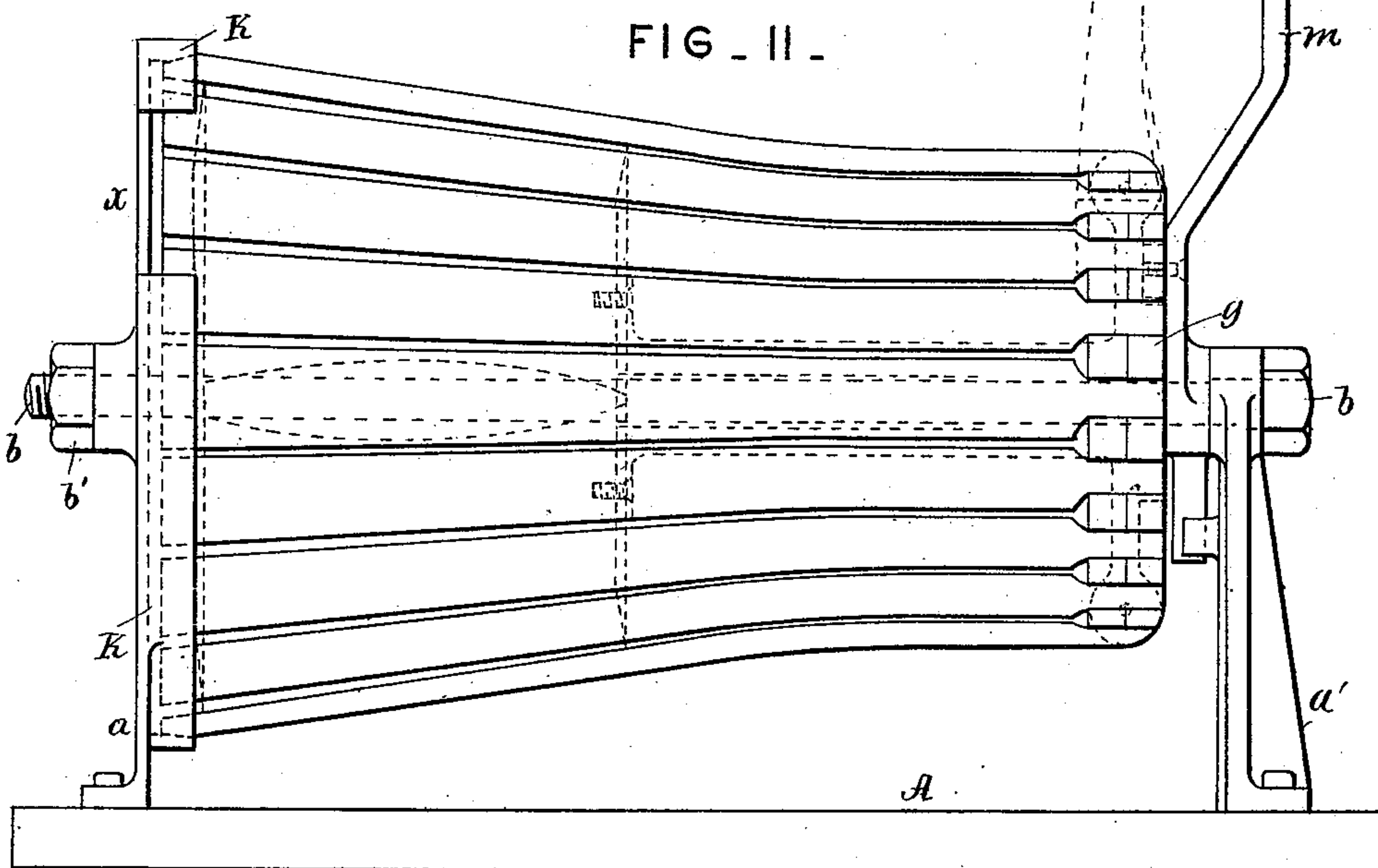


FIG. II.



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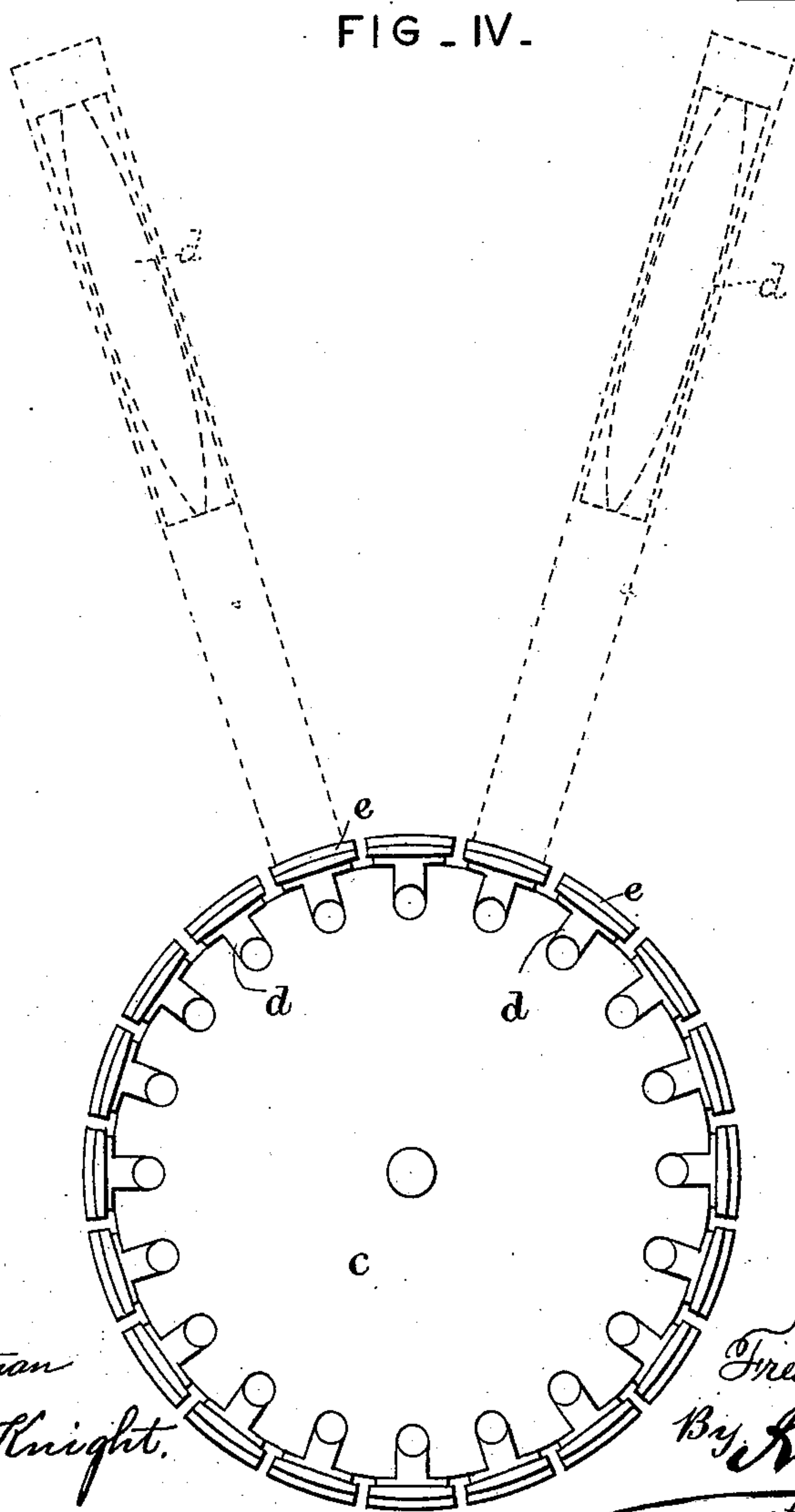
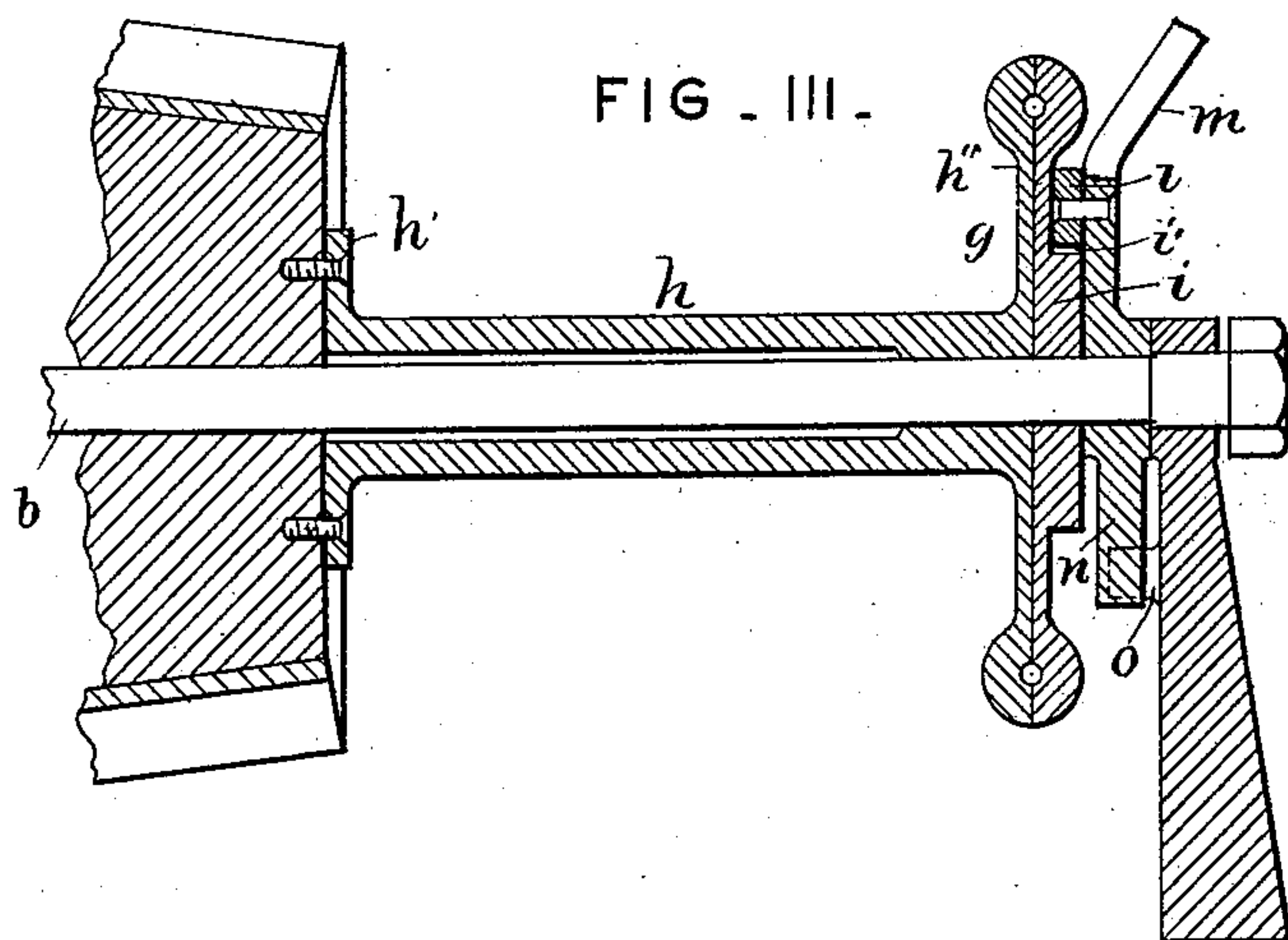
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(No Model.)

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FIG. V.

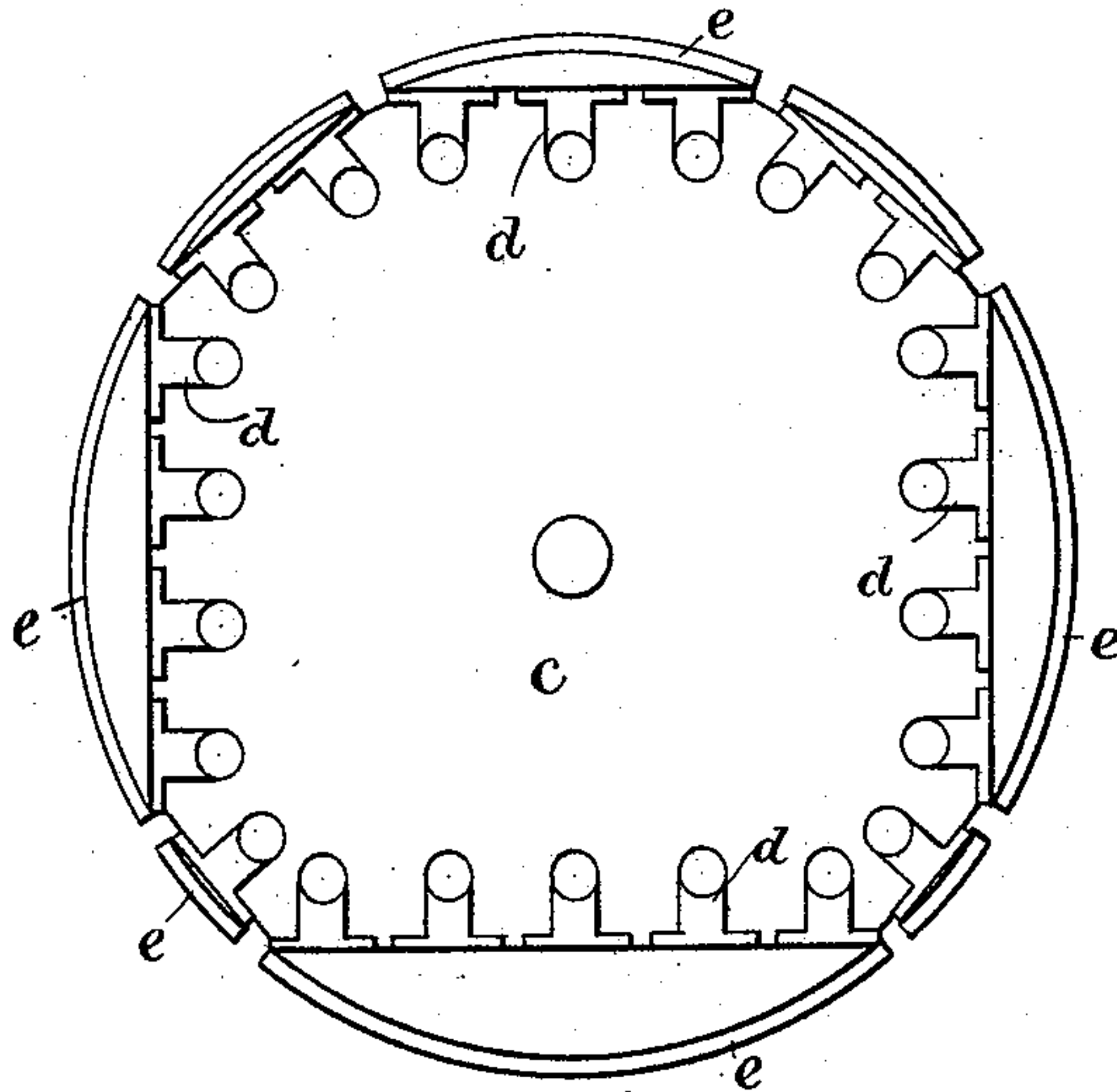


FIG. VI.

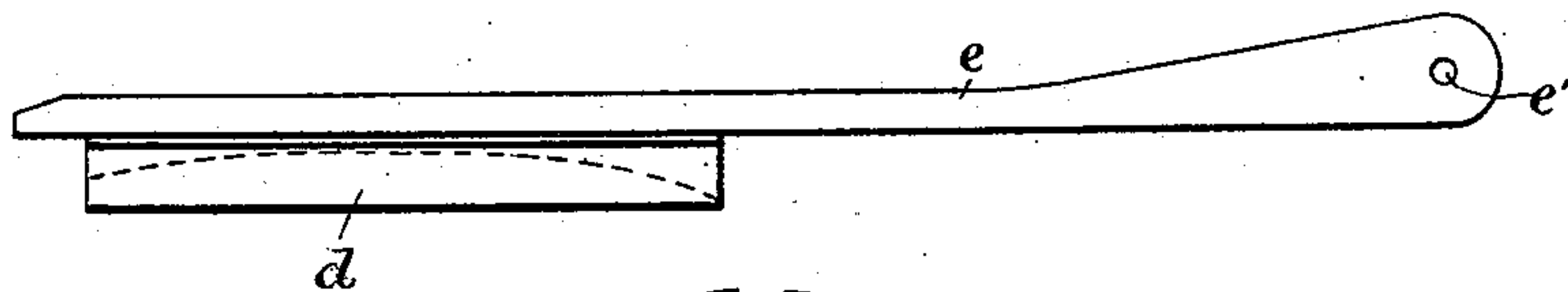
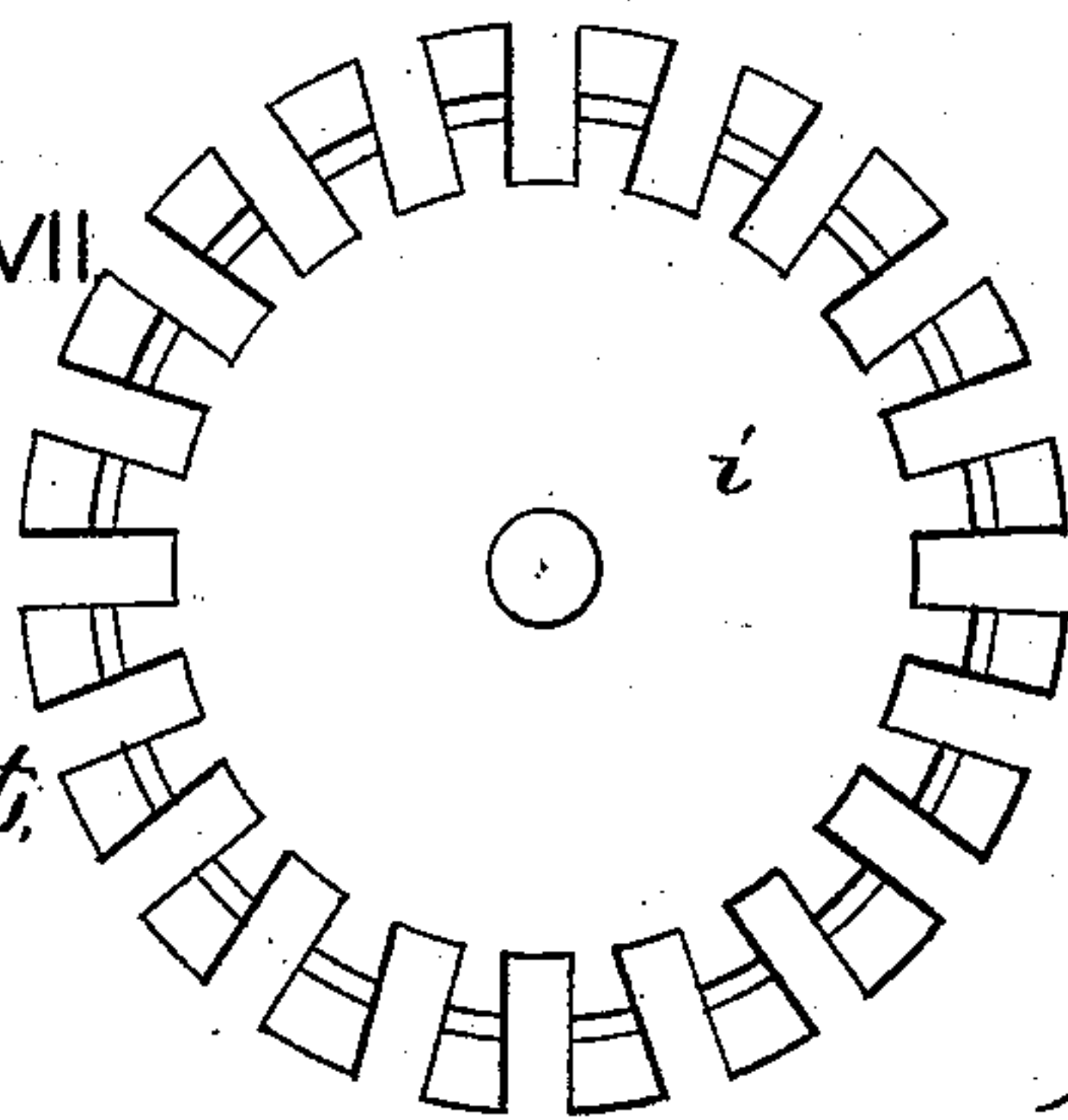


FIG. VII.



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# UNITED STATES PATENT OFFICE.

FREDRICK C. MILLER, OF NEWPORT, KENTUCKY.

## CIGAR-MOLD.

SPECIFICATION forming part of Letters Patent No. 400,868, dated April 2, 1889.

Application filed January 3, 1887. Serial No. 223,232. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK C. MILLER, a citizen of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Cigar-Molds, of which the following is a specification.

My invention relates to that class of molds in which the "lower cups" are formed in a revoluble drum or formed separately and secured thereto; but with the manner of constructing these lower cups my present invention has nothing to do, it being confined to certain features of novelty which are hereinafter particularly pointed out in the claims, being first fully described with reference to the accompanying drawings, in which—

Figure I is a view showing a portion of the machine in end elevation, the slats having the upper cups and the drum having the lower cups being omitted. Fig. II is a side elevation of the complete machine, showing in dotted lines the slat to which is secured one of the upper cups elevated and the corresponding lower cup. Fig. III is a sectional view showing certain details hereinafter particularly referred to. Fig. IV is an elevation of the larger end of the drum and of the slats to which are secured the upper cups, two of the said slats being shown by dotted lines in elevated position. Fig. V is an end elevation showing the same parts slightly modified in construction. Fig. VI is an elevation of one of the upper cups and the slat to which it is secured. Fig. VII is a detail view of a disk hereinafter referred to.

A is the base-board, from which two standards, *a a'*, project upward, said standards being correspondingly perforated for the passage of a long bolt, *b*, which constitutes the shaft or axle upon which the drum *c* is mounted. The drum may be mounted to turn loosely upon the bolt *b*, or it may be fixed thereto and said bolt mounted so as to turn in the bearings which the standards afford, it being held in place by a nut, *b'*. The drum is provided with the "lower cups" of the mold, (technically so called,) being those portions in which the material for the fillers is placed, these cups being shown in the drawings as cut directly into the surface of the drum.

This, however, is entirely immaterial so far as the present invention is concerned, and they may be made separately and secured thereto, if desired. The "upper cups," *d*, are carried by slats *e*, which are hinged in the manner hereinafter described, said cups being either formed in said slats or formed separately and attached thereto, as shown in the drawings, this latter method being preferred. Each of the cups *d* may have a separate slat, as shown in Figs. II, IV, and VI, or each slat may carry one, two, three, or more cups, as shown in Fig. V, in which case the drum is not round, but is provided with as many flat surfaces as there are slats. The slats *e* are considerably longer than the cups *d*, which are secured to them, and are perforated, as at *e'*, at a point remote from said cups for the passage of a pin or piece of wire, *f*, by which they are hinged to a head or disk, *g*, which is fixed to and turns with the drum *c*. It is obvious that the object of this construction is primarily to form a hinge-joint for the slats *e*, and at the same time cause them to move with the drum, the relation between the slats and drum being such that when the slats are lowered into the positions shown in the drawings the upper cups, *d*, will correspond with and be guided into the lower cups for compressing the tobacco contained in the latter in the ordinary manner. To this end the details in the construction may be infinitely varied without departing from the spirit of my invention. The construction which I prefer is that shown in the drawings. A hollow sleeve, *h*, having an annular flange at each end, is placed upon the axle *b* and secured at one end to the end of the drum *c* by screws passing through the perforations in its flange *h'*, the outer face of the flange *h''* at its opposite end being provided with an annular groove of semicircular shape in cross-section.

*i* is a centrally-perforated disk corresponding in size to the flange *h''*, and provided with an annular groove which is the counterpart of the groove in said flange, so that when said disk is placed against said flange the two grooves unite and form an annular cavity of circular shape in cross-section, as shown in Fig. III. The flange *h''* and the disk *i* are also provided at their peripheries with radial



notches *j*, having parallel sides extending inward some distance beyond the annular groove mentioned, said notches being designed to receive the perforated ends of the slats *e*. To  
 5 secure these parts together, a piece of wire, *f*, of the proper length is passed through the perforations *e'* of as many slats *e* as it is desired to employ, the disk *g* (formed by the combination of the flange *h''* and disk *i*) being  
 10 ing provided with a corresponding number of notches *j*. The wire is then bent into circular shape and the slats so distributed thereon as to bring their perforated ends into their respective notches *j* and their cups opposite  
 15 the cups in the drum, whereupon the wire *f* may be placed in the groove in the flange *h''*. If the disk *i* be then placed so that its notches *j* will register with those of the flange *h''*, it may be brought in contact therewith, as  
 20 shown in Fig. III, thereby confining the wire *f*, so that it will constitute a hinge for all the slats. The object which it is desired to accomplish by hinging these slats *e* such a great distance from the matrices of the mold is to  
 25 cause the upper cups to move substantially parallel to surface of the drum when entering the lower cups. To this end also the drum is made of slightly conical form, the disk *g* to which the slats are hinged being  
 30 somewhat less in diameter than the said drum.

*k* is a flange or band, which is formed on the inner face of the standard *a* and projects over the free extremities of the slats *e*, as shown in Fig. II. This flange for a greater  
 35 part is concentric with the drum, but for a short distance is eccentric or tangential, as shown in Fig. I, a portion of it being cut away, as at *x*, to permit the elevation of the slats. The tobacco being placed in the lower  
 40 cup, the upper cup is brought down to place and the drum revolved in the direction shown by the arrow, whereupon the eccentric portion of the flange will force the upper cups into the lower cups a sufficient distance to compress the  
 45 fillers to the desired extent. When so compressed, the concentric portion of the flange or band will hold the upper cups to place until they arrive at the opening or cut-away portion *x*, whereupon the slats carrying the upper cups  
 50 may be elevated into the position shown by dotted lines in Fig. II and the molded bunches or fillers removed for being wrapped. The cups thus emptied may then be again filled with fresh tobacco, the upper cup  
 55 brought down to position shown by full lines in Fig. II, and the drum partially revolved, so as to carry the slat of mold just filled beneath the flange *K* and bring the next mold containing a pressed filler opposite the cut-away portion in readiness to be emptied and  
 60 again filled, and so on.

Formed integrally with the disk *i* is a ratchet-wheel, *i'*, with which engages a pawl, *l*, pivoted to the side of a lever, *m*, journaled upon the  
 65 shaft *b*, whereby the drum *c* may be rotated in the proper direction. The lever *m* has a toe, *n*, which projects downward between a

pair of lugs, *o*, projecting from the inner face of a standard, *a'*, whereby the movement of the lever is limited to such distance as is necessary to revolve the drum an extent equal  
 70 to the distance apart of two adjacent slats, *e*, the ratchet-wheel being shown here as provided with a tooth for each slat.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent, to wit:

1. The combination, with a revoluble drum having the lower cups arranged parallel with its axis, of the slats hinged at one end to said  
 80 drum, so as to project over the lower cups parallel therewith, and the upper cups secured to said slats, substantially as set forth.

2. The combination, with a revoluble drum having the lower cups arranged parallel with  
 85 its axis and a disk having connection with said drum, so as to revolve therewith, of the slats of greater length than said cups hinged to said disk, so as to project over the lower cups parallel therewith, and the upper cups carried  
 90 by said slats, substantially as set forth.

3. The combination, with a frusto-conical drum having the lower cups arranged parallel with its axis, of the hinged slats of greater  
 95 length than said cups projecting over the lower cups, and the upper cups carried by said slats, substantially as set forth.

4. The combination, with a revoluble drum having the lower cups and the slats hinged at one end and carrying the upper cups, and a  
 100 band partially surrounding said drum and embracing said slats near their free extremities, substantially as set forth.

5. The combination, with the rotary drum having the lower cups, of the slats carrying  
 105 the upper cups and hinged at one end, and the stationary band or flange projecting over the free extremities of said slats and formed in part concentric with the drum, substantially as set forth.

6. The combination, with the drum having the lower cups, of the slats hinged at one end and carrying the upper cups, and the stationary band or flange projecting over the  
 110 free ends of said slats, said band or flange being in part concentric with the drum and in part tangential thereto, substantially as set forth.

7. The combination, with the drum having the lower cups, of the slats carrying the upper  
 115 cups, said slats being of greater length than said cups, the disk to which said slats are hinged, and the connection *h* between said disk and drum, substantially as set forth.

8. The combination, with the revoluble  
 120 drum having the lower cups, of the hinged slats carrying the upper cups, and the disk connected to the drum and having the radial notches for the reception of the ends of said slats, substantially as set forth.

9. The combination, with the revoluble drum having the lower cups, of the hinged  
 125 slats carrying upper cups, said slats having perforations *e'*, the flange *h''*, carried by the



drum and having the notches in its periphery and the annular grooves in its outer face, the wire *f*, passed through said perforations and occupying said groove, and the disk *i*, having  
5 notches and an annular groove corresponding to the flange *h''*, substantially as and for the purposes set forth.

10 10. The combination, with a rotary drum having a number of flat surfaces and the lower cups arranged in said flat surfaces, of a hinged slat carrying a plurality of upper cups, substantially as set forth.

11. The combination, with the revoluble drum *c*, having the lower cups, of the hinged slats carrying the upper cups, the disk *g*, carried by the drum and to which said slats are  
15 hinged, and the sleeve *h*, connecting the disk with the drum, substantially as set forth.

FREDRICK C. MILLER.

Witnesses:

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A. F. WENZEL.