

No. 767,306.

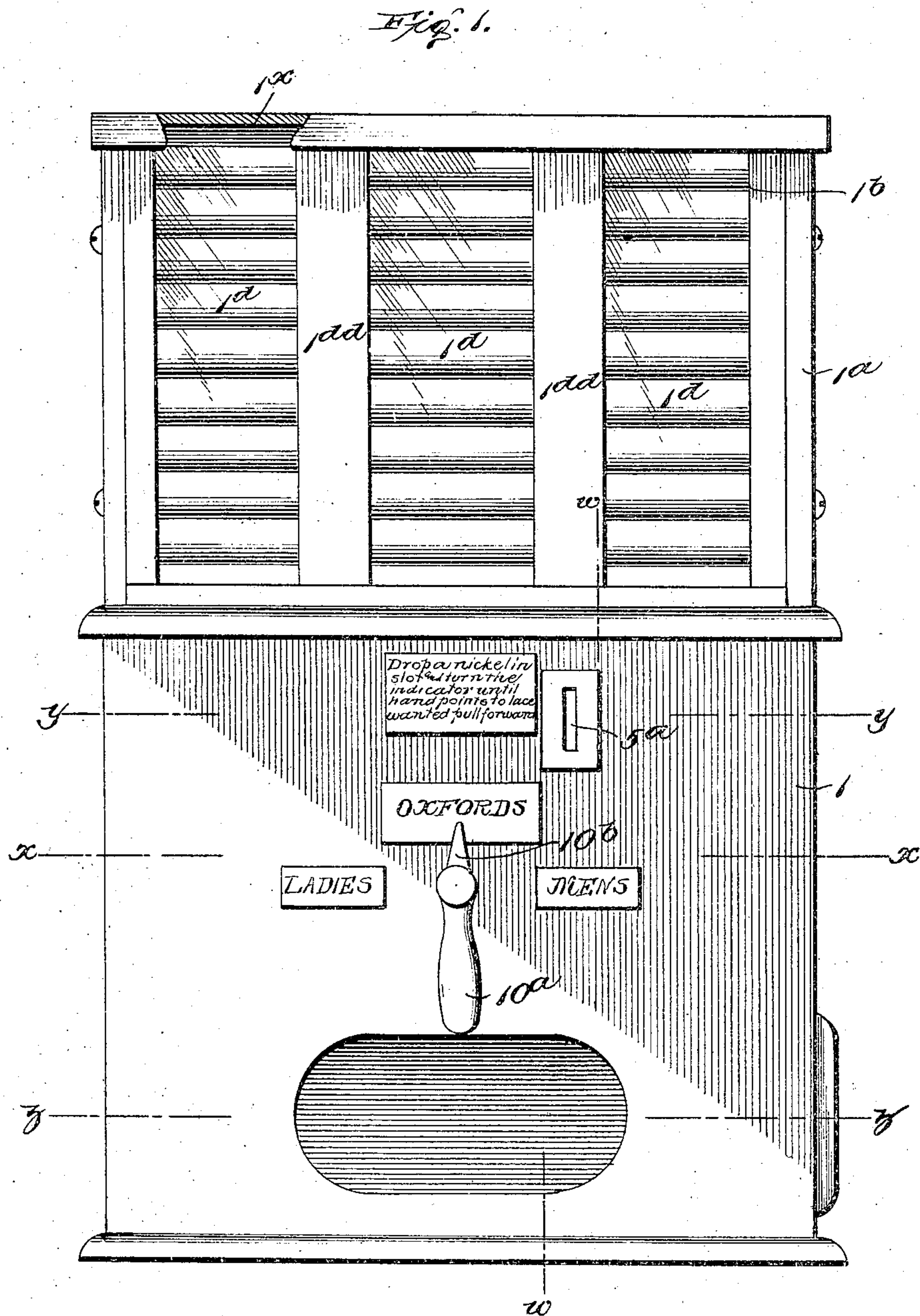
PATENTED AUG. 9, 1904

C. M. MITCHELL.
VENDING MACHINE.

APPLICATION FILED MAY 26, 1903.

NO MODEL.

5 SHEETS—SHEET 1.



WITNESSES:

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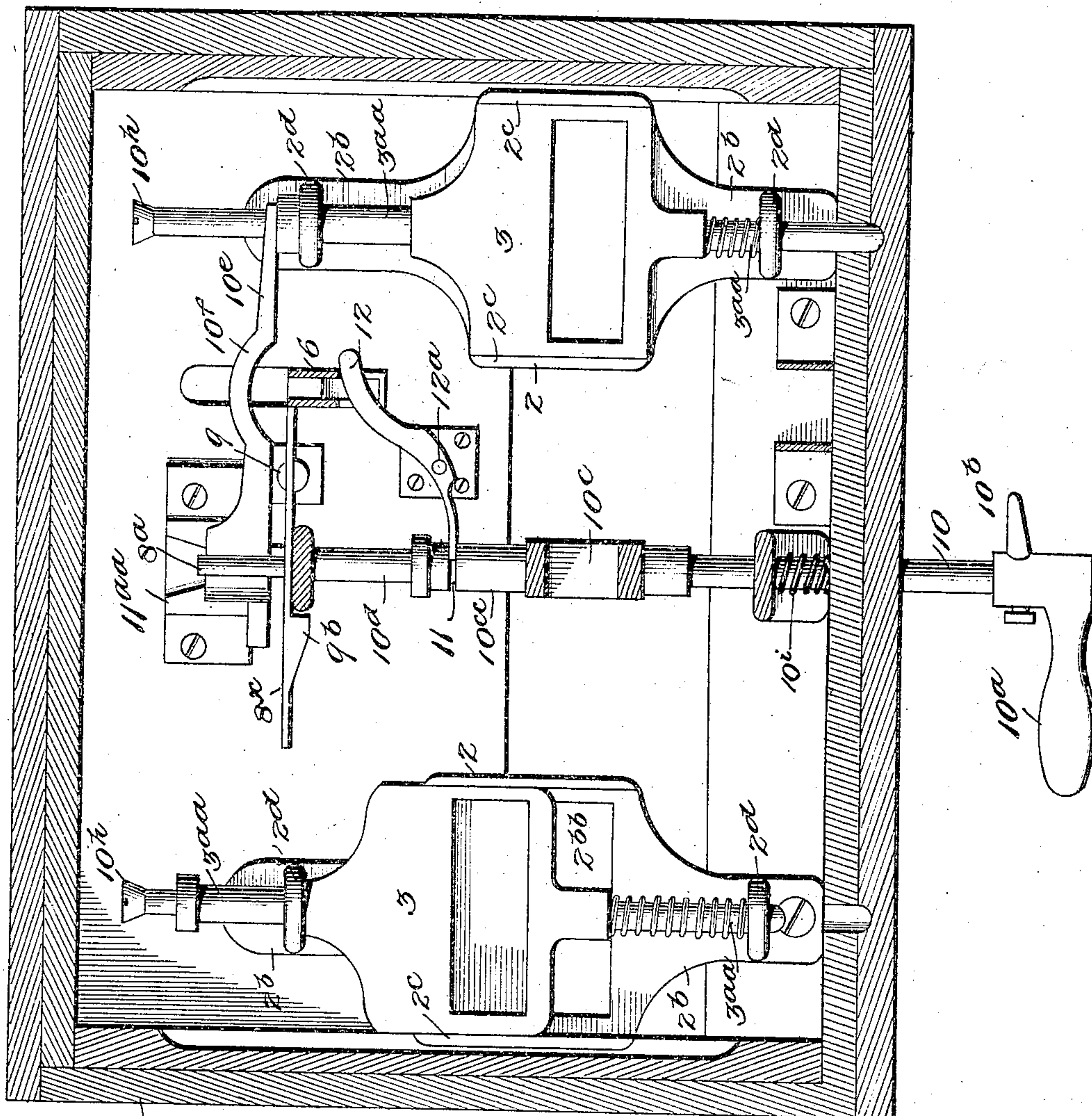
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6 SHEETS—SHEET 2.



21

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5 SHEETS—SHEET 3.

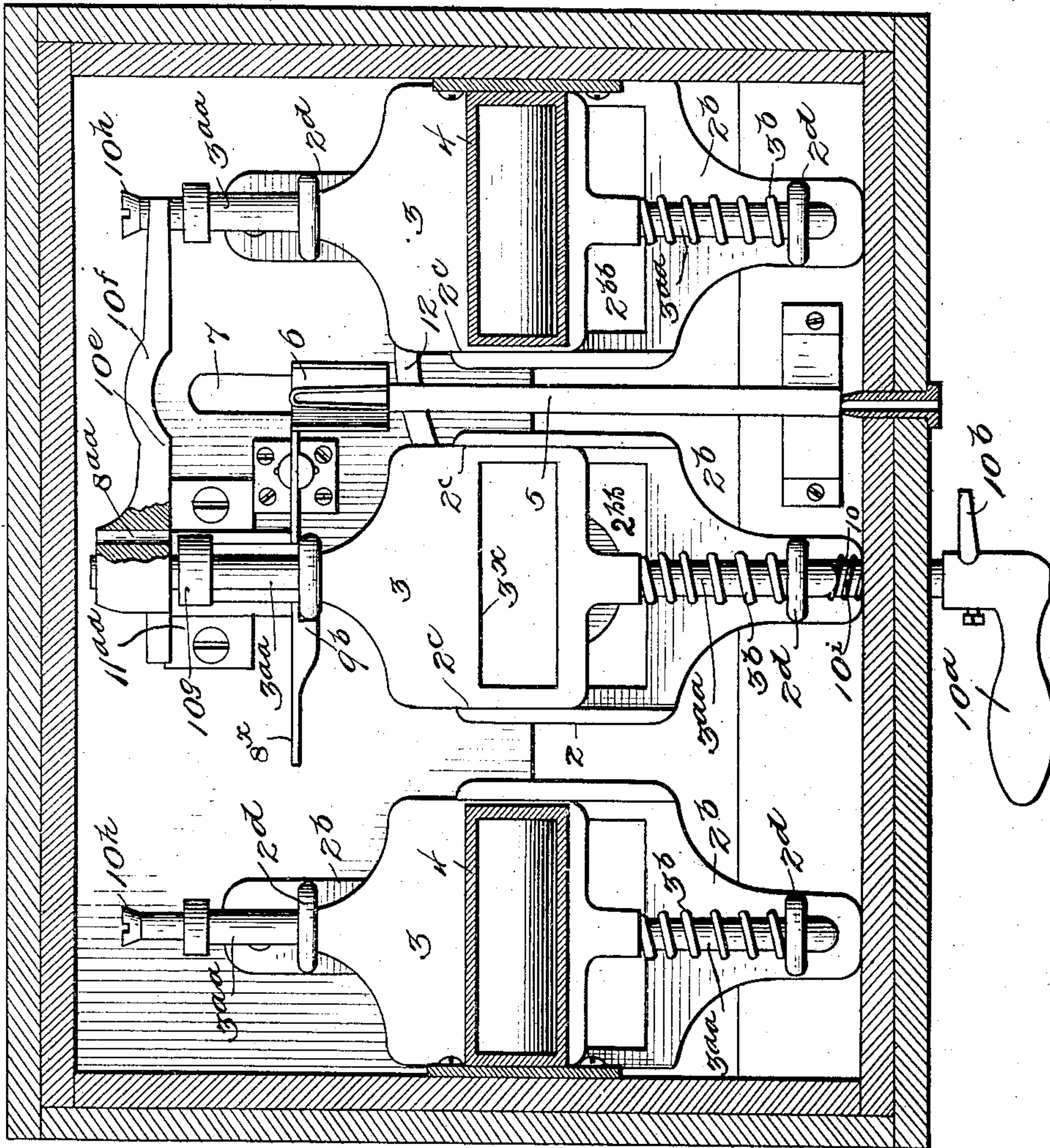


Fig. 3.

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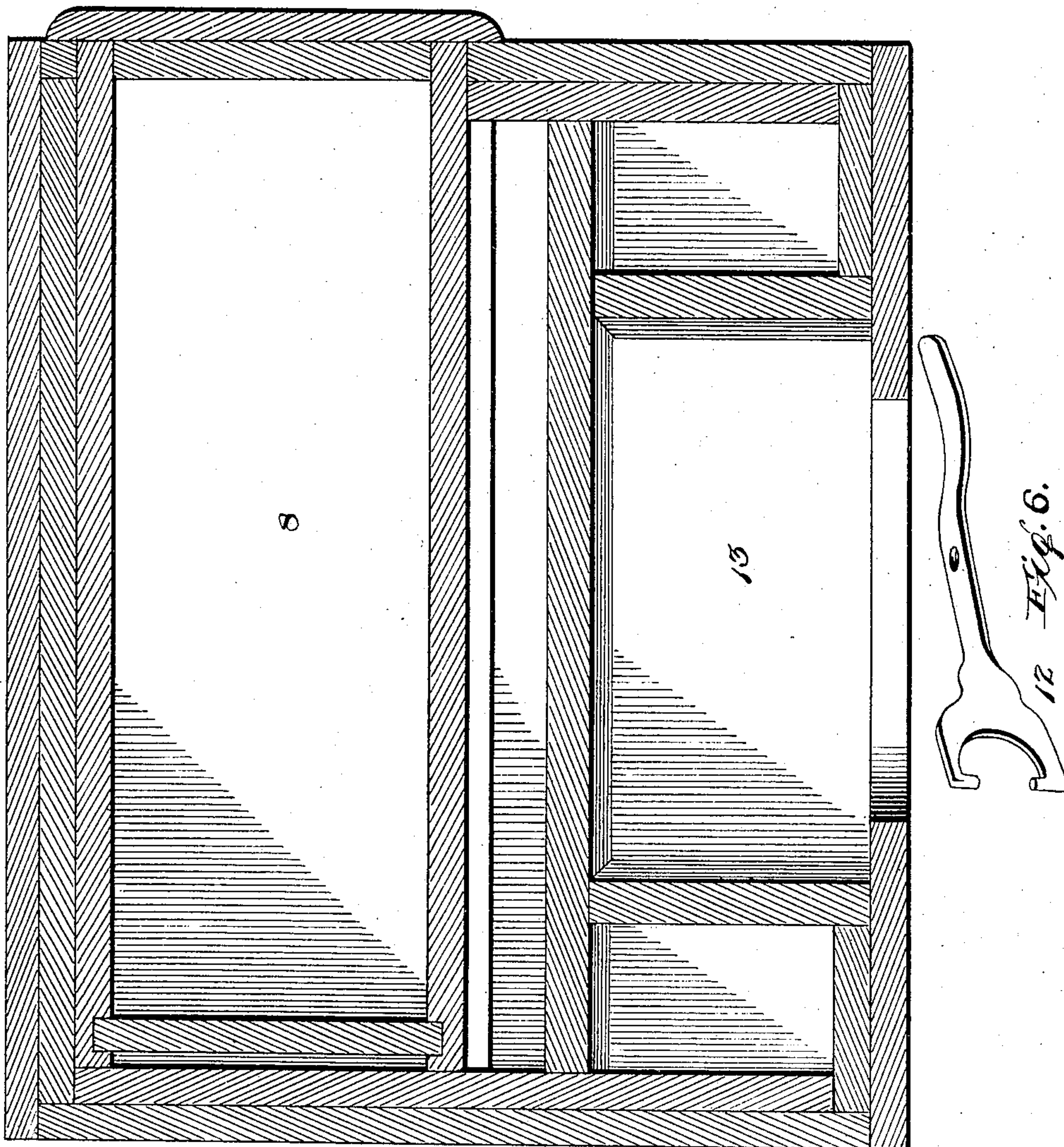


Fig. 4.

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5 SHEETS—SHEET 5.

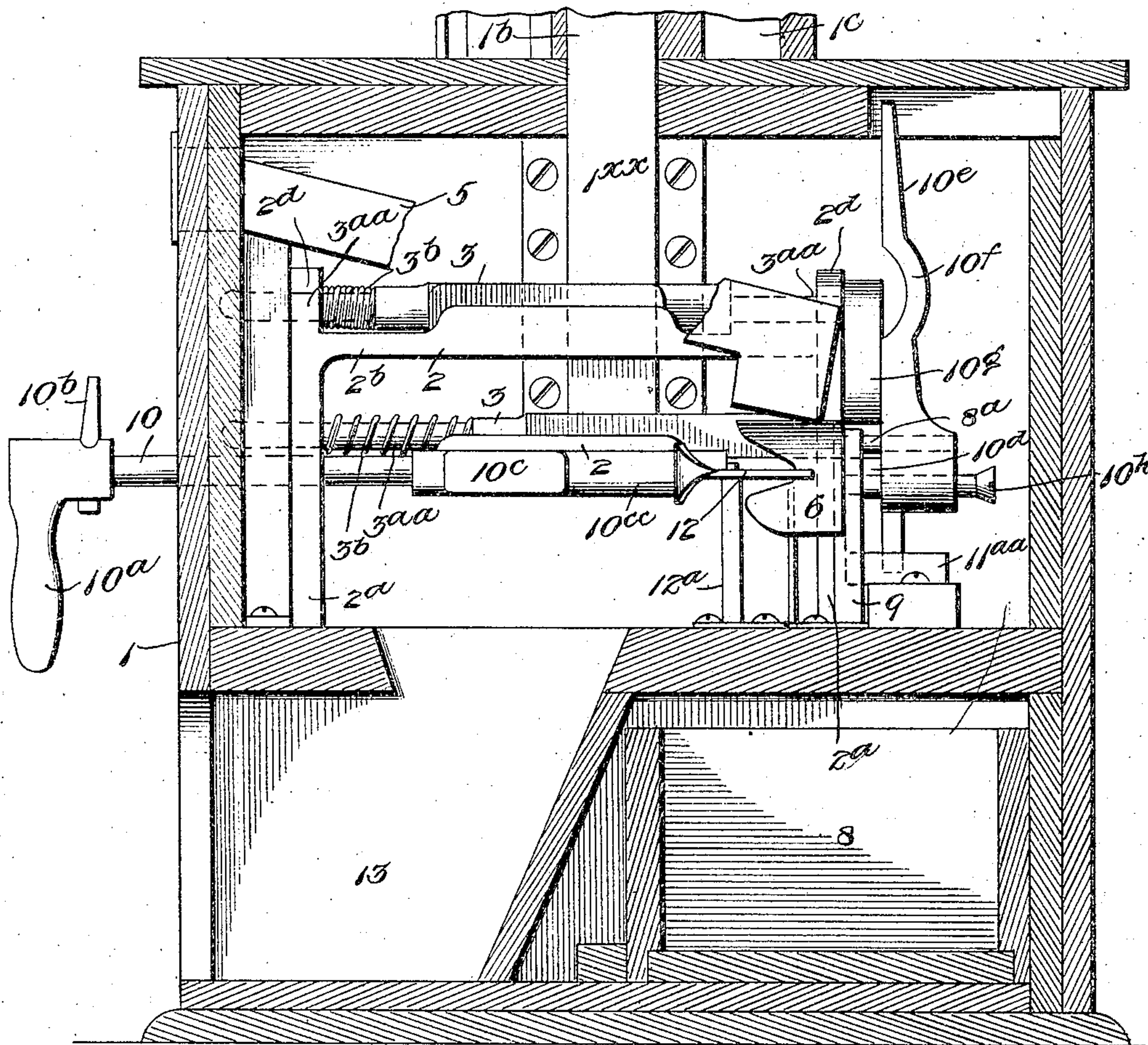


Fig. 5.

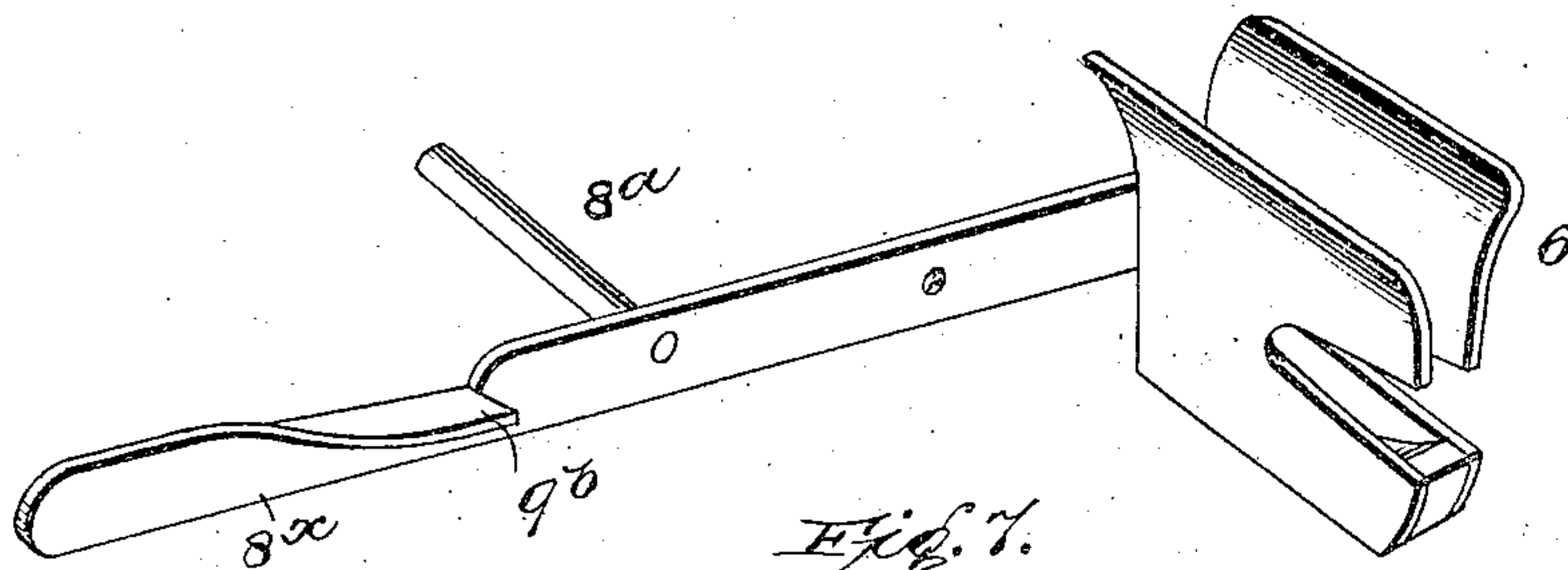


Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES M. MITCHELL, OF PORTSMOUTH, OHIO, ASSIGNOR TO THE
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VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 767,306, dated August 9, 1904.

Original application filed February 5, 1902, Serial No. 92,661. Divided and this application filed May 26, 1903, Serial No. 158,848. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. MITCHELL, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Vending-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 it appertains to make and use the same.

This is a divisional application of the application filed by me February 5, 1902, Serial No. 92,661.

My invention relates to what are termed "vending-machines," particularly that class wherein the mechanism is tripped or released by dropping or passing a coin therein.

It has for its object, among other things, to provide for the release or delivery of articles or packages from a number or plurality of chambers by a common actuating-lever through a common chute, also to effectually involve or lock the mechanism as against unauthorized or surreptitious actuation, and to greatly simplify the construction and operation of the parts, consequently lessening the cost of manufacture thereof.

It consists of the combination and arrangement of parts, substantially as hereinafter more fully disclosed, and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a front view. Fig. 2 is a horizontal section taken on the line *xx* of Fig. 1, with the actuating-lever drawn forward for releasing or delivering a package or article from a lateral package-holder. Fig. 3 is a similar section on the line *yy* of Fig. 1, with the said lever in an inoperative position. Fig. 4 is also a like section on the line *zz* of Fig. 1. Fig. 5 is a vertical section on the line *ww* of Fig. 1, the actuating-lever being drawn forward to release or deliver the package or article from the central package chamber or holder. Fig. 6 is a detail view disclosing more particularly the coin-actuated and lever-re-

leasing contrivance or device. Fig. 7 is a like view showing more especially the coin-dropping slide or lever.

It will be understood that latitude is allowed herein as to details, particularly as relates to the number of package releasing or delivering devices and the number of package-holders, as convenience may suggest without departing from the spirit of my invention and the same still remain intact and be protected.

In carrying out my invention I employ a suitable receptacle or closure 1, preferably as shown, to contain the operative parts, and upon said receptacle I superpose a second or supplemental receptacle 1^a. Said supplemental receptacle is preferably arranged centrally of and fixed to the top of the closure 1 and is thus subdivided into a number or plurality of package receiving or containing compartments or subchambers 1^b, also a storage-compartment 1^c, arranged in rear of the last named. Said compartments or subchambers are all arranged side by side and face the operator and preferably have a common transparent or glass sliding front 1^d to permit the ready viewing of the contents of said compartments and replenishing of the same. Said transparent front or slide may have applied thereto upon its outer side or surface cleats or strips 1^{dd} as an improvised means of concealing the partition in rear of said front or slide and between the subchambers or compartments 1^d from sight. In the top of the receptacle 1 are preferably rectangular or oblong slots or openings 1^x, registering with the compartments or subchambers 1^b, the central slot or opening having, preferably, a corresponding downwardly-extending short tube 1^{xx}, the purpose of which will be presently apparent.

A number or plurality of preferably metallic plates or supports 2 are suitably secured in place, preferably as shown, to the supporting-bars 2^a, with rearwardly and forwardly extending arms 2^b integral with said plates, being secured by lower end flanges and suitable fastenings to the bottom of the receptacle 1. Said plates have in their forward end

portions slots or openings 2^{bb} and also are provided with lateral flanges 2^c, the lateral ones of said plates or supports being preferably in a lower plane than the central one for a purpose presently seen. Slides or carriers 3, also having in their forward ends oblong openings or slots 3^x, are arranged one above each of the plates or supports 2 and guided thereon as against lateral displacement by the flanges 2^c. Said carriers or slides are provided with forwardly and rearwardly extending arms 3^{aa}, preferably cylindric in cross-section, passing through holes in upward extensions 2^d of the supports 2^a and having arranged on the forwardly extensions thereof springs 3^b, whose action is to normally hold the slots or openings 3^x of said carriers or slides out of alinement with the openings or slots 2^b of the supports or plates 2, as when the machine is out of operation.

Directly above and in a line with the openings 2^{bb} of the lateral plates 2 are fixed suitably to the side of the closure 1 chutes or tubes 4, while the chute or tube 1^{xx}, secured to the top of this receptacle, stands directly above and in a line with the opening or slot 2^{bb} of the central plate or support 2. These tubes or chutes are sufficiently elevated from said plates or supports to permit the reception therebetween of the slides or carriers 3.

A coin-receiving tube or trough 5, communicating with a slot or opening 5^a in the front of the receptacle, delivers into a laterally-tilted holder or hopper 6, itself adapted to deliver or discharge into an opening or slot 7 in the top of the coin or money drawer 8, arranged below in that end of said receptacle. Said coin-hopper is pivotally or tiltingly hung or supported in position directly under and at the delivery end of the trough 5, it having, preferably, an integral arm or lever 8^x extending laterally therefrom and pivoted or fulcrumed a short distance from said hopper upon or in a post or support 9, fixed to the receptacle-bottom. Said lever or arm carries a rearwardly-extending pin or projection 8^a, the function of which will appear later. The lever or arm 8^x has near its free end a lateral shoulder or stop 9^b, adapted to engage one edge of one of the bars of the central plate 2 to limit the upward movement of said lever, as presently seen.

A hand-actuated lever or shaft 10 extends through and is partly supported in the receptacle-front and provided outside of said receptacle-front with a suitable handle 10^a and a lateral pointer or finger 10^b, adapted to register with the indicia on said receptacle. Said lever or shaft is also supported in position, as will later appear, and preferably is produced in sections, a handled section being suitably connected at its inner end, preferably to a frame or loop section 10^c. Said loop or frame section has projecting centrally from its upper side a cylindric portion or extension

10^{cc}, in turn having suitably connected thereto a third section 10^d, bearing and sliding in an aperture of the supporting-bar upholding that end of the central plate or support 2. Said cylindric extension 10^{cc} is provided with an annular or circular cam-groove 11, the purpose of which will be presently disclosed. Said shaft or lever section 10^d carries at its extreme rear end an arm or supplemental lever 10^e of the length adapted to enable it to compass or engage either of the lateral slides or carriers 3, as will be more fully understood later, as well as engage the central slide or carrier 3^a. Said arm or supplemental lever 10^e has at a point in alinement with the pin or projection 8^a of the coin-hopper arm 8^x an aperture 8^{aa}, as shown in Fig. 3, which pin and aperture are required to register in order to provide for the actuation of the package releasing or delivering mechanism of one of the package-dropping devices, which will be described farther on. Said arm also preferably has a bend 10^f therein with its convexity or salient portion presented rearwardly. The central slide or carrier 3 has preferably a pendant at its rear end for engagement with the arm or supplemental lever 10^e in effecting the actuation of the central package releasing or delivering mechanism, as presently shown. The lateral movement or throw of the shaft-arm 10^e is limited by suitable stops 10^h, which may be screw-threaded projections screwed into the rear supports of the plate 2. A guide or grooved casting 11^{aa}, suitably secured to the receptacle-bottom, with the groove therein flared at its entrance or rear end, is so arranged below said supplemental arm or lever that when said arm is disposed by suitably manipulating the shaft 10 vertically and a little rearwardly of said guide and then sliding said shaft 10 forwardly said arm will enter at its lower end said grooved guide and its aperture 8^{aa} be thus held in true alinement with the pin or projection 8^a during such forward movement of said shaft. A spring 10ⁱ, suitably applied to the shaft or lever 10, automatically returns it to its normal position after having been actuated.

A coin-releasing slide or lever 12, adapted normally to occupy a position crosswise of the throat of the hopper 6 and suitably fulcrumed upon a post or support 12^a, secured to the receptacle-bottom, is bifurcated at one end and has inward projections or studs upon the free ends of the branches of its bifurcated portion engaging the annular cam-groove 11 of the shaft 10.

A coin or nickel placed in the slot 5^a will upon reaching the delivery end of the tube or trough 5 drop into the hopper 6 and tilt it, so as to move the lever or arm 8^x upwardly, accordingly carrying with it the pin 8^a to a predetermined point or height. The purchaser or operator desiring to obtain a package from the central containing compartment or holder

accordingly turns the shaft or lever 10 to cause its pointer to indicate that fact, in this instance said pointer thus coming opposite the word "Oxfords," placed upon the receptacle-front. He next pulls said shaft or lever forwardly, when the lower end of the arm 10^e slides in the grooved casting or guide 11^{aa}, and the pin or projection 8^a being allowed to enter the aperture 8^{aa} of said arm the last-named will engage the pendant 10^e of the central slide or carrier 3^a, and thus carry it forward. The slot or opening in said carrier will register with the lower end of the corresponding or central package-containing compartment to receive a package therefrom and drop it through the registering slot or opening in the plate below, said package passing downwardly, via the common chute 13, into the bottom chamber of the receptacle 1, whence it is readily accessible to the purchaser or operator through an opening in said receptacle-front. Simultaneously with the forward movement of the shaft or lever 10 the coin-releasing slide or lever 12 will be actuated, so that the coin, temporarily held in the hopper 6, will be released and deposited in the money till or drawer below, the locking pin or projection 8^a thus being free as soon as the shaft or lever 10 is released to automatically fall or turn to its former position, which will intercept any subsequent movement of said shaft 10 by the thus moving of said pin 8 out of alinement or register with said aperture 8^{aa}, and thus prevent the further actuation of the package releasing or delivering mechanism until another nickel or coin has been placed in the slot 5^a. Desiring to obtain a package from either of the lateral compartments, a coin or nickel, as above pointed out, having been placed in the coin-slot, the shaft or lever 10 is accordingly adjusted or turned with its pointer registering with the words "Ladies'" or "Gentlemen's," also inscribed on the receptacle-front, as may be desired. Said shaft or lever is next, as aforesaid, thrown forward, when its arm 10^e will pass under or by the pin 8^a and accordingly be permitted to engage and move forwardly the alining slide or carrier 2 and effect the discharge or delivery of the desired package. Of course it will be understood that a coin has previously been inserted through the slot or opening 5^a to actuate the coin-dropping slide necessary to elevate the pin 8^a above the plane of the arm of said lever or shaft. The release and return of the locking-pin 8^a to its former lowered position will take place upon the lever or shaft 10 reaching the end of its return movement, as recited in connection with the above-named movement of parts.

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

1. In a machine of the character described, the combination of an endwise movable and

rotatable shaft, a slotted support, a slotted carrier arranged to slide upon said support, means directly applied to said shaft, adapted to engage and actuate said carrier through the longitudinal movement of said shaft, and means adapted to lock said shaft against longitudinal movement.

2. In a machine of the character described, the combination of an endwise movable and rotatable shaft having an arm standing at right angles thereto, a slotted carrier adapted to be engaged by said arm, a slotted support for said carrier, means for releasing said shaft, and means for locking said shaft against endwise movement.

3. In a device of the character described, the combination of a slotted support, a slotted slide arranged upon said support and having a pendant at one end, a rotatable and longitudinally-movable shaft having an arm adapted to engage said pendant as said shaft is turned, means to release said shaft or lever, and means to lock said shaft or lever.

4. In a machine of the character described, the combination of slotted supports, slotted carriers arranged to slide upon said supports, a rotatable and longitudinally-movable shaft carrying an arm arranged at right angles thereto, said arm adapted to engage or actuate either of said carriers accordingly as said shaft is actuated, means for releasing said shaft, and means for locking said shaft.

5. In a machine of the character described, the combination of a slotted support, a slotted carrier arranged upon said support, an endwise movable and rotatable shaft carrying an arm arranged at right angles thereto adapted to engage or actuate said carrier, means for locking said lever and its arm against longitudinal movement, and means for releasing said shaft.

6. In a machine of the character described, the combination of an endwise movable and rotatable shaft, a slotted support arranged laterally of said shaft or lever, a slotted carrier arranged upon said support, means carried by said shaft or lever and adapted to engage said carrier, and itself, actuated by actuating said shaft or lever in effecting the movement of said carrier.

7. In a machine of the character described, the combination of an endwise movable and rotatable shaft, carriers for receiving and delivering articles having longitudinal movement, means fixed to, and movable with, said shaft and adapted to actuate any one of each of said carriers, and means adapted to lock said shaft against endwise movement.

8. In a machine of the character described, the combination of an endwise movable and rotatable shaft, carriers for receiving and delivering articles, a single common means fixed to said shaft for actuating each of said carriers, and means adapted to lock said shaft against longitudinal movement.

9. In a machine of the character described, the combination of an endwise movable and rotatable shaft, carriers for receiving and delivering articles, arranged in place laterally
5 of said shaft, an arm fixed to, and movable with, said shaft, adapted to move in an arc intercepting the plane of movement of, and for engagement with said carriers, and means adapted to lock said shaft against longitudinal
10 movement.

10. In a machine of the character described, the combination of an endwise movable and rotatable shaft or lever, a slotted support ar-

ranged laterally of said shaft or lever, a slotted carrier arranged upon said support, and
15 means carried by said shaft or lever and adapted to engage said carrier and itself actuated by the turning of said shaft or lever to effect the movement of said carrier, substantially as
20 set forth.

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

CHARLES M. MITCHELL.

Witnesses:

J. W. BANNON, Jr.,
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