

No. 726,617.

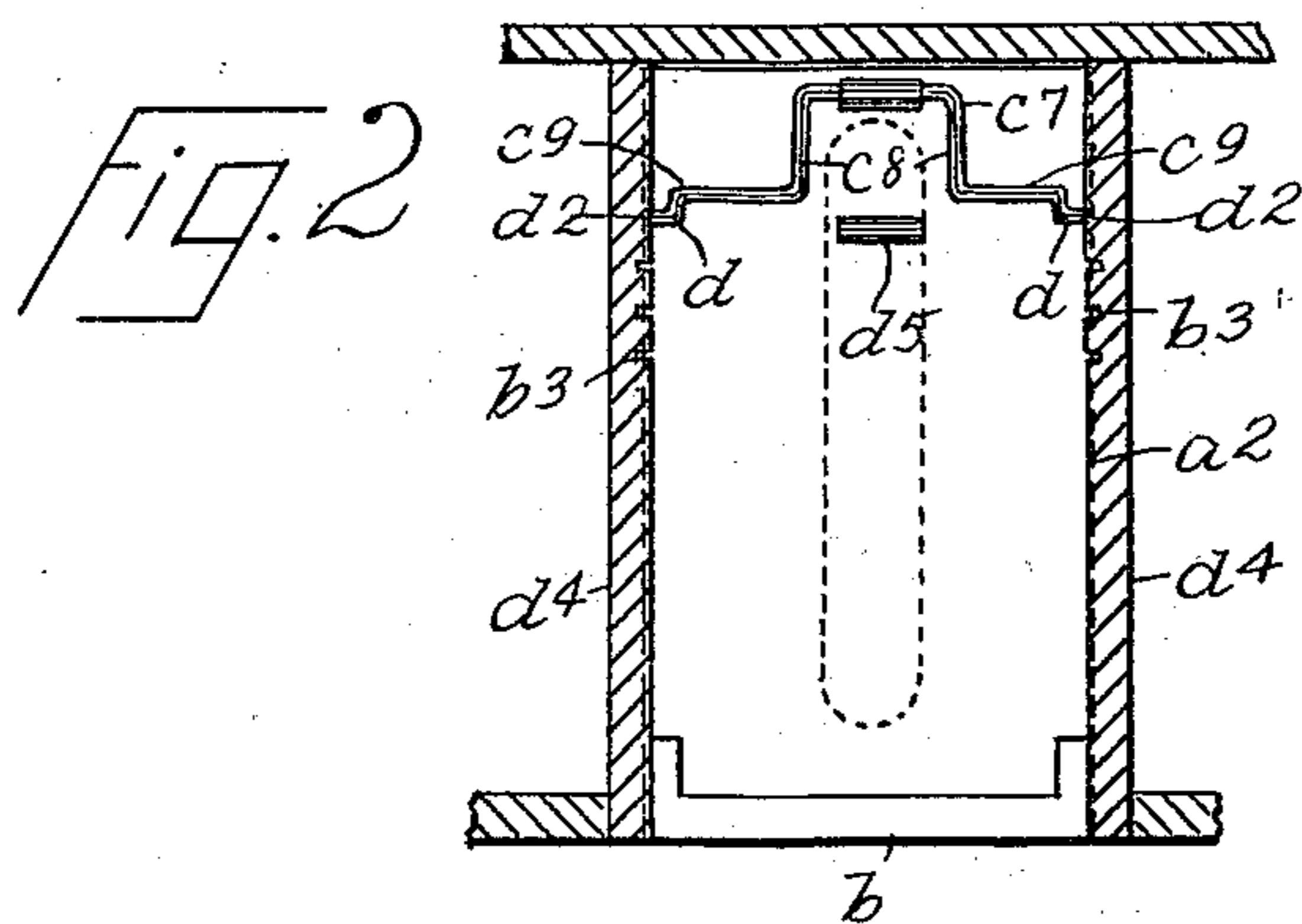
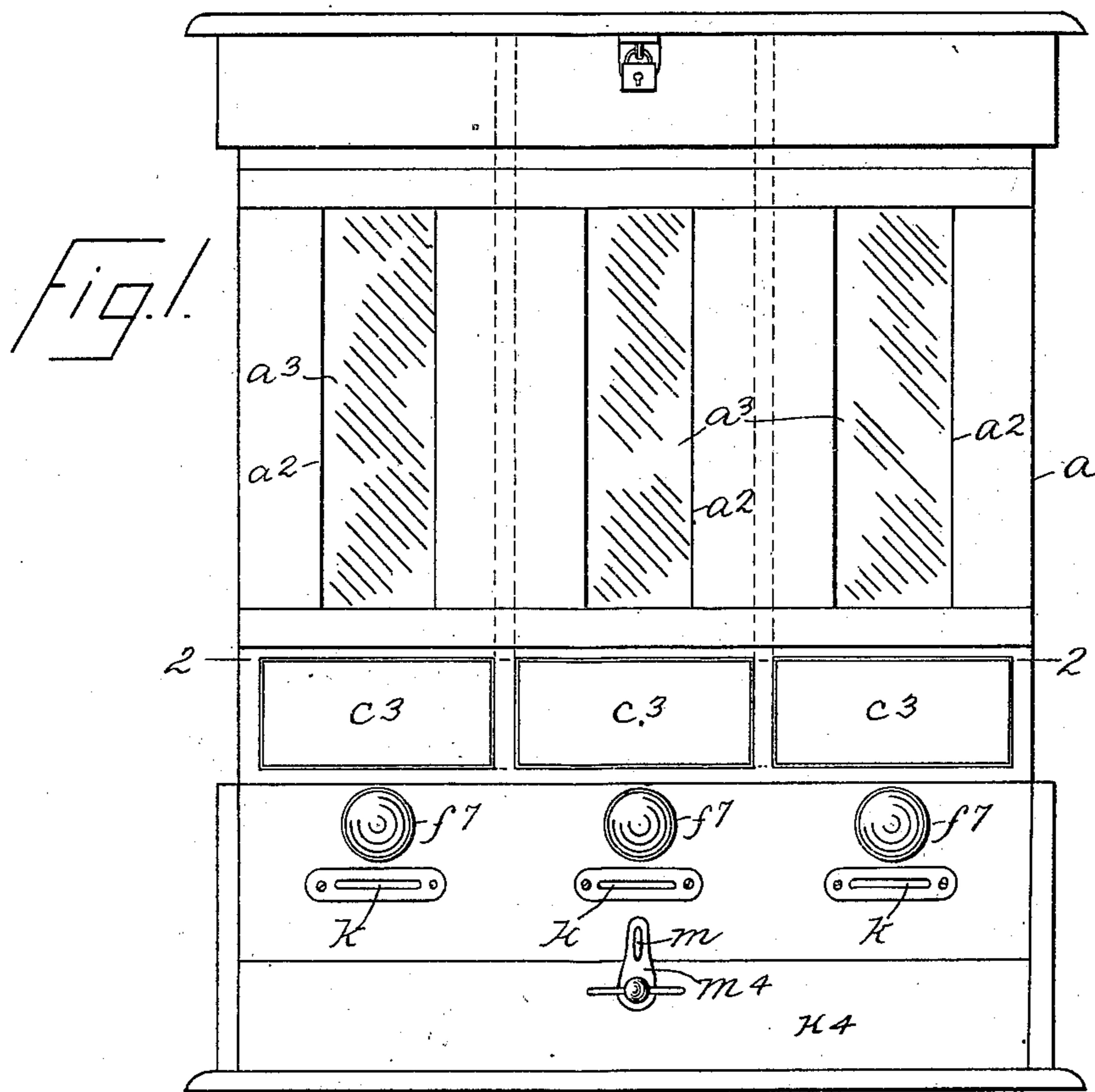
PATENTED APR. 28, 1903.

L. W. BALDWIN.  
COIN OPERATED VENDING MACHINE.

APPLICATION FILED MAY 10, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES

*J. E. Larsen*  
*F. H. Stewart*

BY

INVENTOR

*Louis W. Baldwin*

*Edgar Tate & Co.*  
ATTORNEYS

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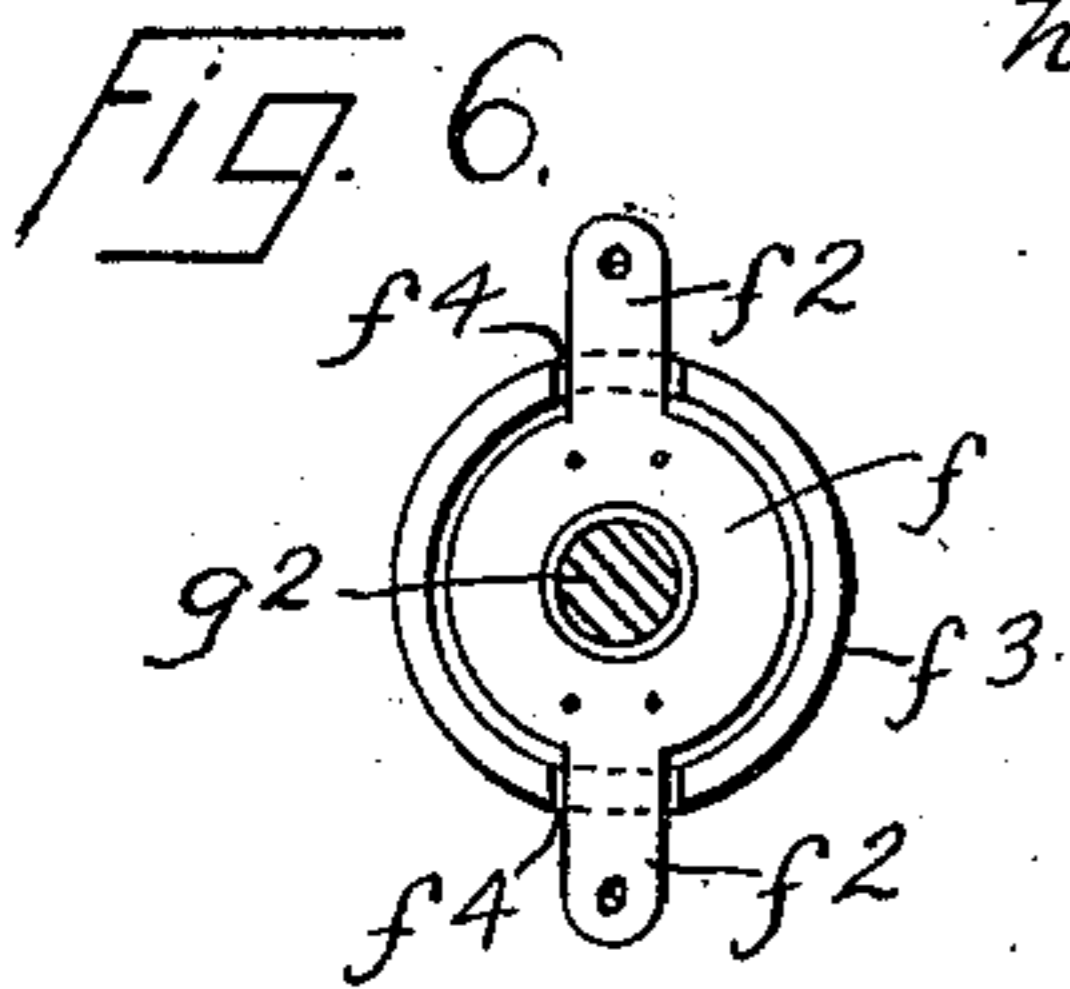
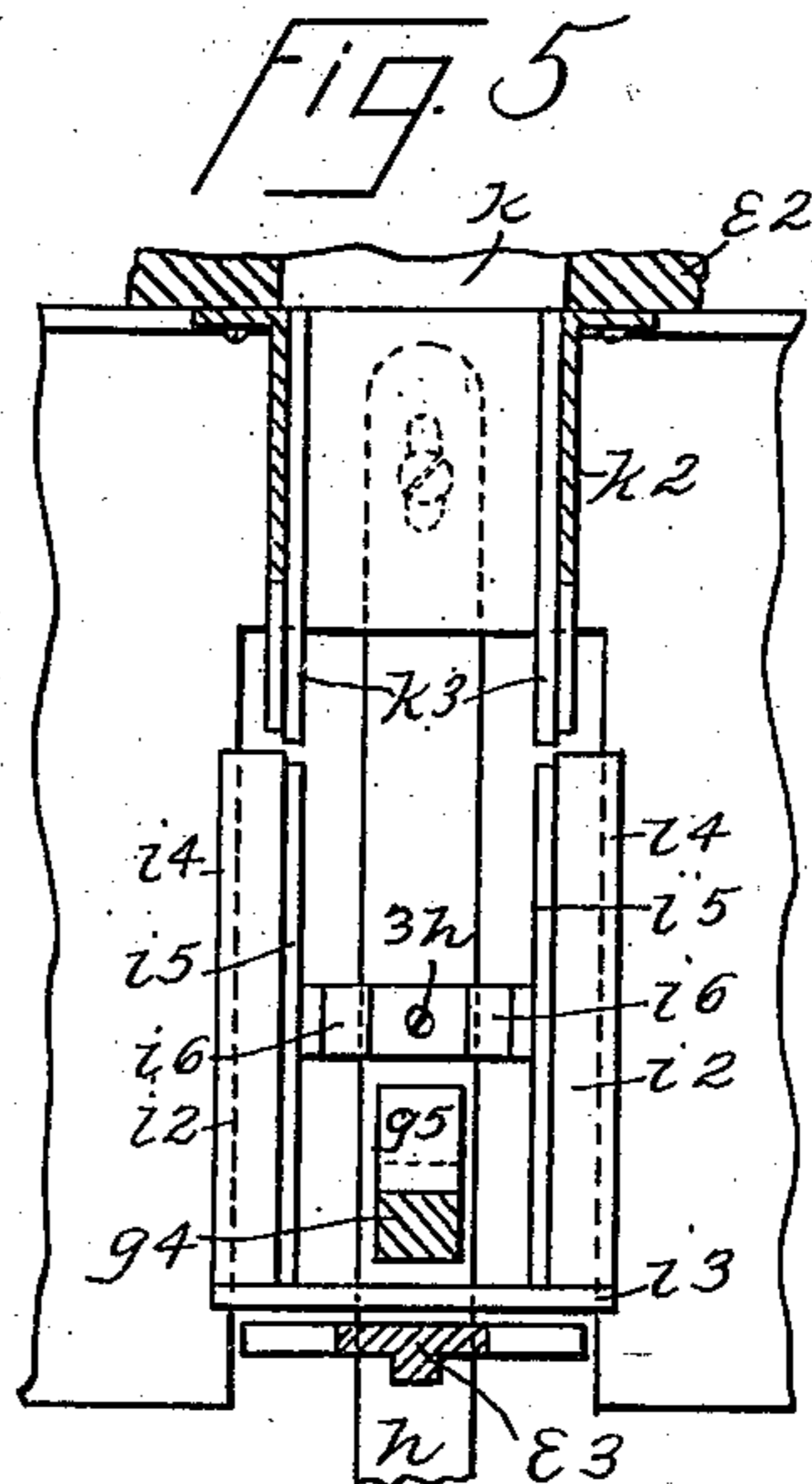
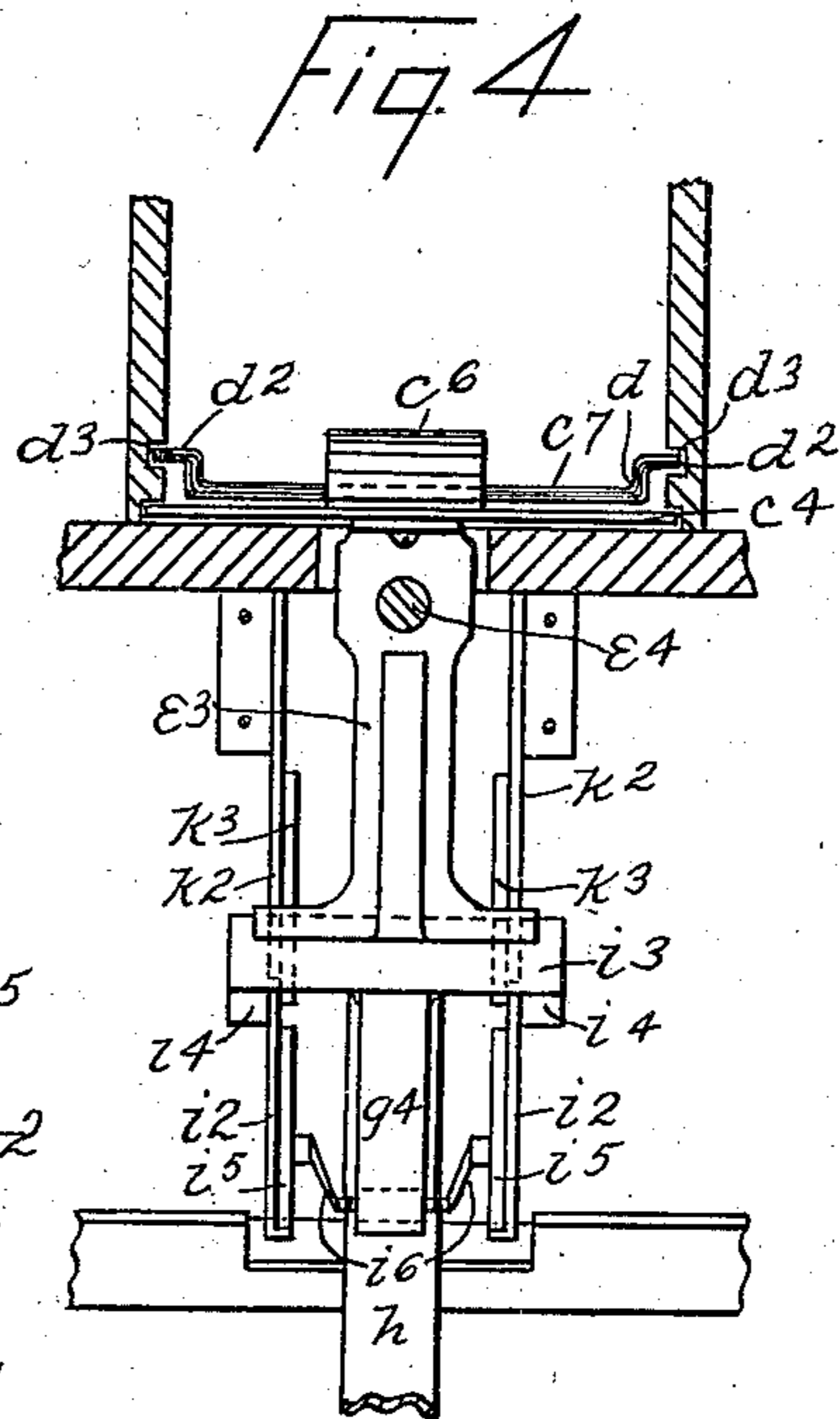
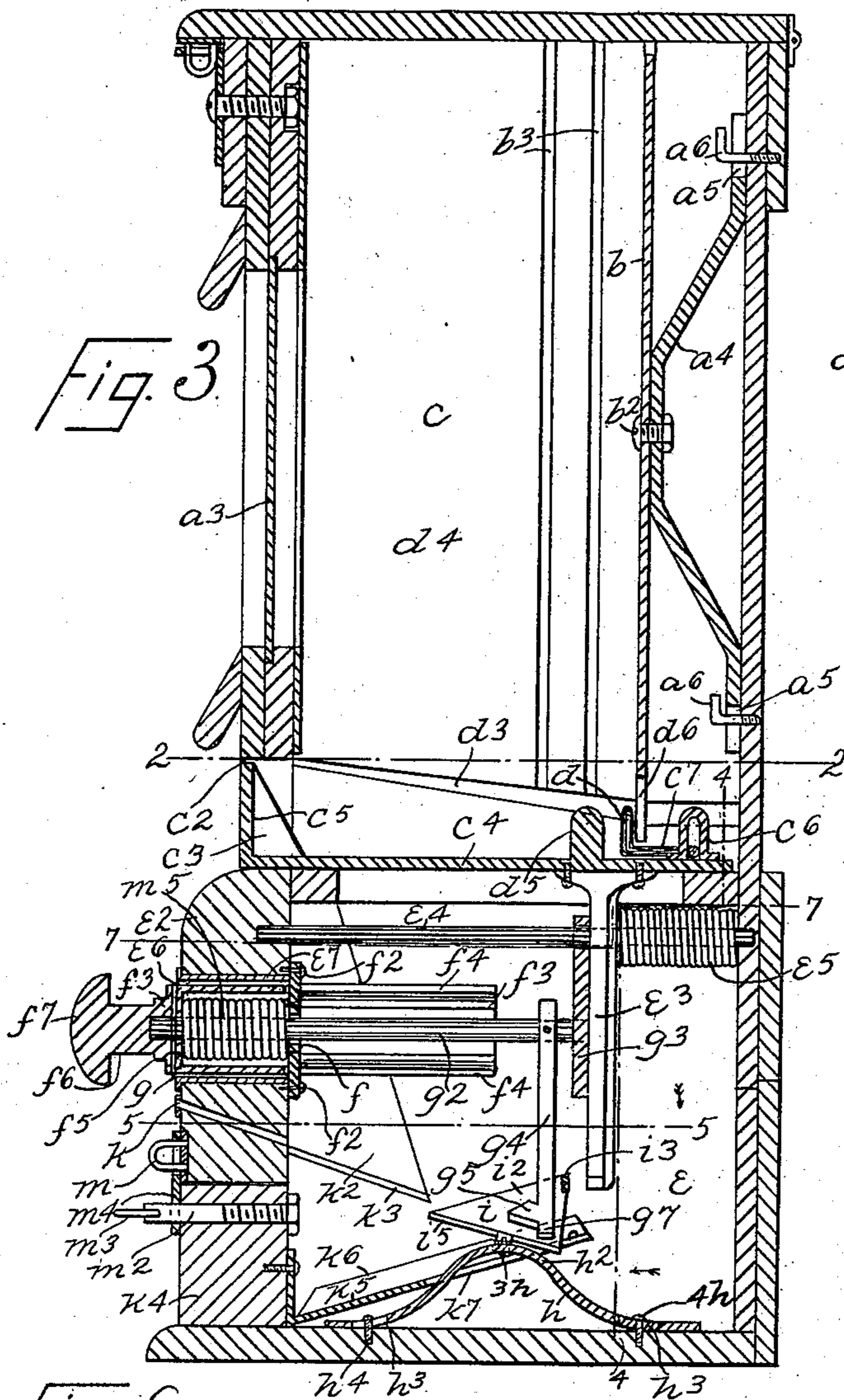
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APPLICATION FILED MAY 10, 1902.

NO MODEL.

3 SHEETS—SHEET 2.



WITNESSES

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3 SHEETS—SHEET 3.

Fig 7

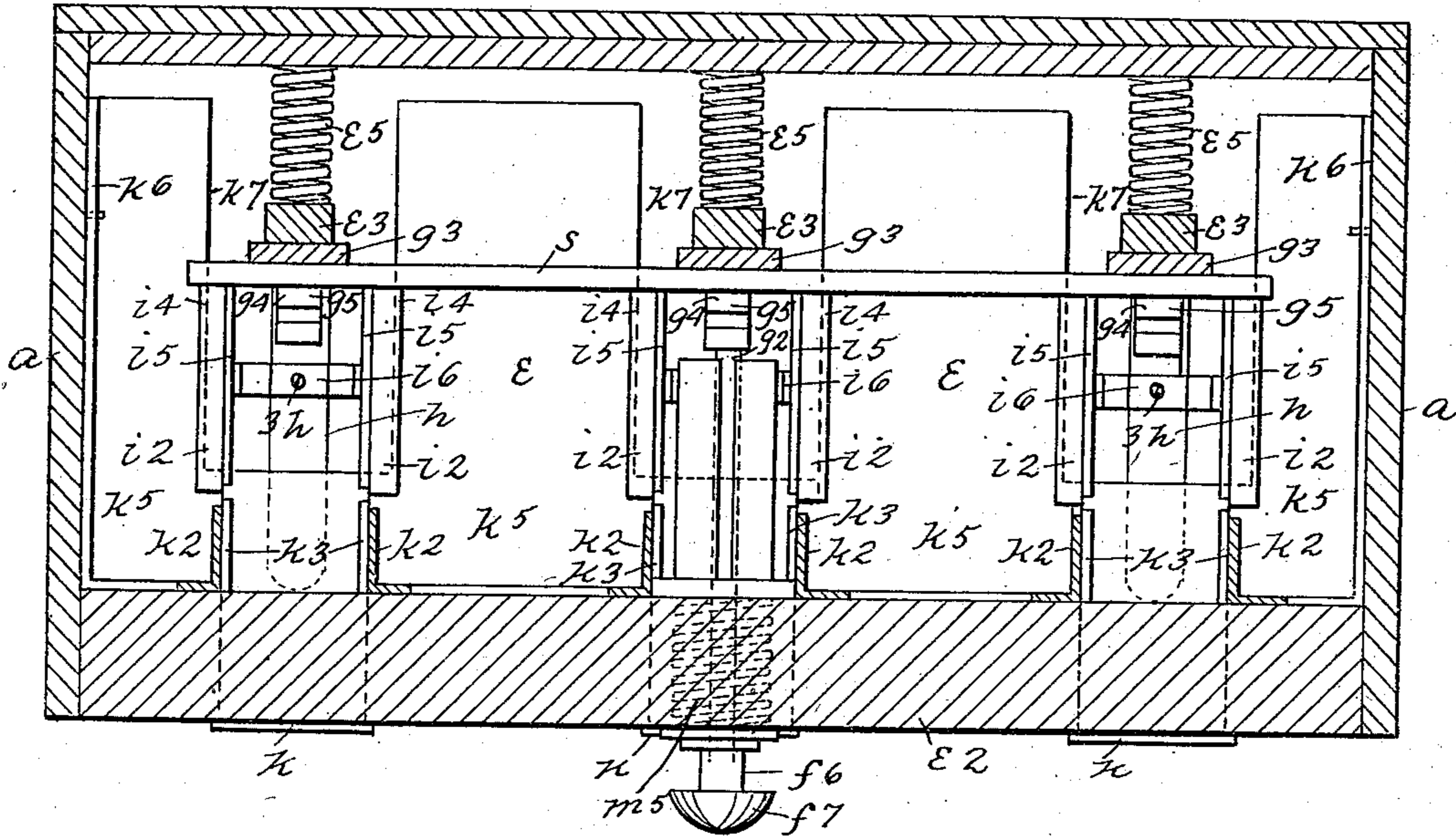
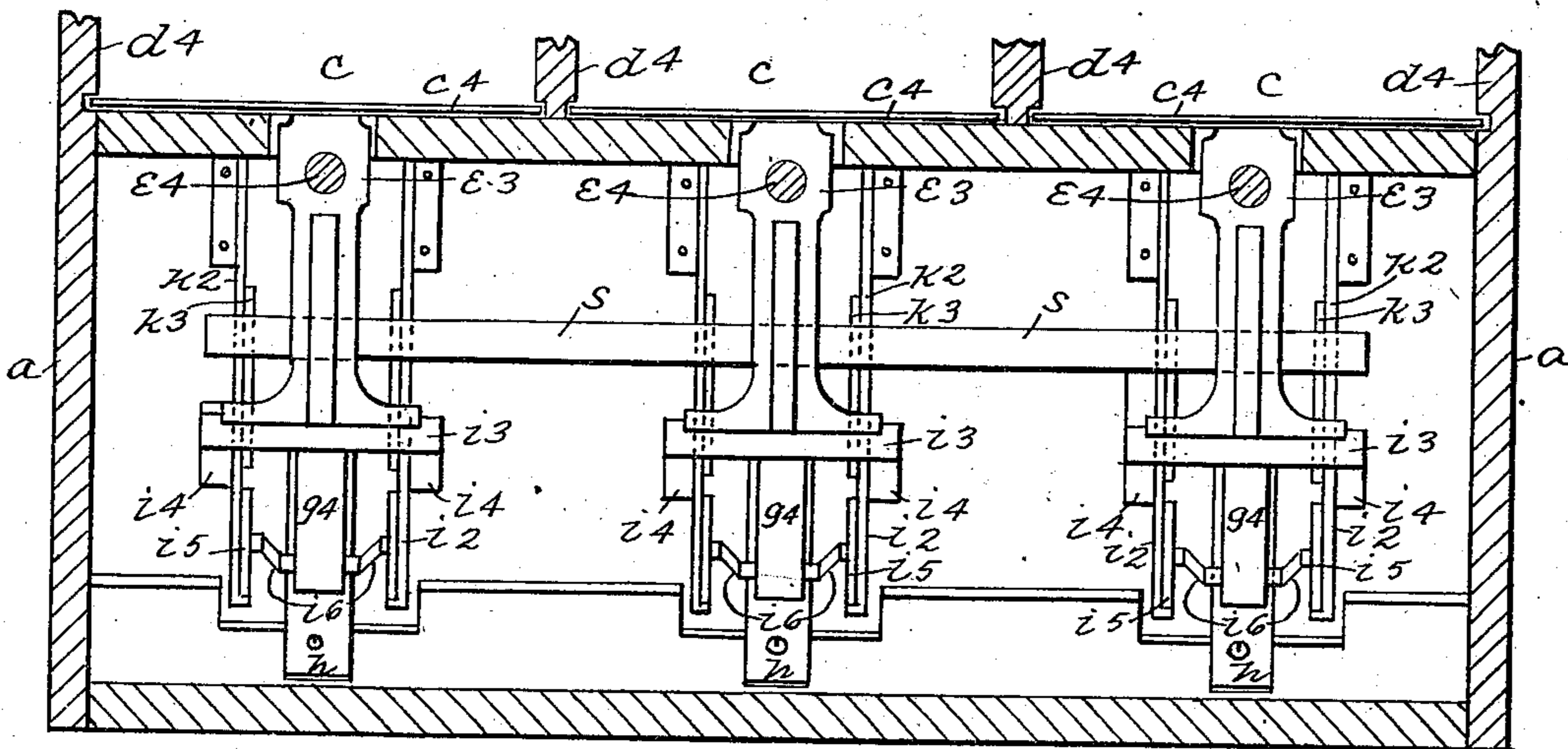


Fig 8



WITNESSES

J. C. Larsen  
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# UNITED STATES PATENT OFFICE.

LOUIS W. BALDWIN, OF JERSEY CITY, NEW JERSEY.

## COIN-OPERATED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 726,617, dated April 28, 1903.

Application filed May 10, 1902. Serial No. 106,766. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS W. BALDWIN, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Coin-Operated Vending-Machines, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved coin-operated vending-machine which is simple in construction and operation and comparatively inexpensive and which involves a comparatively small number of parts and which will not easily get out of order or frequently need repair.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same reference characters in each of the views, and in which—

Figure 1 is a front view of a coin-operated vending-machine embodying my invention; Fig. 2, a partial section on the line 2 2 thereof; Fig. 3, a central vertical section through one of the compartments or subdivisions of my improved machine; Fig. 4, a partial section on the line 4 4 of Fig. 3; Fig. 5, a partial section on the line 5 5 of Fig. 3; Fig. 6, an end view of a slide-tube and parts connected therewith which I employ; Fig. 7, a section on the line 7 7 of Fig. 3 and showing a modification, and Fig. 8 a view similar to Fig. 4 of the construction shown in Fig. 7.

In the drawings forming part of this specification, reference being made to Fig. 1, I have shown at *a* a machine involving my invention and comprising three separate subdivisions or parts *a*<sup>1</sup>, each of which is exactly the same and each of which contains the same operative mechanism, the object of this construction being to provide a machine of the class specified by which various articles may be vended—such as chewing-gum, candy, cigarettes, peanuts, smoking-tobacco, chewing-tobacco, and various other articles—the number of articles vended depending entirely upon the subdivisions or compartments of the machine, and from the following description it will be seen that the operative mechanism of the separate compartments have no con-

nection whatever except as hereinafter specified, and a description of one of said compartments and the mechanism contained therein will suffice for the description of all.

In Fig. 3 of the drawings I have shown a central vertical section of one of the compartments or subdivisions of my machine, and said compartment is provided with a front transparent panel *a*<sup>2</sup>, and the back wall thereof is provided with a flexible metal strip or wire *a*<sup>4</sup>, the ends of which bear on said back wall and are provided with slots, loops, or hooks *a*<sup>5</sup>, through which are passed pins, screws, or other devices *a*<sup>6</sup>, by which said strip or wire is held in place, and a vertical plate *b* is connected to said strip or wire at *b*<sup>2</sup>, and the side walls of the compartment are preferably provided with vertically-arranged grooves *b*<sup>3</sup>, as shown in Figs. 2 and 3, into which the side edges of the plate *b* are adapted to be inserted. The bottom slot or loop *a*<sup>5</sup> in the bottom end of the strip or wire *a*<sup>4</sup> opens downwardly, and the said end of said strip or wire may thus be caused to engage the screw or other device *a*<sup>6</sup> as the plate *b* is inserted into the grooves *b*<sup>3</sup> in said walls of the compartment, and the groove or slot *a*<sup>5</sup> in the upper end of said strip or wire may open upwardly or laterally and may be easily connected with the corresponding screw or other device *a*<sup>6</sup>, and by means of the plate *b* the dimensions of the chamber *c*, which constitutes a goods receptacle or reservoir, may be regulated, and the object of using the strip or wire *a*<sup>4</sup> is to provide means whereby the central portion of the plate *b* may be supported, and said plate may be made of thin material; but said plate may be of any desired material and may be adjusted in any preferred manner.

The front wall of the compartment *a*<sup>2</sup> is provided with an opening *c*<sup>2</sup>, and placed in the bottom of said compartment is a drawer *c*<sup>3</sup>, which may be drawn out through said opening *c*<sup>2</sup>, and said drawer consists of a bottom plate *c*<sup>4</sup> and a front plate *c*<sup>5</sup>, and connected with the inner end of the bottom plate *c*<sup>4</sup> is a keeper *c*<sup>6</sup>, in which is placed a transverse rod *c*<sup>7</sup>, the separate sides of which are bent forwardly, as shown at *c*<sup>8</sup> in Fig. 2, and then laterally to form arms *c*<sup>9</sup>, having upwardly-directed members *d*, which are provided with outwardly-directed fingers *d*<sup>2</sup>, adapted to move in slots *d*<sup>3</sup>, formed in the opposite side

walls  $d^4$  of the chamber, receptacle, or reservoir  $c$ . The drawer  $c^3$  forms the bottom of the chamber  $c$ , and the bottom of said drawer is also preferably provided near the rear end thereof with an upwardly-directed projection  $d^5$ , and the bottom of the plate  $b$  is provided with a corresponding opening  $d^6$ , through which the projection  $d^5$  may pass if in the operation of the device the plate  $b$  is so placed as to be forward of the upwardly-directed projection  $d^5$ .

Below the chamber or reservoir  $c$  is a supplemental chamber or compartment  $e$ , provided with a thickened front wall  $e^2$ , and the bottom  $c^4$  of the drawer  $c^3$  is provided with a hanger  $e^3$ , which is secured to the bottom of the rear portion thereof, and in the top of the supplemental chamber or compartment  $e$  is placed a shaft  $e^4$ , the ends of which are supported in the front and back walls of the compartment or chamber  $e$ , and this shaft passes through the hanger  $e^3$ , and between said hanger and the rear wall of said compartment is placed a spiral spring  $e^5$ , which is mounted on said shaft.

The front wall  $e^2$  of the chamber or compartment  $e$  is provided centrally with a cylindrical opening  $e^6$ , having a metal casing  $e^7$ , and the inner end of this casing is partially closed by a circular plate  $f$ , having oppositely and vertically arranged arms  $f^2$ , which are secured to the front wall  $e^2$ , and movable through the front wall of the casing and inclosing the plate  $f$  is a tube  $f^3$ , having longitudinal slots  $f^4$  at the top and bottom sides thereof, through which the arms  $f^2$  of the plate  $f$  pass, and the outer end of the tube  $f^3$  is closed by a head  $f^5$ , having a neck  $f^6$ , provided with a knob or handle  $f^7$ , by which the apparatus is operated, as hereinafter described.

Secured to the head  $f^5$  of the tube  $f^3$  by means of a transverse pin  $g$  or in any desired manner is a shaft  $g^2$ , which passes inwardly through the center of the plate  $f$  and through the tube  $f^3$ , and to the inner end of which is secured a plate  $g^3$ , which normally rests against the hanger  $e^3$  and through which the shaft  $e^4$  loosely passes, and connected with the inner end of the shaft  $g^2$  is a supplemental hanger  $g^4$ , the lower end of which is provided with a forwardly-directed shoulder  $g^5$ , below which the said hanger is extended to form a lug or projection  $g^7$ .

In the bottom of the supplemental compartment or compartments  $e$  is placed a plate-spring  $h$ , which ranges forwardly and backwardly and the central portion of which curves upwardly, as shown at  $h^2$  in Fig. 3, and the ends of which bear on the bottom of said compartment, and said ends are provided with slots  $h^3$ , through which are passed screws or headed pins  $h^4$ , the object of this construction being to provide means whereby the central portion of said spring may be depressed; but a slot  $h^3$  at each end of said spring is not absolutely necessary.

Connected with the upper curved portion of the spring  $h$  at  $3^h$  is a coin-receiver  $i$ , composed, as shown in Figs. 4 and 5, of side portions  $i^2$ , which are preferably triangular in form, the wider ends thereof being directed backwardly, and the upper portion of the wider ends of said side portions  $i^2$  of the coin-receiver  $i$  are preferably connected by a transverse plate  $i^3$ , which when the parts are in their normal position project above the bottom of the hanger  $e^3$ . The side plates  $i^2$  of the coin-receiver  $i$  are preferably made of thin metal and are provided at their upper edges with outwardly-directed flanges  $i^4$ , over which the hanger  $e^3$  passes in the operation of the device, and said side portions  $i^2$  are provided at their bottom edges with inwardly-directed flanges  $i^5$ , forming supports for the coin, and the side pieces  $i^2$  are also rigidly connected by a transverse yoke-shaped member  $i^6$ , and as thus constructed it will be seen that the coin-receiver  $i$  is open at the bottom between the inner edges of the flanges  $i^5$ .

The front wall  $e^2$  of the bottom compartment or receptacle  $e$  is provided with a coin-slot  $k$ , which is of just such dimensions as the coin which it is intended to use, and this slot passes downwardly and backwardly through said wall, and connected with the wall at the inner end of said slot is a coin-chute  $k^2$ , the sides of which are provided with inwardly-directed flanges  $k^3$ , which receive the coin as it passes through the slot  $k$  and discharge it into the coin-receiver  $i$ , where it rests on the bottom flanges  $i^5$  at the opposite side of said receiver.

In the front wall  $e^2$  of the chamber or receptacle  $c$  and beneath the coin-slot  $k$  is placed a drawer  $k^4$ , which comprises a transverse member, which fits in a suitable opening in the front wall  $e^2$  and to which is secured a backwardly and upwardly directed member  $k^5$ , having sides  $k^6$ , and the member  $k^5$  constitutes the bottom of the drawer and is provided with a slot or opening  $k^7$ , into and through which the central portion of the spring  $h$  projects, and the front wall  $e^2$  of the chamber  $e$  is provided with a staple or other device  $m$  and the drawer  $k^4$  with a bolt  $m^2$ , having a link  $m^3$ , which serves as a handle, and said bolt is also provided with a plate  $m^4$ , through which the staple  $m$  may be passed, whereby the drawer may be secured by an ordinary padlock.

The operation will be readily understood from the foregoing description, when taken in connection with the accompanying drawings and the following statement thereof. The material or articles to be vended are placed in packages, which are deposited in the reservoir or chamber  $c$ , and it will be understood that said packages may be of any desired size, as may also the drawer  $c^3$ , and said drawer is intended to be of such dimension as to be substantially filled by one of said packages, and when the drawer is drawn out, as hereinafter described, the fingers or

projections  $d^2$  of the arms  $c^9$  move forward in the grooves  $d^3$  and support all the packages above the bottom one and prevent them from dropping down until the drawer is forced back into its normal position, as shown in Fig. 3.

In the operation of the apparatus a coin is inserted into the coin-slot  $k$  and passes down over the bottom of or through the coin-chute  $k^2$  and drops into the receiver  $i$ , where it rests on the bottom flanges  $i^5$ , at the sides thereof. The knob or handle  $f^7$  is then grasped, and the shaft  $g^2$  and tube  $f^3$  are pulled outwardly against the operation of a spring  $m^5$ , which is mounted in the outer end of the tube  $f^3$  and one end of which bears on the plate  $f$  and is secured thereto, and the other end of which is secured to the shaft  $g^2$ , and the operation of which is to force said shaft and tube inwardly into the position shown in Fig. 3. As the shaft  $g^2$  is pulled outwardly the hanger  $g^4$  moves therewith, and the lug or projection  $g^7$  at the bottom of said hanger and against which the coin rests strikes against said coin and forces it forwardly over the upwardly and forwardly directed flanges  $i^5$  at the bottom of the coin-receiver  $i$ . This operation depresses the spring  $h$  and the transverse plate  $i^3$  at the back of the coin-receiver  $i$ , the latter being depressed below the bottom of the hanger  $e^3$ . At the same time the spring  $e^5$  forces the hanger  $e^3$  forwardly, which operation forces the drawer  $c^3$  forwardly and outwardly, and the package in said drawer may be removed therefrom. When this operation is complete, the knob or handle  $f^7$  of the shaft  $g^2$  is released, and the spring  $m^5$  immediately forces said shaft  $g^2$ , the hanger  $e^4$ , the drawer  $c^3$ , and the hanger  $g^4$  back into their normal position, or into the position shown in Fig. 3. In the above operation the coin is shoved forwardly out of the coin-receiver  $i$  by means of the lower end of the hanger  $g^4$  and drops into the drawer  $k^4$ , and the parts are again in position for use or for the insertion of another coin.

It will be observed that the coin-receiver  $i$  is secured to or connected with the spring  $h$  in such manner that the bottom flanges  $i^5$  at the sides thereof range forwardly and upwardly, and when the coin is dropped thereinto from the chute  $k^2$  it slides downwardly and backwardly until it strikes the lug or projection  $g^7$  at the bottom of the hanger  $g^4$ , in which position the forwardly-directed shoulder  $g^5$  extends immediately thereover, and when the hanger  $g^4$  is pulled forwardly, as hereinbefore described, the parts  $g^7$  and  $g^5$  force the coin forwardly and upwardly, and this operation depresses the coin-receiver  $i$ , together with the spring  $h$ , as hereinbefore described.

In the normal position of the parts the hanger  $e^3$  is held a considerable distance back of the top rear portion of the receiver  $i$  by the spring  $m^5$ , and when a coin passes into the receiver  $i$  and the hanger  $g^4$  is drawn out-

wardly the receiver  $i$  will be depressed, so as to allow the hanger  $e^3$  to pass over it, and in practice the hanger  $e^3$  and the receiver  $i$  are made low enough so that the bottom of the hanger  $e^3$  will pass under the coin-chute  $k^2$ .

Although I have described the separate compartments of my improved machine as provided with separate operating mechanisms having no connection, I may under certain circumstances operate all the mechanisms of the various compartments by means of a single central knob or handle  $f^7$ , as shown in Figs. 7 and 8, and the operative parts connected therewith, including the shaft  $g^2$ , and this will be the case where the number of compartments in the machine are three, five, or seven, and in order to do this a transverse bar  $s$  is connected with the rear end of the shaft  $g^2$  of the central subdivisions and only one central knob or handle  $f^7$  is employed, together with one shaft  $g^2$ , the remaining hangers  $g^4$  independent of the central hanger being secured to said transverse bar, it being understood that the plate  $g^3$  and the rod  $e^4$  are also employed in each of the subdivisions in this modification.

The drawer  $k^4$  may serve for all the separate compartments of the machine and is preferably so made, or a separate drawer may be provided in each of said compartments. It will be observed that the bottom of the coin-chute  $k^2$  is open longitudinally thereof, as is also the bottom of the coin-chute  $i$ , the width of this opening depending on the width of the flanges  $k^3$  and  $i^5$  and the width of the coin-chute, and the width of the opening in the bottom of the coin-chute and coin-receiver will depend upon the width or transverse diameter of the coin to be used, these parts being so formed as to drop any coin of an improper size before it can find lodgment in the coin-receiver.

When the handle  $f^7$  is pulled outwardly, the bar  $s$  and hangers  $g^4$  are also drawn out, allowing the springs  $e^5$  to force out the hangers  $e^3$  until they engage with the portions  $i^3$  of the coin-receivers  $i$ , which prevent further movement of the hangers  $e^3$  and the drawers  $c^3$ , to which said hangers are attached. When, however, a coin is inserted in the coin-chute of any subdivision, said coin enters the coin-receiver of that subdivision, and when the handle  $f^7$  is drawn forwardly the hanger  $g^4$  of the said subdivision engages with the coin therein and forces the receiver  $i$  downwardly until the hanger  $e^3$  is free to pass and the drawer of that subdivision opens, and if coins be inserted in each of the subdivisions, each of the drawers of said subdivisions will be forced forwardly and the contents thereof may be removed, and said receiver  $i$  will not be depressed unless a coin be held therein, and when the hangers  $g^4$  are at their forward limit of movement the coins therein are dropped into the drawer  $k^4$ , and the spring  $m^5$  forces said hangers and drawers back to their normal position.

This apparatus is simple in construction and operation, and while I have shown in Fig. 1 of the drawings a machine involving three separate similar subdivisions it will be understood that they are all the same, and only one or more may be employed, as desired; and the invention consists in the mechanism with which each is provided.

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

1. In a coin-operated vending-machine, a casing provided with a goods-reservoir, a drawer in the bottom thereof, a chamber beneath said drawer, and the front wall of which is provided with a coin-slot, a hanger connected with said drawer, a shaft passing through said hanger and provided with a spring for forcing the hanger and drawer forwardly, another shaft passing through the front wall of said chamber and provided with a spring for forcing it inwardly, a plate connected with the inner end of the last-named shaft and bearing on said hanger and through which the first-named shaft passes, a hanger connected with the last-named shaft, a spring-operated coin-receiver beneath said hanger and in front of the first-named hanger, and in connection with which both of said hangers are adapted to operate, and means for guiding a coin from the coin-slot into said receiver, substantially as shown and described.

2. A machine of the class described comprising a casing provided with top and bottom compartments, a drawer in the bottom of the top compartment, a hanger connected with said drawer and depending into the bottom compartment, means for forcing said hanger and said drawer forwardly, a spring-operated shaft extending through the front wall of the bottom compartment and bearing on said hanger, a supplemental hanger connected with the last-named shaft, a spring-supported coin-receiver at the bottom of the last-named hanger and the top of which projects above and in front of the bottom of the first-named hanger, and means whereby a coin may be passed through the front wall of the bottom compartment and into said receiver, substantially as shown and described.

3. A machine of the class described, provided with top and bottom compartments, a drawer in the bottom of the top compartment, a hanger connected with said drawer and extending downwardly into the bottom compartment, a spring for forcing said hanger and said drawer forwardly, a tube mounted in the front wall of the bottom compartment and movable forwardly and backwardly therein, a knob or handle connected with the outer end of said tube, a shaft secured in the outer end of said tube and projecting inwardly and bearing on the said hanger, a spring forcing said shaft and said tube inwardly, a supplemental hanger connected with said shaft, a spring-supported coin-receiver in front of and partially below the first-named hanger into

which the supplemental hanger extends, and means whereby a coin may be passed through the front wall of the bottom compartment and into said receiver, substantially as shown and described.

4. A machine of the class described comprising a casing provided with top and bottom compartments, a drawer mounted in the bottom of the top compartment, a hanger depending from said drawer into the bottom compartment means for forcing said hanger and said drawer forwardly, a tube mounted in the front wall of the bottom compartment and movable outwardly and backwardly therethrough, a shaft secured in the outer end of said tube and projecting inwardly and adapted to bear on said hanger, a spring for forcing said shaft and said tube inwardly, a spring-supported coin-receiver mounted in the bottom of the bottom compartment and in connection with which said hanger operates, means whereby a coin may be passed through the front wall of the bottom compartment into said receiver and devices connected with the tube-shaft and operating in connection with said coin to depress said receiver when said tube and shaft are pulled outwardly, substantially as shown and described.

5. A machine of the class described comprising a casing provided with a plurality of separate subdivisions each of which consists of a top and bottom compartment, a drawer in the bottom of the top compartment of each subdivision, a hanger connected with said drawer and depending into the bottom compartment of each subdivision, forwardly and backwardly ranging shafts mounted in the top portion of each of the bottom compartments, and passing through said hangers, means for forcing said hangers and drawers forwardly, plates or supports slidably mounted on said shafts in front of said hangers, a horizontal bar connecting said plates or supports, a spring-operated shaft passing through the wall of the bottom compartment of a central subdivision and connected with said bar, supplemental hangers connected with said bar in the bottom compartment of each subdivision, spring-supported coin-receivers at the bottom of the bottom compartments of each subdivision and the tops of which project above the bottoms of the first-named hangers, and means whereby a coin may be passed through the front wall of the bottom compartment of each subdivision and into the corresponding receiver, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 8th day of May, 1902.

LOUIS W. BALDWIN.

Witnesses:

F. A. STEWART,  
C. E. MULREANY.