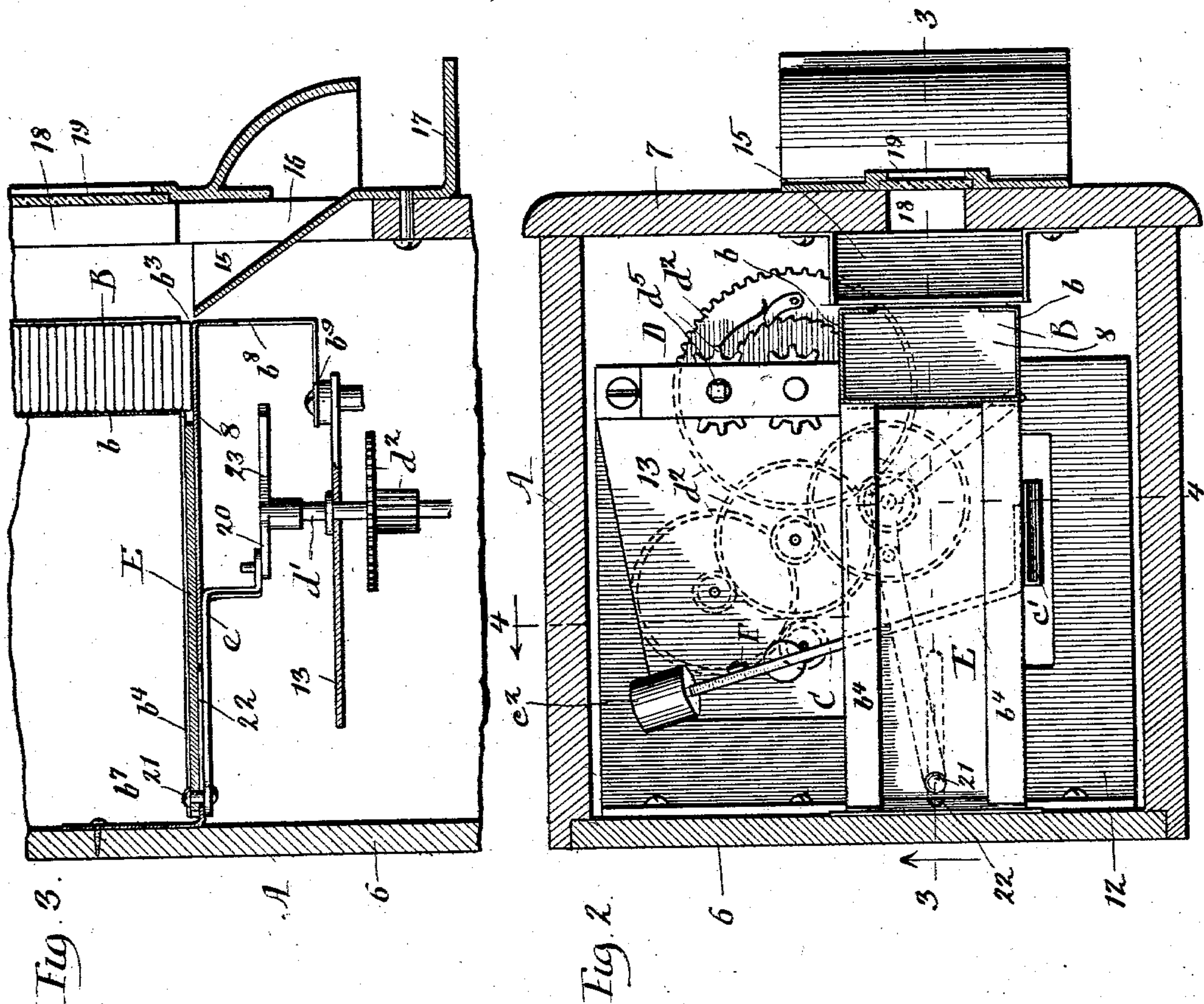


S. MAYER.
AUTOMATIC VENDING MACHINE.

(Application filed Oct. 1, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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Fig. 1

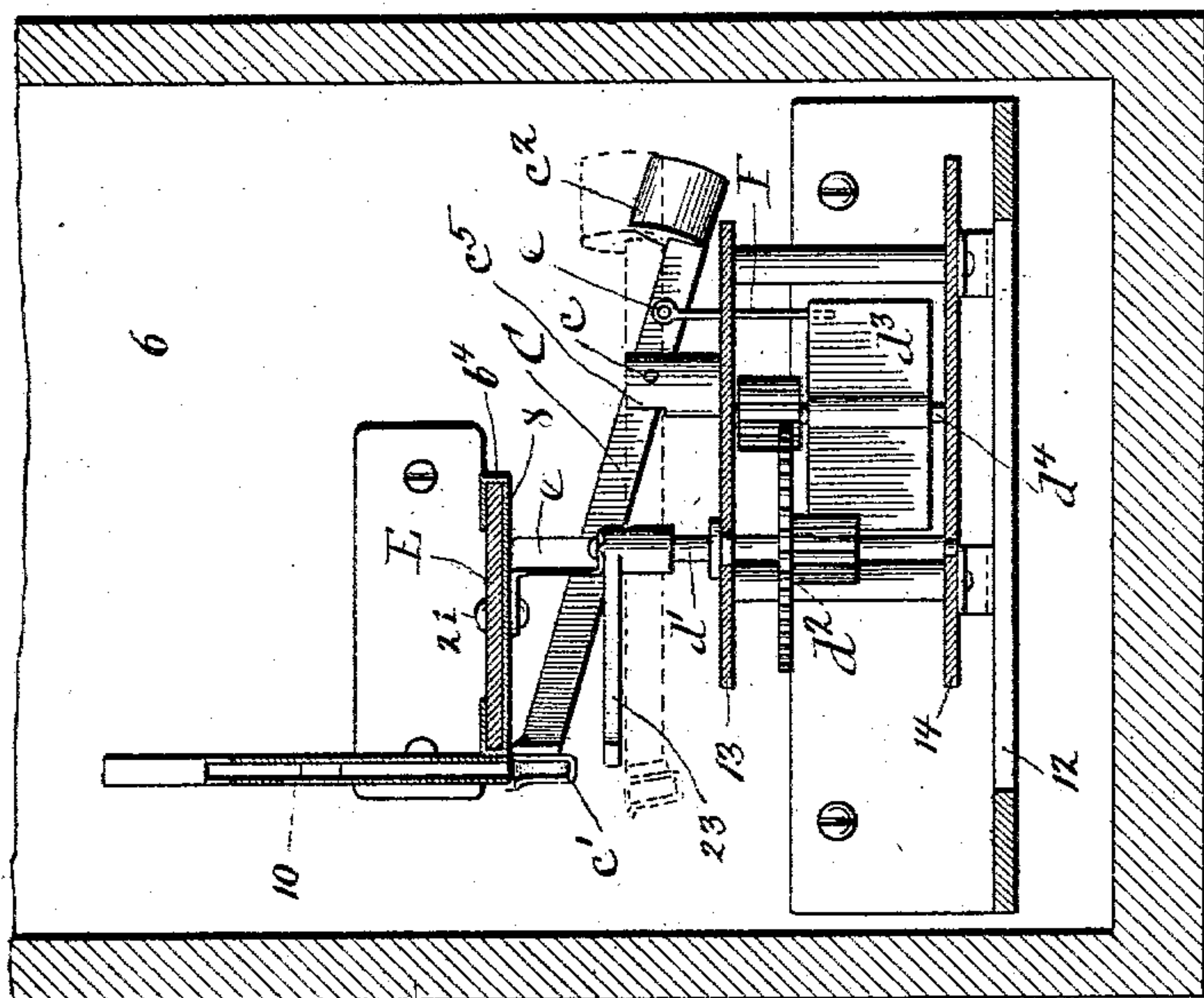
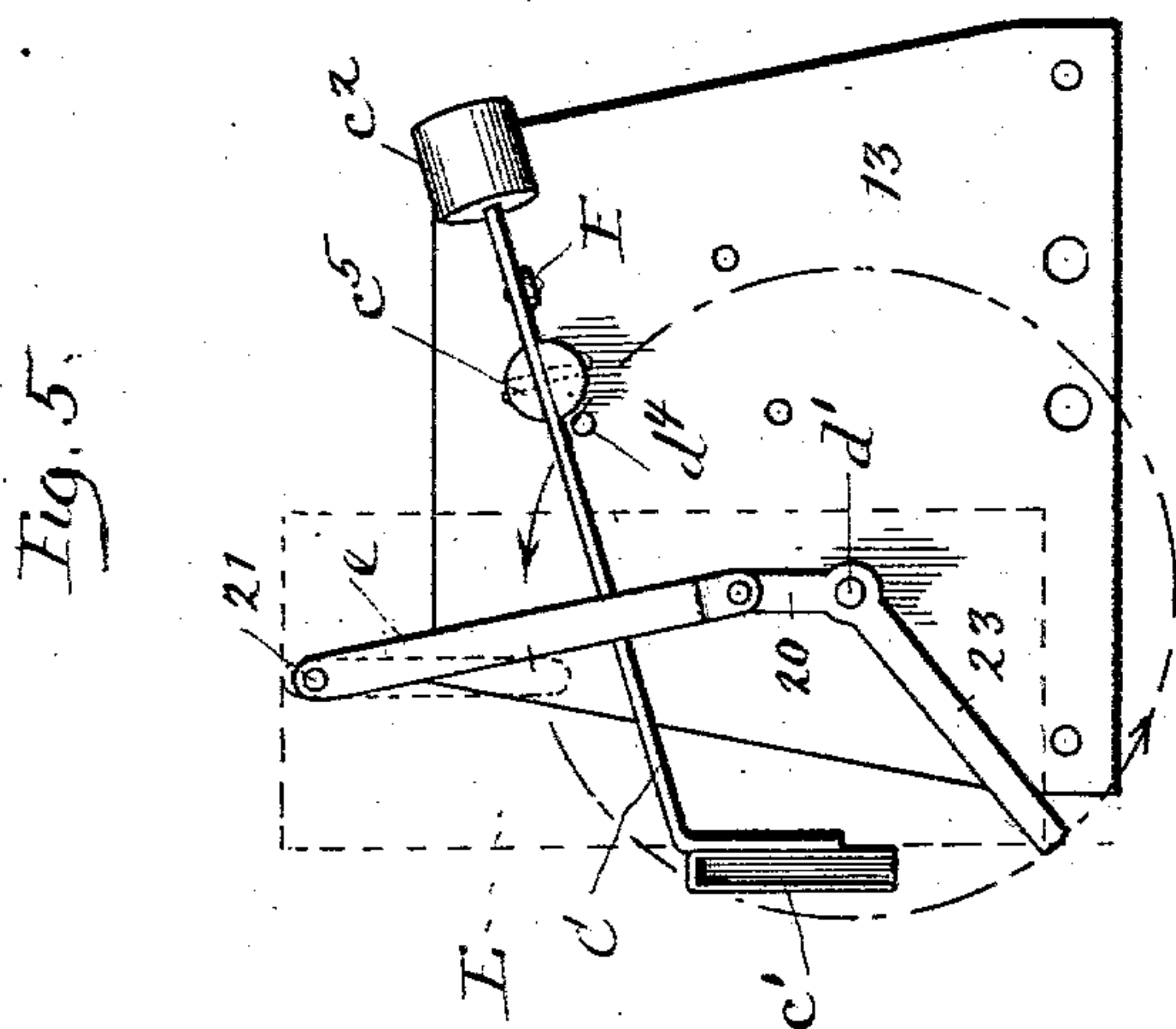
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(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

SIGMUND MAYER, OF CHICAGO, ILLINOIS.

AUTOMATIC VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 704,752, dated July 15, 1902.

Application filed October 1, 1901. Serial No. 77,195. (No model.)

To all whom it may concern:

Be it known that I, SIGMUND MAYER, a citizen of the United States, and a resident of the city of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Automatic Vending-Machines, of which the following is a full, clear, and exact description.

The present invention relates to check or coin controlled machines for vending merchandise, and more particularly to that class of devices wherein a motor is employed for effecting the delivery of the merchandise or the like.

The invention designs to provide an improved machine which is simple in construction, efficient in operation, and in which the coins or checks are positively displaced from the controlling mechanism.

The invention consists in the several novel features hereinafter set forth, and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a view in side elevation (the inclosing case being shown in section) of a machine embodying the preferred form of the invention. Fig. 2 is a view in horizontal section, taken on line 2-2 of Fig. 1. Fig. 3 is a detail view, in vertical section, taken on line 3-3 of Fig. 2, parts being omitted. Fig. 4 is a view in vertical section, taken on line 4-4 of Fig. 2. Fig. 5 is a detail plan view of the coin-controlled lever and the mechanism for displacing the coin from the lever.

A denotes a suitable inclosing case, which comprises a back wall 6, a front wall 7, and top, bottom, and side walls. The case may be of any suitable construction. A compartment B, formed between vertical walls b and provided with a bottom or table 8, serves to contain the articles or merchandise to be dispensed. A coin-receiving slot 9 is conveniently located in the front 7 of the case. A conduit 10 directs the coins deposited through slot 9 to a coin-controlled lever C. A bogus-coin rejector, such as a magnet 11, for removing slugs and improper checks from the conduit is provided, as well understood in the art. A coin of proper size and denomination will gravitate in conduit 10 and onto a lever C. A motor D for ejecting the mer-

chandise is conveniently sustained by a bracket 12, secured to back wall 6 of the case. The motor comprises upper and lower frame-sections 13 and 14, a convolute spring d , a shaft d' , a train of gears d^2 , and a fly or escapement d^3 , secured to a shaft d^4 , and a device d^5 , whereby spring d may be manually wound. The motor may be of any suitable construction, as well understood in the art. The gear-train d^2 imparts revolution to operating-shaft d' and shaft d^4 of the escapement.

The mechanism for successively ejecting or removing the articles or merchandise from compartment B comprises an ejector E, held in manner free to slide upon a rearward extension of table 8 by guides b^4 and arranged to engage the lowermost article in compartment B to eject such article through an opening b^3 of sufficient size to permit but one article to pass therethrough. Table 8 is secured, as at b^7 , to back 6 of the case and to the upper section 13 by extension b^8 , as at b^9 . A guide-chute 15 directs the article through an exit 16 in the front of the case and onto a receiver 17, conveniently arranged within reach of the purchaser. Through an opening 18, closed by a translucent plate 19, the merchandise may be displayed.

The mechanism for automatically imparting movement to the ejector E comprises an arm 20, secured to the upper terminal of operating-shaft d' of the motor, a pitman e , having one end pivotally secured to arm 20 and its other end secured to a pin or stud 21, which is secured to the ejector E and is free to travel in a slot 22, formed in the table 8. Rotation of arm 20 will effect the reciprocation of ejector E to discharge one of the articles of merchandise from compartment B.

The means for controlling the operation of the motor and the delivery of the merchandise comprises a lever C, pivotally sustained, as at c , provided with a pocket or recess c' , positioned normally beneath coin-conduit 10 to receive coins therefrom, and a weight c^2 at the opposite side of the lever, which serves to hold the lever in normal position with pocket c' immediately beneath conduit 10. A brake or stop F is secured to lever D, as at f , and extends downwardly through frame-section 13 and normally into the path of movement of revoluble blades of fly d^3 of the motor,

and said brake controls the movement of the motor. A coin deposited in recess c' of lever C will overbalance weight c^2 and cause the coin-holding side of said lever to be depressed into position seen in dotted lines of Fig. 4, the movement of the lever being restricted in post c^5 in the upper bifurcated terminal whereof the lever is pivotally sustained. A sweep-arm 23, secured to operating-shaft d' of the motor, is arranged to engage the upper projecting portion of coin in recess c' and sweep such coin from the lever to check the further or repeated operation by a single coin or check. Upon the removal of the coin from the lever brake-pin F will descend into the path of travel of fly d^3 and check the further operation of the motor and parts driven thereby. Preferably arm 20 and sweep-arm 23 are integrally formed.

The operation will be as follows: Assuming a coin of proper denomination to have been deposited into receiving-slot 9 and conduit 10 and the parts to be in normal position shown in the drawings, the coin will pass into recess c' of the coin-controlled lever C, depress one end of said lever, lift the weighted end of the lever, and cause the brake-pin F to release the fly c^3 of the motor. Thereupon the motor, under control of fly c^3 , will be free to revolve. Revolution will then be imparted to the gear-train d^3 and operating-shaft d' . Arm 20, revolving with shaft d' , will rotate and reciprocate ejector E, during which shift one of the articles will be discharged from the storage-chamber. The coin-controlled lever will hold the deposited coin so a portion of the coin will be in the path of travel of sweep-arm 23 and until sweep-arm 23, revolving with arm 20 and shaft d' , will engage the projection portion of the coin in recess c' and remove the coin therefrom, whereupon the lever will be restored to normal position by weight c^2 and brake-pin F will descend into the path of fly d^3 and check the further revolution of the motor. The parts will then be in readiness for succeeding operation. Thus it will be seen that the coin will be positively removed from the coin-shifted lever.

An objection to many devices heretofore employed in which the delivery of the merchandise was effected automatically as distinguished from those which were manually operated was that if a coin or improper token became caught in the releasing-lever or other mechanism for controlling the operation of the motor the motor would continue to oper-

ate and effect the discharge of all the merchandise or until the coin was removed from the lever or controlling mechanism. Manifestly that objection is entirely overcome by the present invention, because the coin is positively swept from the lever, and, furthermore, if a coin should become caught or remain on the lever sweep-arm 23 would abut against the coin and check the further operation of the motor until the coin is removed. Such advantage is an important one, because repeated operation of the delivery mechanism by a single coin is effectually guarded against. Furthermore, if attempt is made to operate the machine by a coin having a string or wire attached thereto for the purpose of withdrawing the coin attempt at repeated operation would fail, because the lever will be restored to normal position upon removal of the coin from the recess and the coin could not be replaced into the recess from below.

Obviously the details of construction may be varied by the skilled mechanic without departing from the spirit of the invention.

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

1. In a vending-machine, the combination with mechanism for delivering articles to be dispensed, and a motor for imparting movement to said mechanism and for effecting the delivery of said articles, of coin-controlled mechanism for controlling the operation of said motor, said mechanism comprising a coin-shifted lever, and means whereby the coin will be held, and a revoluble arm connected directly with and shifted by the motor, and positioned to sweep over and engage a coin on said lever to remove said coin from said lever when said arm is shifted by said motor.

2. In a vending-machine, the combination with mechanism for delivering the articles to be dispensed, said mechanism comprising an ejector, and a motor, of an arm shifted by said motor, a pitman connecting said ejector and said arm, a pivotally-sustained lever, provided with a pocket for holding a coin, an arm connected directly with and shifted by the motor, and positioned to sweep the coin from said pocket, a motor-brake operated by said lever, and an operating-shaft whereto both of said arms are directly secured.

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Witnesses:

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