

No. 731,936.

PATENTED JUNE 23, 1903.

T. H. MUNROE.
SERVING APPARATUS.

APPLICATION FILED FEB. 18, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

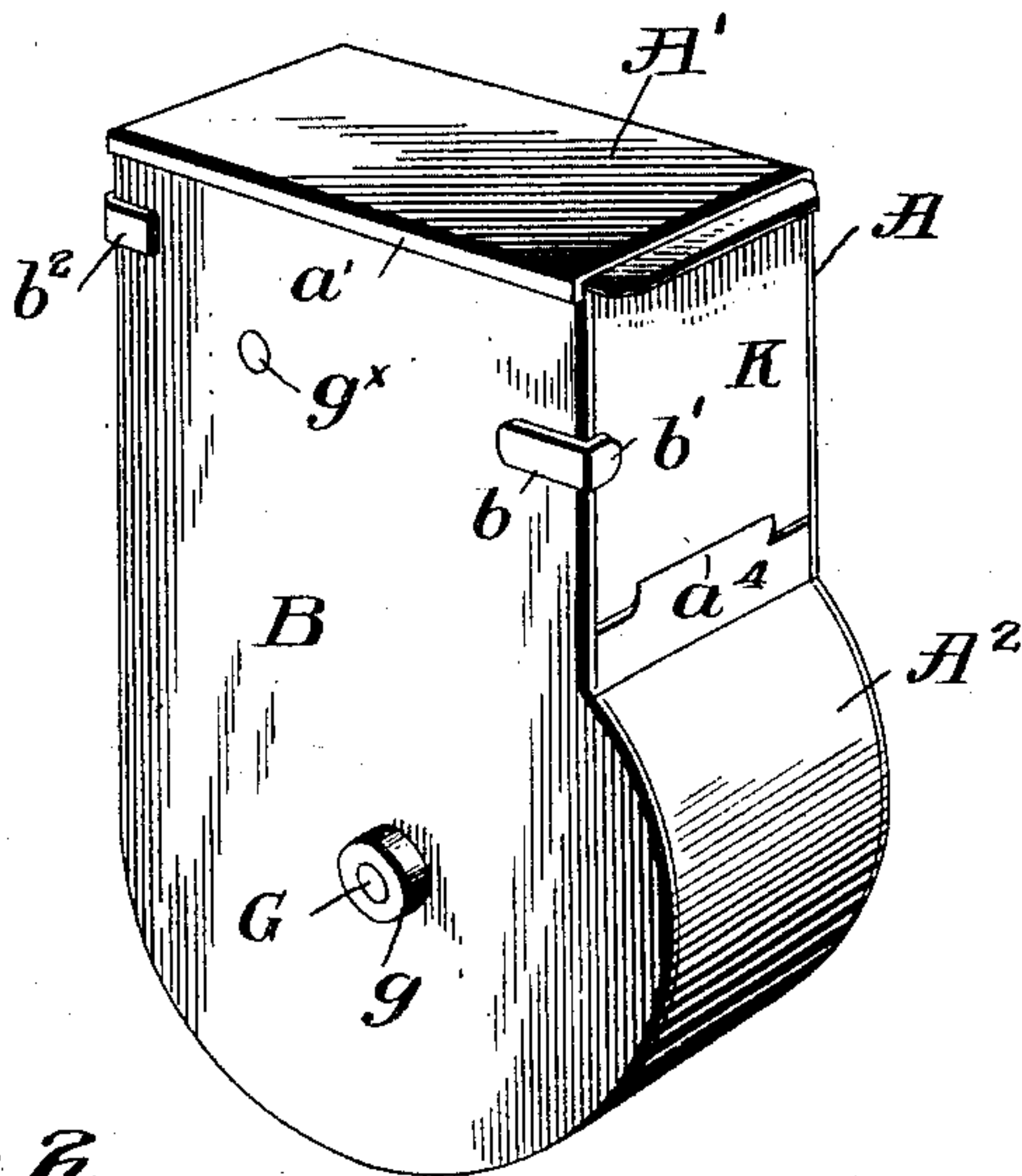


Fig. 2.

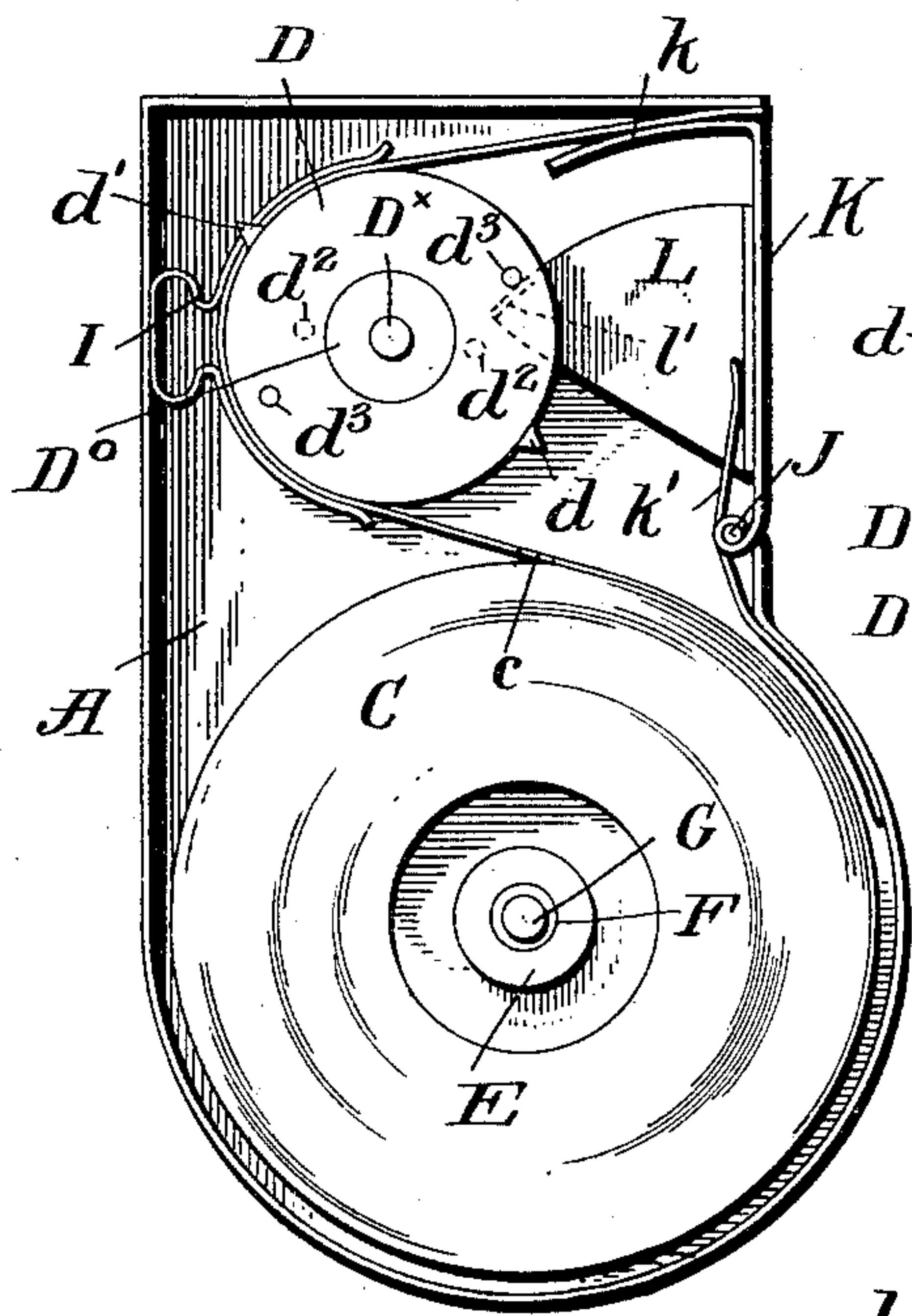


Fig. 3.

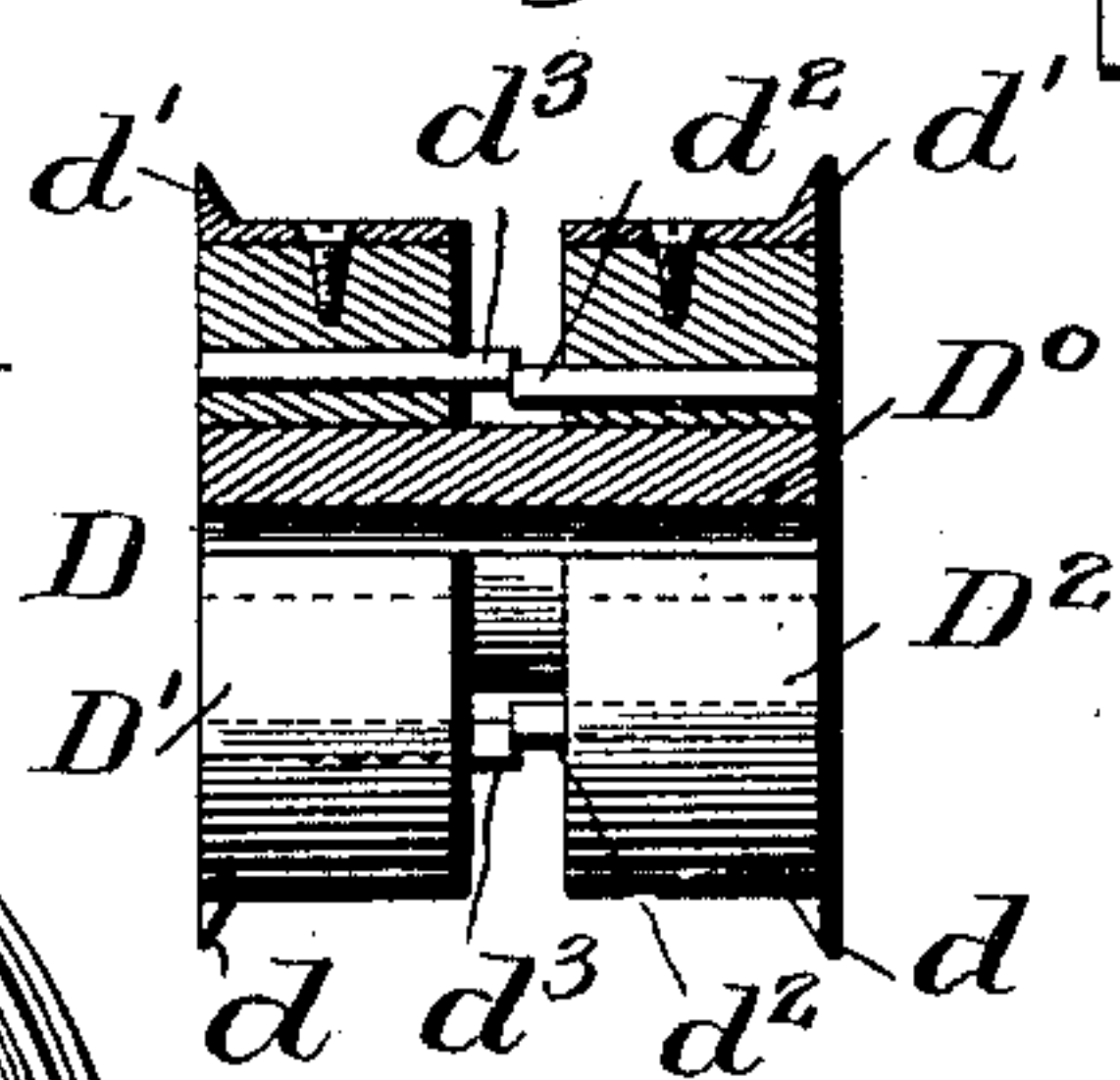


Fig. 4.

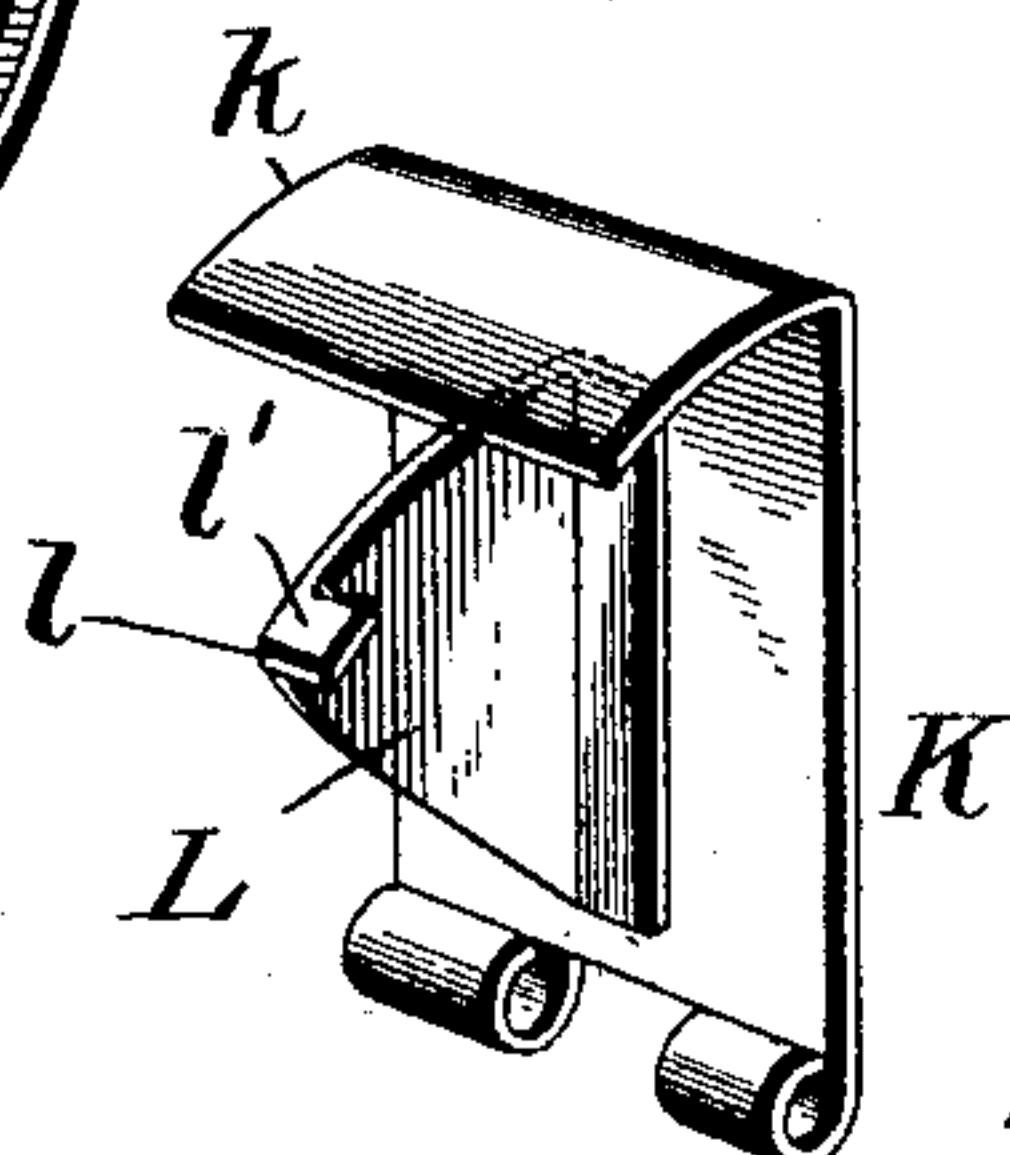
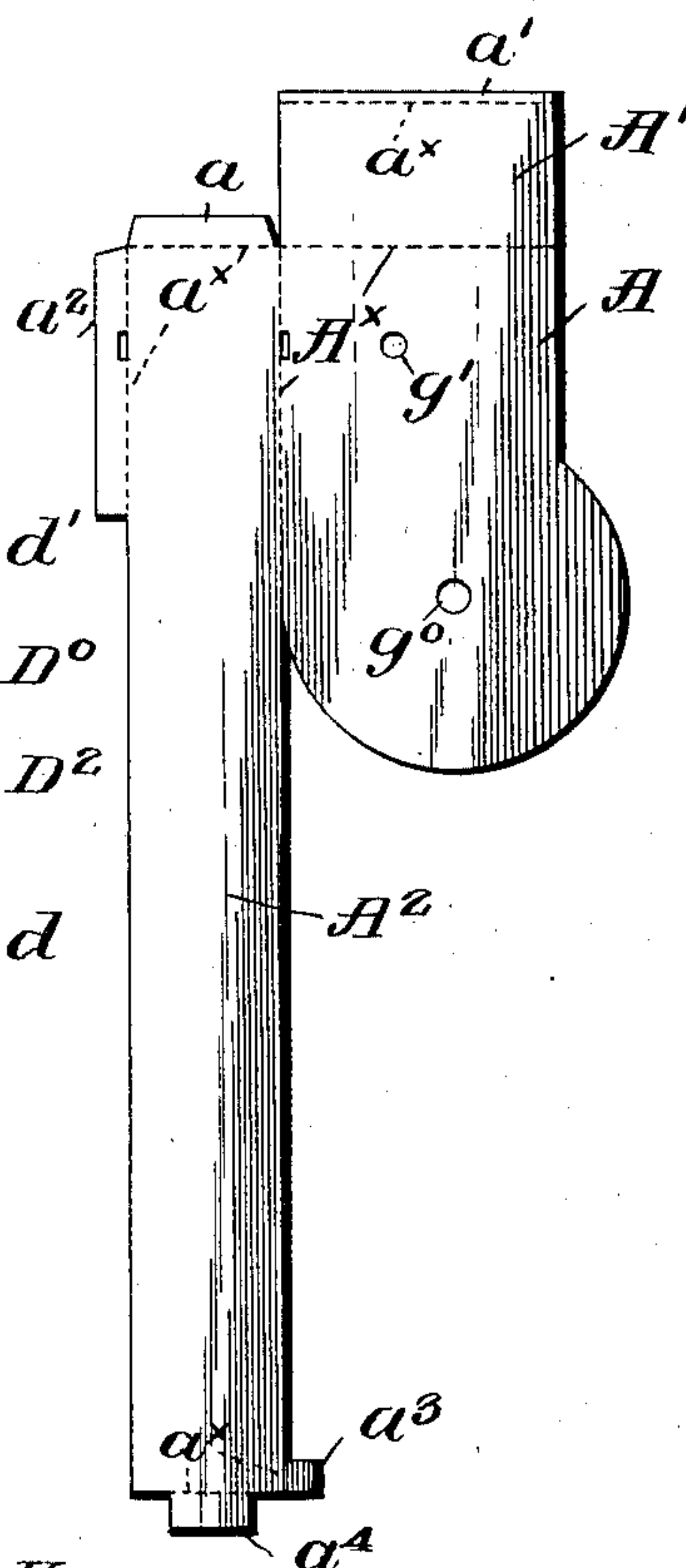


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 6.

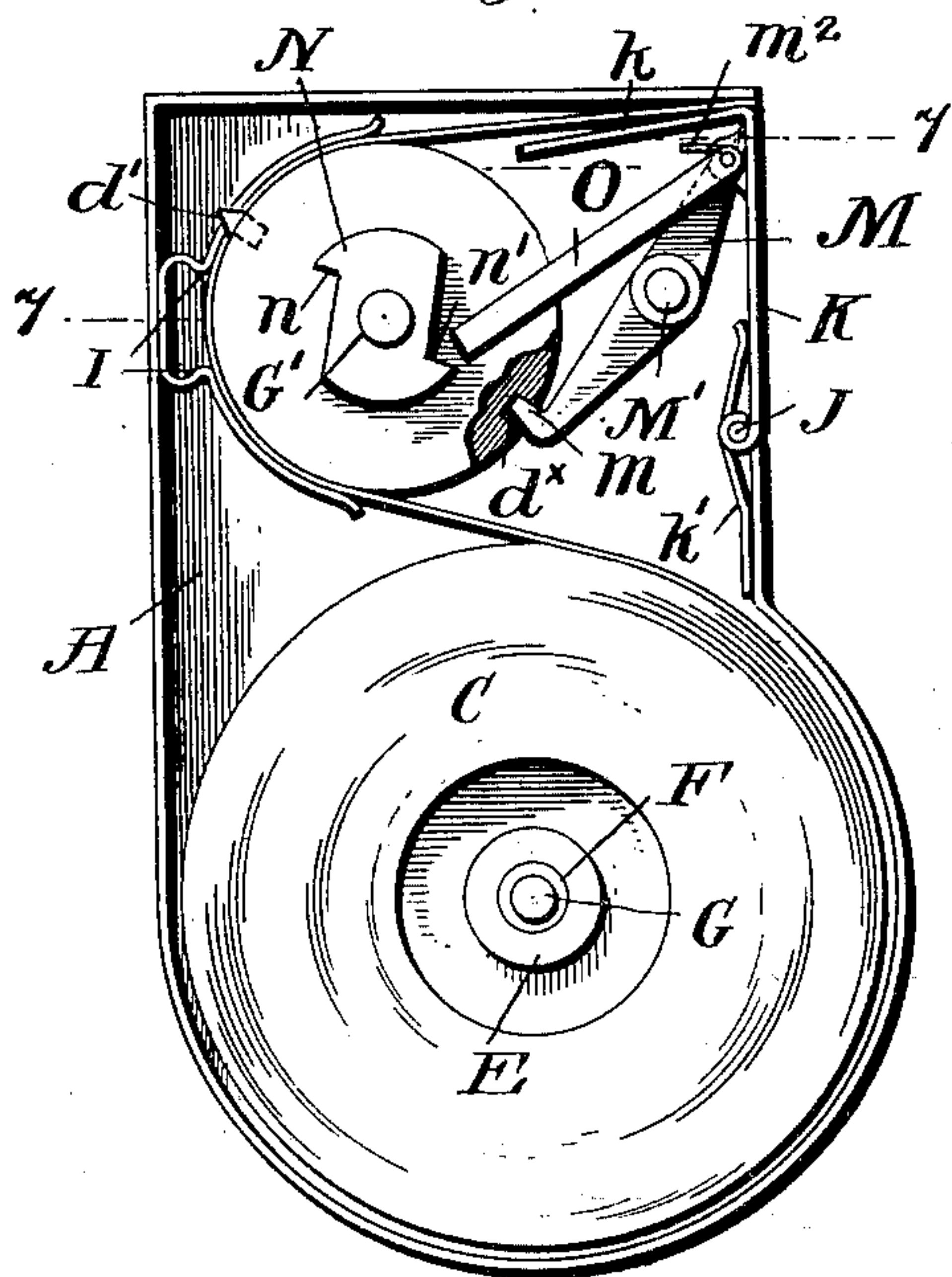


Fig. 10.

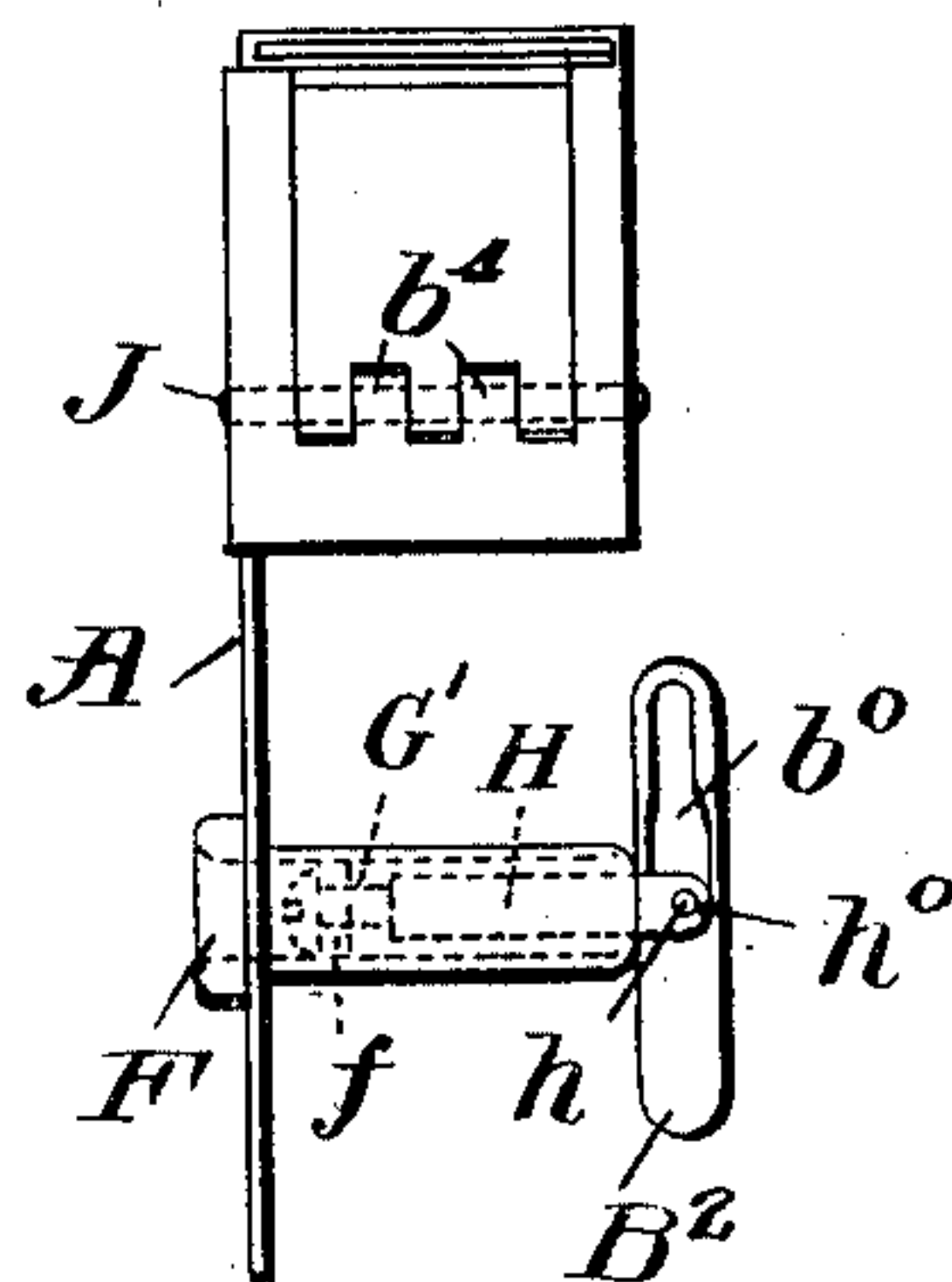


Fig. 8.

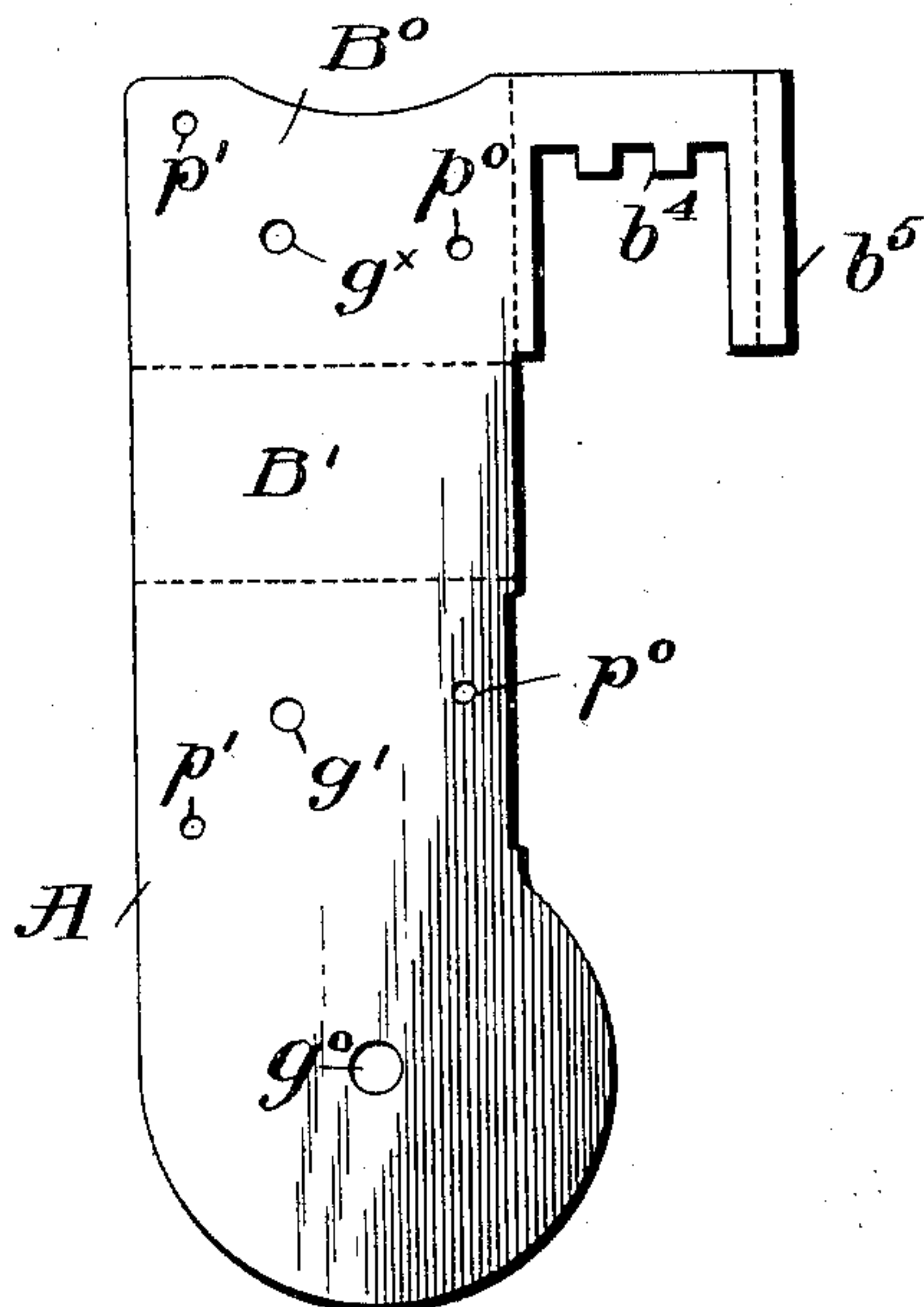


Fig. 7.

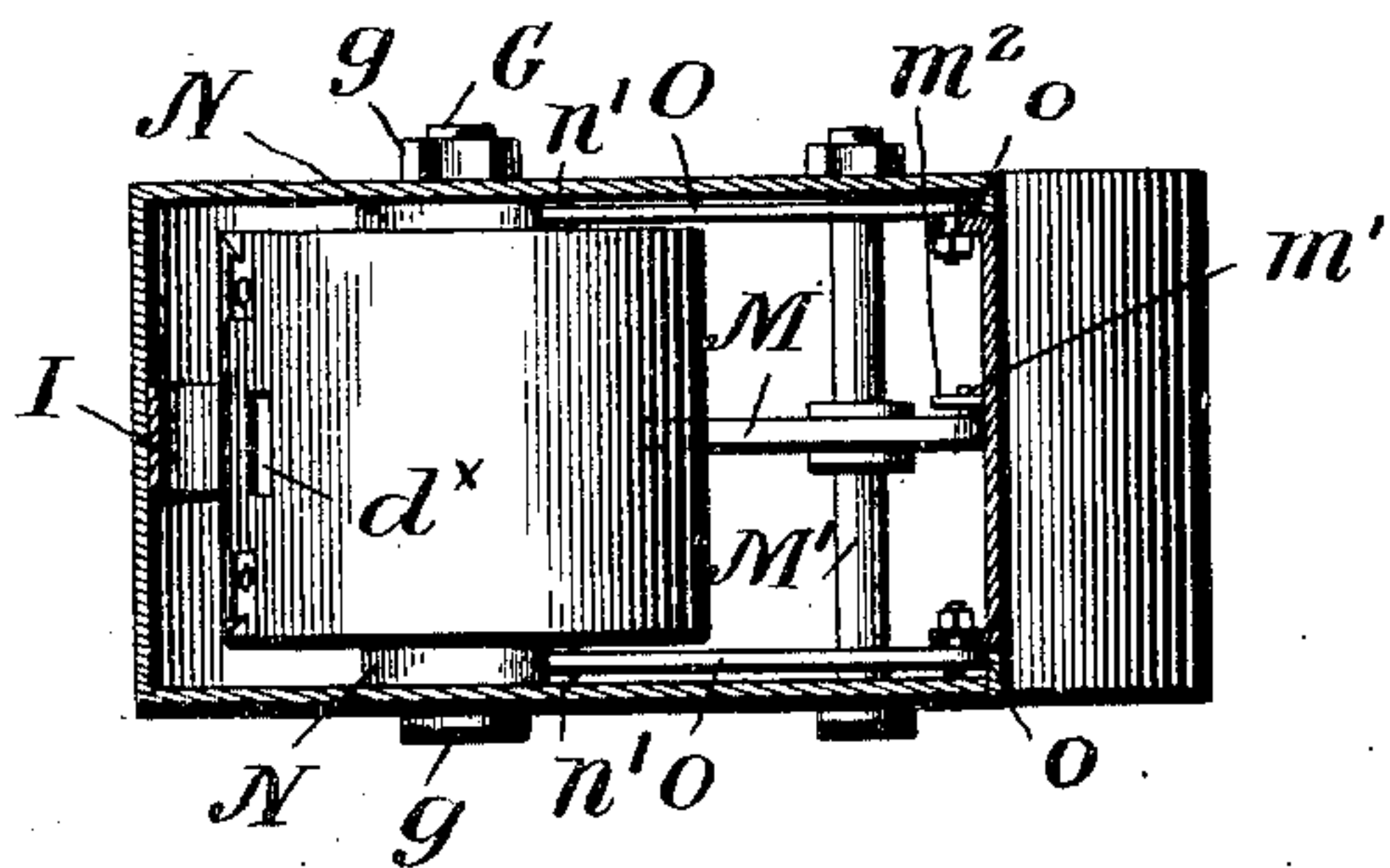
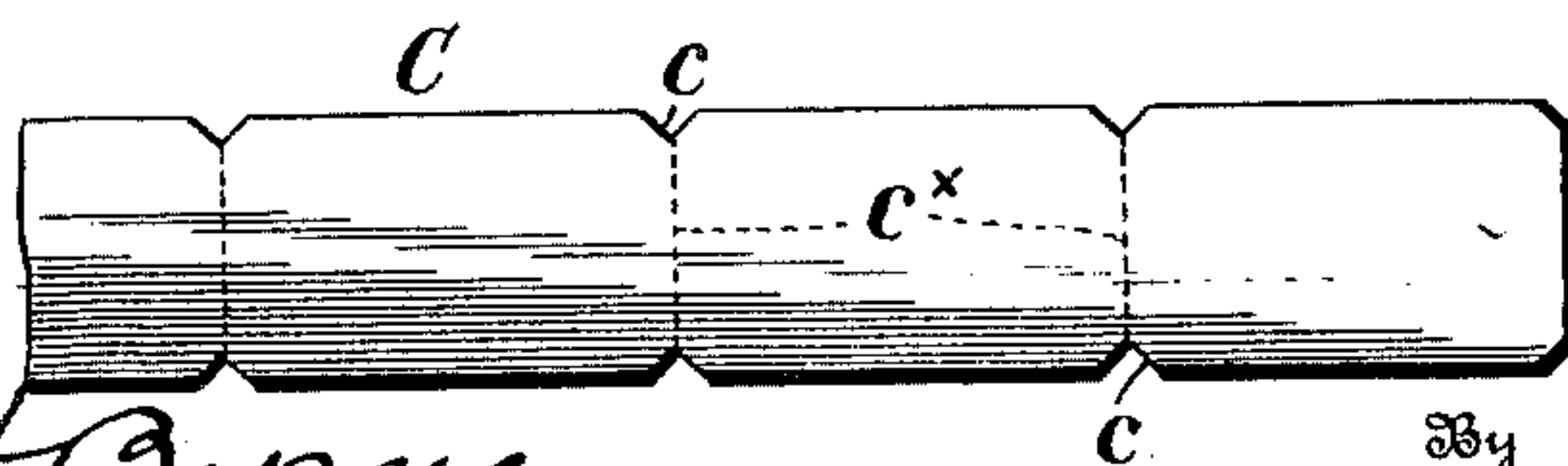


Fig. 9.



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UNITED STATES PATENT OFFICE.

THEODORE H. MUNROE, OF HARTFORD, CONNECTICUT.

SERVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 731,936, dated June 23, 1903.

Application filed February 18, 1903. Serial No. 143,986. (No model.)

To all whom it may concern:

Be it known that I, THEODORE H. MUNROE, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Serving Apparatus; 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 it appertains to make and use the same.

My invention relates to improvements in serving apparatus, and is especially applicable for holding and delivering checks or tickets, a plurality of which are detachably secured together, forming a long strip or ribbon adapted to be wound on a reel and inclosed in a suitable casing.

The object of my invention is to provide a suitable casing with means for feeding the strip of checks or tickets out of the delivery end of the casing, and in the embodiment of my invention I provide suitable mechanism for controlling the delivery of the checks, so that the strip or ribbon is fed forward with an intermittent movement and but one check or ticket delivered upon a single operation of the serving mechanism.

To more fully understand my invention, reference is had to the accompanying drawings, in which—

Figure 1 is a perspective view of the casing, showing the hinged operating-plate in its normal closed position after having been operated to advance the strip of tickets slightly beyond the edge of the delivery-opening. Fig. 2 is a side elevation, the side plate B being removed and showing the hinged plate with its operating member and the serving-wheel in their relative positions when a ticket has been delivered and limiting the further advance of the strip. Fig. 3 is a front elevation of the serving-wheel, partly in section. Fig. 4 is a perspective view of the hinged plate and its operating member. Fig. 5 shows a blank stamped from a strip of flat metal for forming that portion of the casing shown in Fig. 2. Fig. 6 is a similar view to Fig. 2, but showing a modified form of the device. Fig. 7 is a transverse section on the line 7 7 of Fig. 6. Fig. 8 shows a modified blank stamped

from flat metal, the rear, the lower front, and the lower end of one side of the casing adjacent the ticket-reel being left open. Fig. 9 is a plan view of a portion of the strip of detachable tickets, and Fig. 10 is a front view of the casing formed from the blank shown in Fig. 8 and showing a modified method of supporting the ticket-reel.

A represents one portion of the casing, formed, preferably, from the flat metal blank illustrated in Fig. 5 and bent to the desired shape. In forming the casing from the blank the edges a , a' , a^2 , a^3 , and a^4 are bent inwardly on the dotted lines a^x , while the portions A' and A^2 are bent inwardly on the dotted lines A^x , the portion A' forming the top and the portion A^2 the rear, bottom, and lower front faces of the casing. When the blank is bent to its proper form, the projecting edges a and a^3 may be soldered to their respective adjacent inner faces of the casing, while the edges a' and a^2 form supporting-flanges for the plate or cover B of the casing. The projection a^4 is bent to form a loop to receive a pivot-pin for a purpose hereinafter mentioned. In Fig. 1 the plate or cover B is shown provided with the angle plates or lugs b and b^2 , which may be made integral therewith or soldered thereto, as desired. The projection b' of the lug b is adapted to serve as a stop for limiting the movement outwardly of the hinged operating-plate, hereinafter described, while the angle plate or lug b^2 serves conjointly with the inturned ledge a' and nut g to hold the removable plate B in position in the casing. It is manifest, however, that the cover B may be hinged to the rear side of the casing and the lug b^2 and inturned ledge a' dispensed with, or the form of blank illustrated in Figs. 8 and 10 may be used, if desired, the various portions being bent on the dotted lines substantially in the same manner as in the previous construction, and no further description is believed necessary other than it will be observed that in this construction when the blank is bent to the desired form the casing resulting will have its rear, bottom, and lower front portions left open, as also one side of the casing opposite the ticket-wheel. The portions B' and b^4 correspond for all purposes substantially to the parts A' and a^4 , while the

portion B^0 will similarly correspond to the upper portion of the plate or cover B. b^5 is bent inwardly to engage the casing A.

C represents the roll of tickets detachably secured together at the line c^x and provided with the angularly-notched edges c , adapted to be engaged by suitable projections $d d'$ on the serving-wheel D. The roll of tickets may be mounted in the casing in any suitable way. As illustrated in Figs. 1, 2, and 5 the roll of tickets is loosely mounted on the spool E, which is correspondingly supported by the sleeve F, through which passes the pin G, supported in the apertures g^0 in the casing and held in place by the nuts g . It will be observed, however, that the ticket-roll may be mounted in the casing as shown in Fig. 10, where the headed sleeve F is provided with a countersunk shoulder f to engage the head of a screw G' . The screw-threaded end of the screw G' in turn engages the internally-screw-threaded rod H, provided with the slotted end h^0 , in which is located the bar B^2 , held in position therein by the pin h , engaging the bar B^2 in a suitable slot b^0 cut therein. In the position illustrated in Fig. 10 the bar B^2 is shown held at right angles to the sleeve F and serves as a retaining member for holding the ticket-reel in place on its axis. When it is desired to insert a new roll of tickets on the sleeve F, the screw G' is loosened, which allows the pin h to ride in the slot b^0 , permitting the bar B^2 to assume a position in the same horizontal plane with the sleeve F, when the roll of tickets can be passed thereon and the bar B^2 again secured in its transverse position.

The serving-wheel D comprises the central hub D^0 , provided with the spaced circular collars $D' D^2$, and diametrically opposite each other on the outer surface of these spaced collars and disposed transversely thereof are suitable metallic plates provided with the projections $d d'$. Suitably arranged relatively to each other and adjacent each pair of the projections $d d'$ are the oppositely-disposed transverse pins $d^2 d^3$, projecting inwardly from either side into the space formed between the collars $D' D^2$. For the purpose of clearness of illustration I have shown the pins d^2 as only partly projecting into the annular opening between the space-collars $D' D^2$; but it is apparent that I can and in actual practice I generally do pass the pins d^2 all of the way across the annular opening. The serving-wheel is rotatably mounted in the casing in any suitable manner—such, for instance, as by means of the axis-pin D^x , securely riveted to the casing through the aperture g' , and one end of which might also rest in the aperture g^x of the cover for the more rigidly holding of the wheel when the parts are assembled. On the rear inner face of the casing is secured a suitable narrow metallic strip I, preferably located opposite the annular opening between the collars $D' D^2$ and bent to conform with the circular configura-

tion of the serving-wheel, serving as a guide for the strip of tickets during its passage over the serving-wheel from the ticket-reel to the delivery-opening.

K is the operating plate or door, hinged by a suitable hinge-pin J to the casing. This hinged plate K has an inwardly-extending projection k at the top thereof which serves both as a supporting-guide for the tickets at the delivery end of the casing and as a stop for limiting the inward movement of the plate K, which after operation is returned to its normal position, as shown in Fig. 2, by a suitable spring k' . It will be understood, of course, that the plate k is spaced from the top of the casing, forming a passage therebetween for the delivery of the tickets or checks. The hinged plate K is also provided with the central inwardly-projecting plate L, the upper and lower edges of which are substantially curved, as shown, in opposite directions and terminate in a point l , provided with the transversely-extending ear or stop l' , adapted to rest in the annular space between the collars $D' D^2$ and in its normal position to lie in the path of rotation of the pins d^3 , as clearly shown in Fig. 2.

In the construction shown in Figs. 6 and 7 the transverse surface of the serving-wheel is continuous and has the centrally-disposed locking-slots d cut in its periphery substantially adjacent the two sets of projections d and d' , into which the locking-lug m of the lever M is projected upon each half-revolution of the serving-wheel. The lever M is pivotally mounted on the transverse rod or bolt M' , secured to the side walls of the casing, and is held in engagement with the serving-wheel in its normal position by means of the lug m' at the upper end thereof in operative engagement with the spring m^2 , carried by the hinged plate K, and by thus pressing downwardly on the upper end of the lever M tends to force the lower end inward toward the serving-wheel. On each side of the wheel are formed or secured thereto the raised portions N, cut away, as shown, to form the oppositely-disposed shoulders $n n'$, and adapted to engage these shoulders $n n'$ are the pushing-rods O, suitably secured to the hinged door or plate K and extending in a plane inwardly and downwardly therefrom, so that their lower ends engage the shoulders $n n'$ to rotate the serving-wheel D a limited distance when the operating plate or door is operated inwardly and the lug m disengaged from the slot d^x . In the drawings I have shown these pushing-rods O rigidly bolted to inwardly-extending ears o on the hinged door or plate K.

Referring to Fig. 2, the operation of my device is as follows: When the hinged plate K is pressed inwardly, the lower edge of the plate L engages the pin d^2 and rotates the serving-wheel D until the inward movement of the plate K is arrested by the end of the inwardly-projecting plate k coming in contact with the serving-wheel D, the ear l' hav-

ing moved inwardly out of the path of the pin d^3 and the strip of tickets fed forward a short distance beyond the delivery-opening, as shown in Fig. 1. The hinged plate K is then forced outward by the action of the spring k' , its movement being limited by the projection b' , and the plate L with its transverse projecting ear again assumes the position shown in Fig. 2, but the pin d^3 has now passed around the ear l' and rests below the same. The projecting edge of the tickets is now pulled forward until the length of one check or ticket has been delivered, when the pin d^3 again comes in contact with the top of the ear l' and limits the further advance of the ticket until the hinged plate is again operated. In the construction shown in Figs. 6 and 7 substantially the same operation is performed—that is to say, upon the inward movement of the hinged plate K the upper end of the lever M is forced inward under the tension of the spring m^2 and disengages the lug m from the locking-slot d^x , when the inner ends of the pushing-rods O engage the shoulders n' or n , as the case may be, and rotate the serving-wheel a limited distance, as before, the spring k' returning the hinged plate K to its normal position and allowing the lug m to recede inwardly toward the serving-wheel D under tension of the spring m^2 . When one length of the ticket has been advanced, the lug m will be forced in the locking-slot d^x opposite to the one it has been recently disengaged from and, as heretofore, limits the further movement of the tickets. It will be observed that in both constructions the locking-pins d^3 and slots d^x are so disposed relative to the length of the tickets to be delivered as to cooperate therewith substantially in the manner described and lock the further rotation of the serving-wheel at the proper predetermined moment. It will be also observed that in both constructions the feeding lugs or projections d d' are so spaced in the serving-wheel as to engage the notches c on each length of tickets.

Many modifications might be made without departing from the spirit of my invention. For instance, when the open casing formed from the blank shown in Fig. 8 is used the metallic guide-strip I may be suitably supported on a transverse rod supported in the apertures p' p' on each side of the casing and the pivot-pin J in the apertures p^0 p^0 .

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

1. In a serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of serving means engaging and adapted, when operated, to advance said strip, means for initially moving said serving means forward a predetermined limited distance and automatically locking same against further forward movement as each length of ticket is pulled out.

2. In a serving apparatus, the combination

with a suitable casing and a continuous strip of detachable tickets or checks provided with notches located therein, of serving means having projections thereon positively engaging said notches when operated for controlling the feed of said strip, means for initially moving said serving means forward a predetermined limited distance and automatically locking same against further forward movement as each length of ticket is pulled out.

3. In a serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of rotatable serving means engaging and adapted, when operated, to advance said strip, means for initially rotating said serving means forward a predetermined limited distance for advancing the end of said strip beyond said casing, and means for locking said serving means against further forward rotation as each length of ticket is advanced.

4. In a serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of serving mechanism comprising a serving-wheel engaging and adapted, when operated, to advance said strip, and cooperating means initially engaging said serving-wheel for rotating the same a limited distance and adapted to automatically lock the same against forward rotation as each length of ticket is advanced.

5. In a serving apparatus, the combination with a continuous strip of detachable tickets or checks and a suitable casing therefor, of serving mechanism comprising a serving-wheel having projections thereon positively engaging said strip, and cooperating means initially engaging said serving-wheel for rotating the same a limited distance and adapted to automatically lock said serving-wheel against forward rotation as each single ticket is advanced.

6. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of a serving-wheel engaging and adapted, when operated, to advance said strip, an operating-plate pivoted to said casing, and means in operative engagement with said pivoted plate for initially rotating said serving-wheel a limited distance when pushed inwardly and, upon its return to its normal position, adapted to automatically lock said wheel against forward rotation as each length of ticket is advanced.

7. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of a serving-wheel engaging and adapted, when operated, to advance said strip, an operating-plate pivoted to said casing, having an inwardly-extending projection at its upper end and adapted to serve as a support for the tickets at the delivery end of the casing and limit the inward movement of said plate when operated, and means in operative engagement with said pivoted plate for initially rotating said serv-

ing-wheel a limited distance when pushed inwardly and, upon its return to its normal position, adapted to automatically lock said wheel against forward rotation as each single ticket is advanced.

8. In serving apparatus, the combination with a continuous strip of tickets or checks detachably secured together and having notches therein, of a serving-wheel provided with spaced projections on its periphery adapted to engage said notches when operated to advance said strip, and cooperating means initially engaging said serving-wheel for rotating the same a limited distance and adapted to automatically lock said serving-wheel against forward rotation as each single ticket is advanced.

9. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor formed from a flat blank, of a serving-wheel engaging said strip, and means for initially rotating said serving-wheel a limited distance and adapted to automatically lock the same against forward rotation as each single ticket is pulled out.

10. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of serving mechanism comprising a serving-wheel engaging and adapted, when operated, to advance said strip, a plate pivotally supported on said casing and provided with an inwardly-extending operating-plate adapted to initially engage said serving-wheel when moved inwardly for rotating said wheel a limited distance, means for returning said plate to its normal position, and means on said operating-plate cooperating with said serving-wheel for automatically locking same against forward rotation as each length of ticket is pulled out.

11. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of a serving-wheel engaging said strip comprising a sleeve with spaced collars thereon forming an annular space between said collars, operating and locking pins projecting into said annular space, a plate pivoted to said casing, an inwardly-extending operating-plate carried by

said pivoted plate and adapted to initially engage said operating-pin, when moved inwardly, and cooperating with said locking-pin when returned to its normal position for automatically locking said serving-wheel against forward rotation as each single ticket is pulled out.

12. In serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of serving mechanism for controlling the delivery of said tickets comprising a serving-wheel rotatably mounted in said casing, and engaging said strip, operating and locking pins carried by said serving-wheel, a pivoted plate on said casing provided with an inwardly-extending projection having a transverse ear thereon, said projection adapted to initially engage said operating-pin when moved inwardly for rotating the serving-wheel a limited distance and said ear adapted to rest in the path of rotation of said locking-pin when in its normal position and cooperate therewith for limiting the forward rotation of said wheel as each single ticket is pulled out.

13. In a serving apparatus, the combination with a continuous strip of tickets or checks and a suitable casing therefor, of serving mechanism for controlling the delivery of said tickets comprising a rotatable serving-wheel positively engaging said strip and having a central annular groove, operating and locking pins projecting into said annular groove, a pivoted plate on said casing provided with an inwardly-extending projection having a transverse ear on the end thereof adapted to rest in said annular groove, said projection adapted to initially engage said operating-pin when moved inwardly and said transverse ear adapted to rest in the path of rotation of said locking-pin when in its normal position and cooperate therewith for limiting the forward rotation of said wheel as each single ticket is pulled out.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE H. MUNROE.

Witnesses:

A. B. WILSON,
JOHN F. FORWARD.