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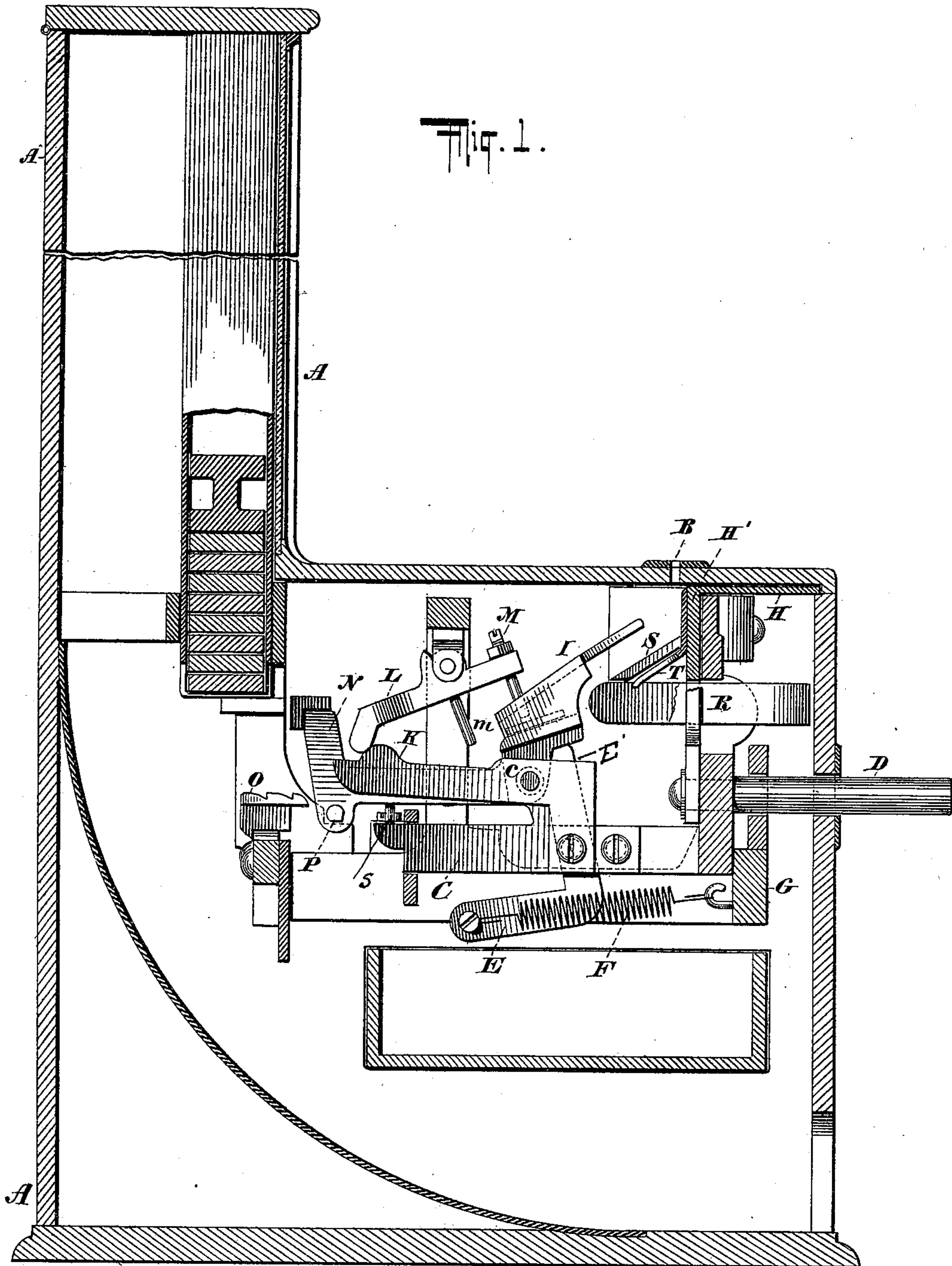
Patented June 27, 1899.

E. H. COOK.
VENDING APPARATUS.

(Application filed Mar. 10, 1898.)

(No Model.)

3 Sheets—Sheet 1.



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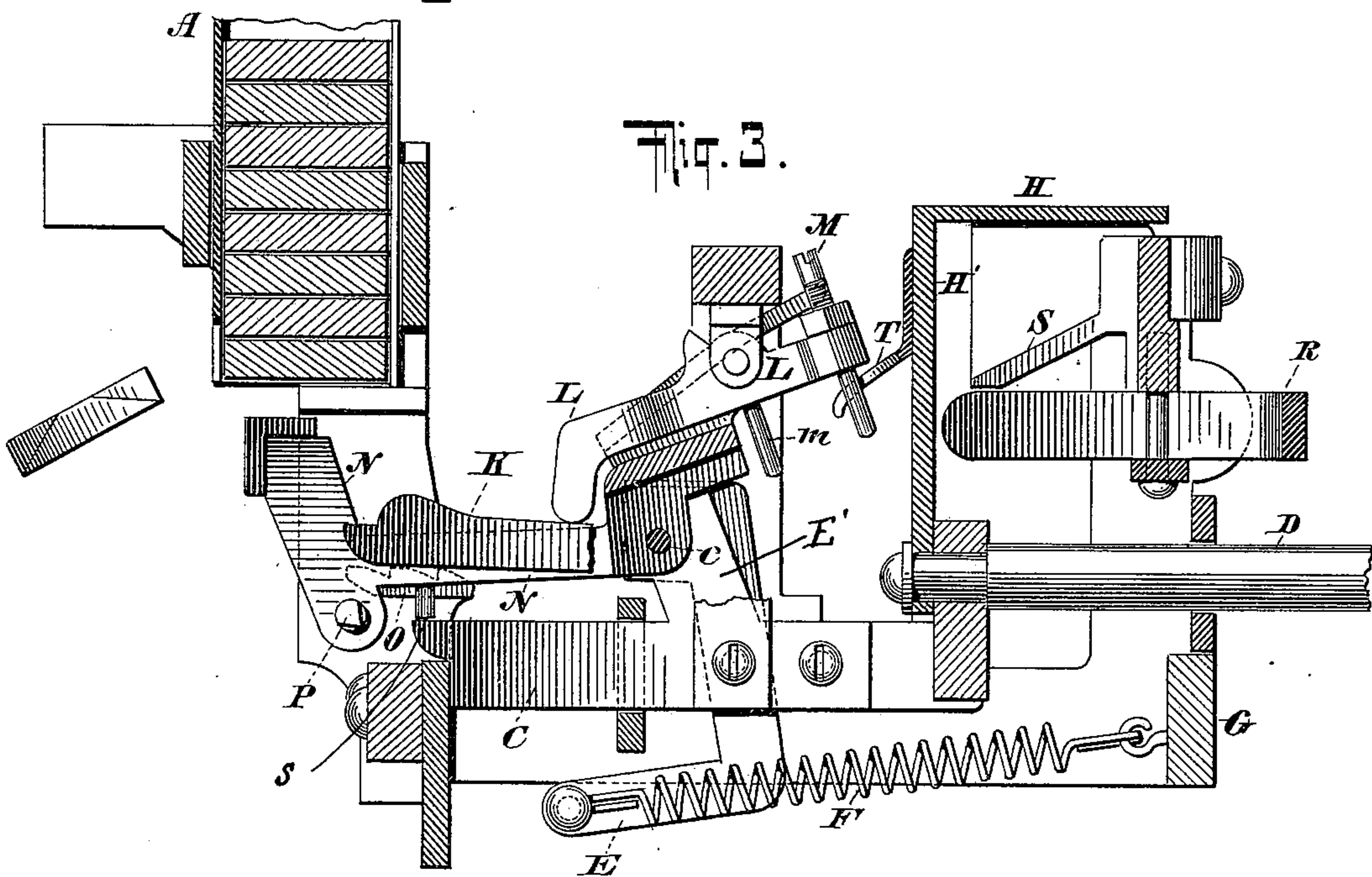
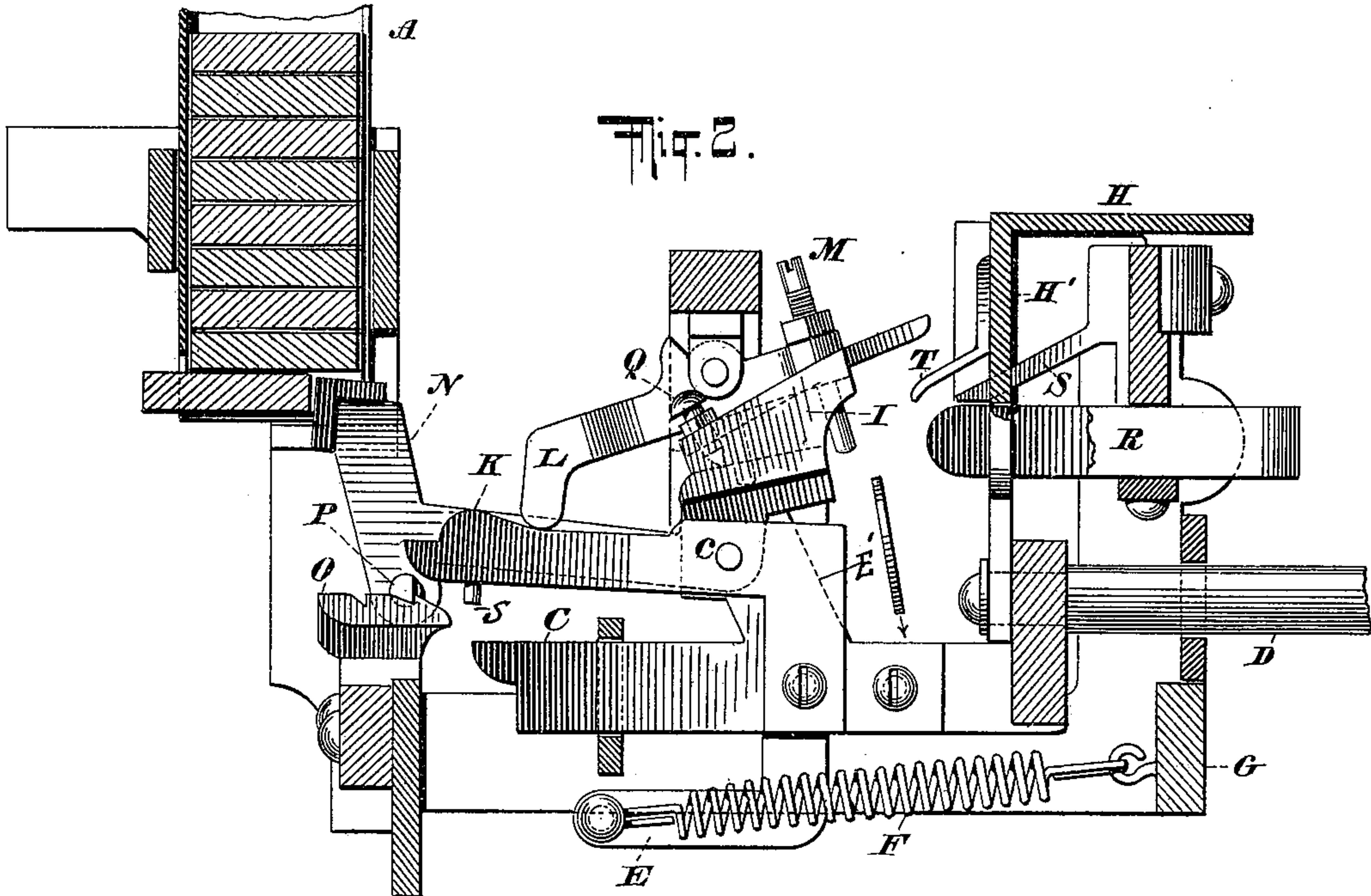
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3 Sheets—Sheet 2.



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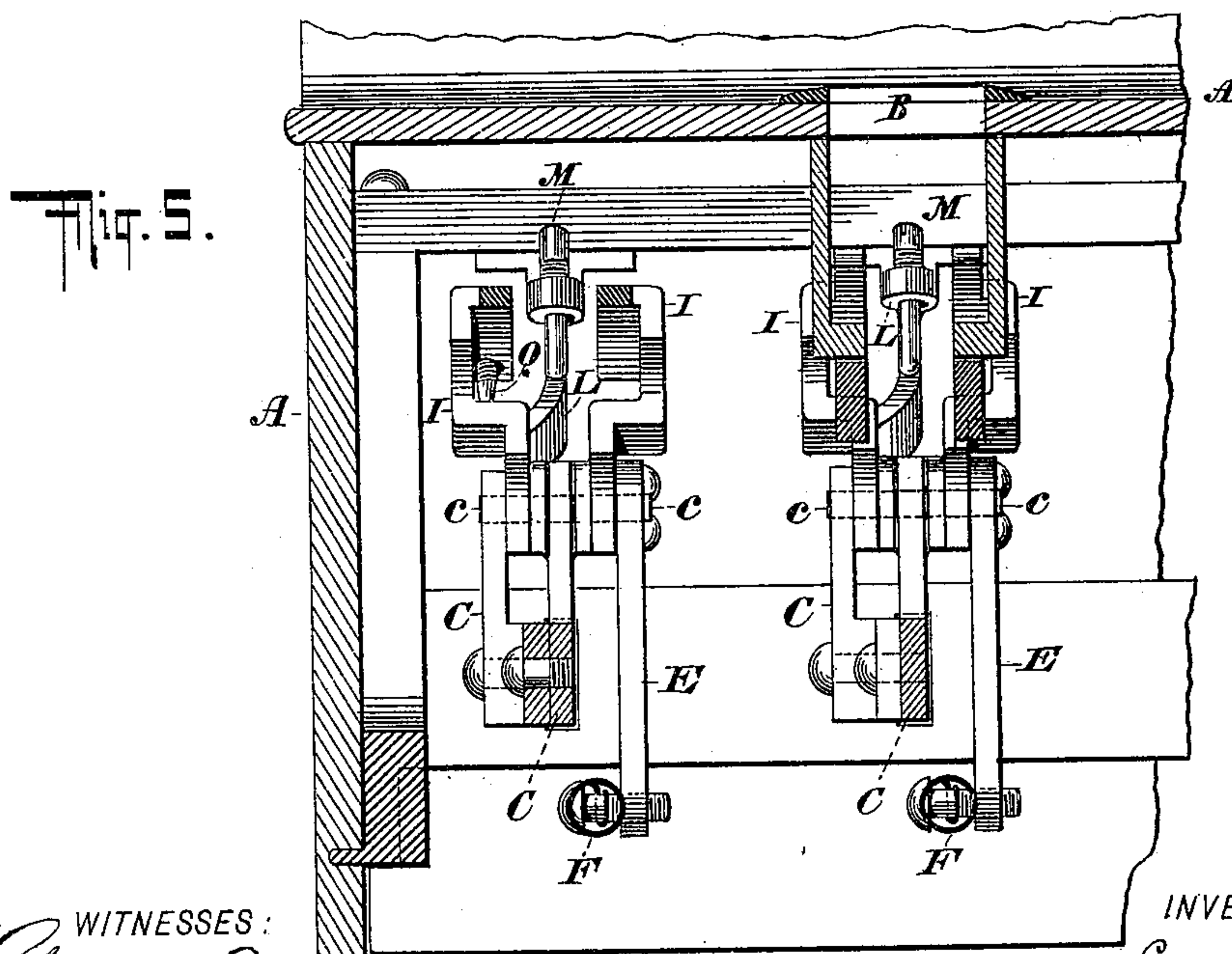
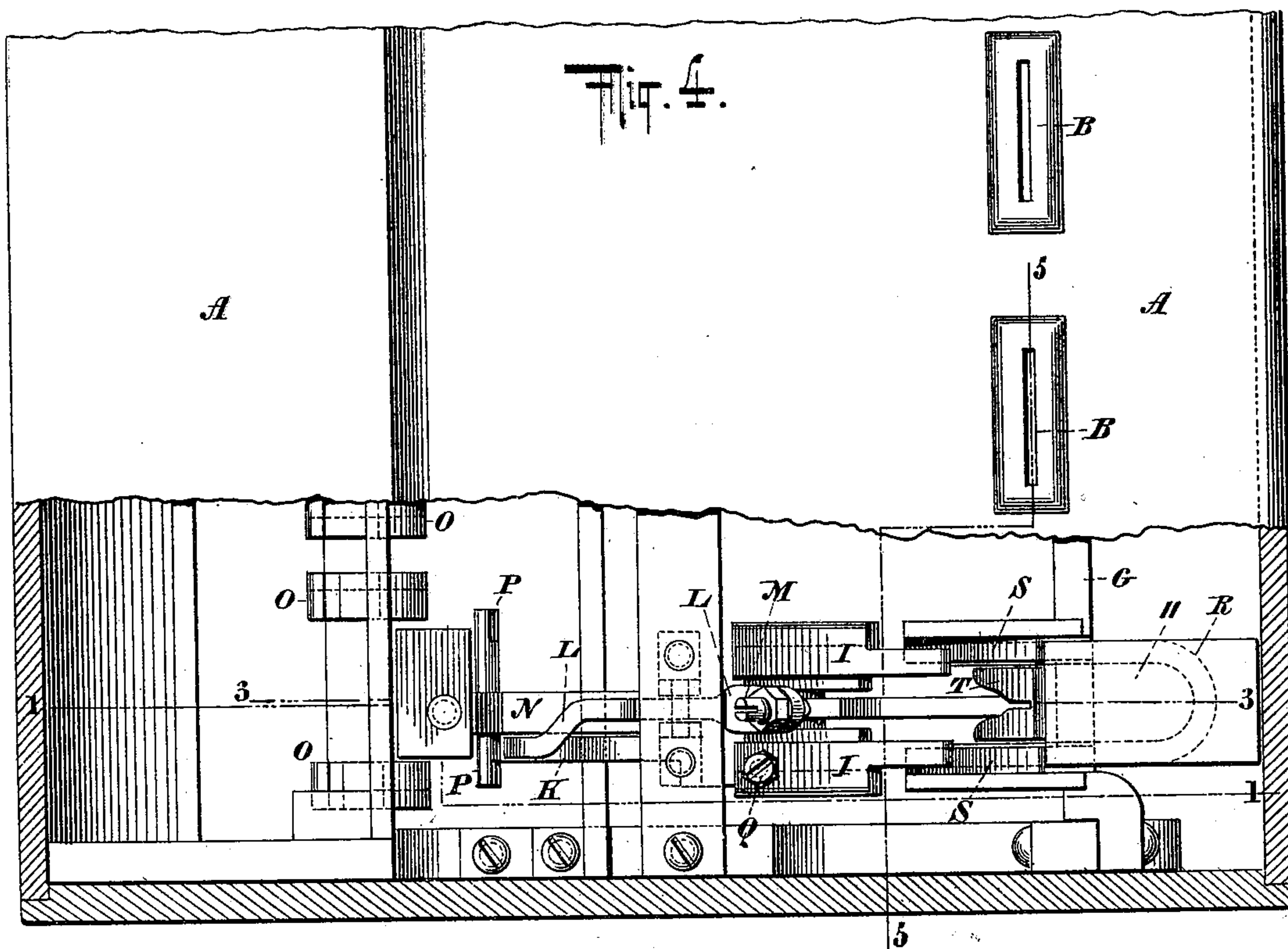
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(Application filed Mar. 10, 1898.)

(No Medal.)

3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

EDGAR H. COOK, OF NEW YORK, N. Y.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 627,685, dated June 27, 1899.

Application filed March 10, 1898. Serial No. 673,322. (No model.)

To all whom it may concern:

Be it known that I, EDGAR H. COOK, of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Vending Apparatus, of which the following is such a full, clear, and exact description as will enable others skilled in the art to make and use the same when taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical section, on the line 1 1 of Fig. 4, through the box or case of the mechanism and the frame of the machine, giving a side view of the mechanism and a vertical sectional view of the goods within the chute, showing the parts of the mechanism in their normal position. Fig. 2 is a like view of the mechanism, showing the movable carriage pushed part way in. Fig. 3 is a like view of the mechanism on the line 3 3 of Fig. 4, showing the movable carriage pushed in to the extreme limit. In this view the gage-screw for the coin-carrier is omitted. Fig. 4 is a top view of the apparatus, showing the coin-openings, with the case partly cut away to show the mechanism within; and Fig. 5 is a vertical section on the line 5 5 of Fig. 4.

This my invention relates to coin-actuated vending apparatus in which the articles are vended or ejected by means of a reciprocating carriage; and it consists in the operation of the delivery-lever carried on the reciprocating carriage by the introduction of a predetermined coin and the various combinations and modifications hereinafter described and claimed.

In the drawings, Fig. 1, A represents the frame or case of the machine, which may be made in any of the usual ways of making vending-machines, having the coin slot or slots at B of a proper size to receive the predetermined coin.

C is the reciprocating carriage and has rigidly attached to it the several parts which I will now proceed to describe.

The push-rod D projects through the frame of the machine and by it the carriage is pushed inward. The spring-retracted lever E is also rigidly attached to the reciprocating carriage and has attached at its end the spring F,

which at its other end is attached to the frame G of the mechanism and by which the carriage is returned to its normal position when the force on the push-rod is removed. The slot-closer H is a piece of metal carried on the upright part H' and slides just beneath the slot or slots, so as to close the same when the reciprocating carriage is moved inward. There is also the cam K, attached to the reciprocating carriage, which operates the lever L, carrying the adjustable pin M.

Pivoted to the reciprocating carriage C at the pivot c is the delivery-lever N. The delivery-lever N is provided at one end with an arm, which when the lever is in one position passes beneath the lowest package in the stack of packages, but when the delivery-lever is in another position—the position given it by the introduction of the proper coin to the coin-carrier I—impinges against the lowest package in the stack of packages and delivers the same. Attached to the delivery-lever N at one end is the pin P, having a beveled side and a straight side, and which pin takes into the ratchet O when the end of the delivery-lever is raised to come in contact with the goods to be delivered. At the other end of the delivery-lever N is arranged the coin-carrier I, rigidly attached thereto and forming part thereof. The coin-carrier I is made of such dimensions as to receive and hold the predetermined coin, and it has at the same time a longitudinal cut or opening through the center, so that the adjustable coin-impinging pin M may pass through the coin-carrier I without coming in contact therewith when no coin is present therein. This coin-carrier I is also provided with an adjustable screw Q, having a tapered end, whereby the exact size of the passage through the coin-carrier may be adjusted, so that a thin or small coin will run through the coin-carrier and the predetermined or thicker coin will be held therein.

The normal position of the reciprocating carriage is such that the coin-carrier I is in line with the coin-guide S, so that a coin introduced at the coin-slot and passing over the coin-guide S will fall into the coin-carrier I. There is provided also in the path of the coin as it

passes over the coin-guide S to the coin-carrier I a fixed magnet R, against the ends of which coins introduced at the coin-slot B come in contact as they pass over the coin-guide S.

5 By this magnet all slugs of magnetic metal are held and prevented from going into the coin-carrier. The ends of the magnet, it will be observed, are rounded, so that when the reciprocating carriage is pushed inward the
10 magnetic slug held on the magnet will be pushed into a vertical position and then pushed from contact with the magnet by the upright part II' of the carriage which supports the slot-closer H and passes between
15 the two arms of the magnet. Attached to this upright part II', on the front side thereof, is the claw-like piece T, which, as shown in Fig. 1, when the parts are in their normal position, is below the line of the coin-guide S.
20 This claw-like piece catches any coin that may be introduced attached to a thread and prevents the drawing out of the coin by the attached thread.

Pivoted on the fixed frame of the mechanism is the lever L, which at one end is weighted, so as to cause it to come in contact with the cam K, and at the other end carries the adjustable coin-impinging pin M, and is also provided with a secondary pin *m*. The pin M is
30 so adjusted that when the reciprocating carriage is pushed inward, having in the coin-carrier I a predetermined coin, the cam K as the carriage moves inward will turn the lever L and force the end of the pin M against the
35 top of the coin in the coin-carrier I, thereby turning the delivery-lever N on its pivot *c* and raising the pin P upon the ratchet O, the upper end of the delivery-lever being at the same time brought in line with the under
40 package of the stack of packages, and as the ratchet prevents the reciprocating carriage from being withdrawn the lowest package of the stack of packages will be delivered by pushing the carriage in to the farthest position, as shown in Fig. 3, when the pin P drops
45 off the end of the ratchet O. The coin having been forced out of the coin-carrier by the adjustable pin M, the reciprocating carriage is returned to its normal position by the operation of the spring F, ready for another trip.

It will be observed that the lever E, to which the retracting-spring F is attached, is formed or provided with an arm E', which extends upwardly and forwardly, with its upper end always engaging or pressing against the under side of the coin-carrier I, and thus
55 whenever the said coin-carrier is tilted downward by the action of cam K upon lever L the arm E is depressed or carried forward against the tension of said spring F. As soon as the carriage is pushed far enough inward to carry the coin-carrier beyond the coin-impinging device M the said carrier is immediately restored to its former elevated position,
60 while at the same time the delivery-arm of the delivery-lever is lowered in an obvious

manner by the turning of said lever upon its pivot *c*. The further retractile power of the spring then acts to return the carriage C, together with the parts mounted upon or supported thereby. It will thus be seen that the function of lever L and pin M is to cause an impingement of the latter upon the top of the coin sufficient to move or eject it from the coin-carrier, while at the same time the
75 said carrier is quickly lowered to a limited extent to assist in the discharge of the coin into the receptacle below. Instantly the pin M passes beyond the carrier, as shown in Fig. 2, the return of the carrier and lever L
80 to their former positions takes place. The tendency of the spring F therefore is to elevate the coin-carrier and to depress the delivery-arm, which, however, is prevented from being lowered too far by means of stop-pin *s*
85 engaging the upper edge of the carriage.

Should an iron or other magnetic slug be introduced into the slot B, it would be held by the magnet until brushed off by the part II', as already described. If, however, a paste-
90 board slug of proper size were introduced, it would find its way to the coin-carrier I, ready to operate the machine; but as the cam K turns the lever L the pin M presses down on the coin or slug in the coin-carrier with such
95 force that a pasteboard or lead dummy would be bent and thrown out of the carrier before the pin P had reached the ratchet O. Thus the delivery-lever N would not be brought in contact with the lowest package.
100

Coins attached to a fine thread have been inserted in coin-actuated vending-machines and after operating the machine withdrawn therefrom by means of the thread attached
105 or replaced in the coin-carrier, so as to operate the machine a second time, to prevent which the claw-like piece T is attached to the upright part II' of the reciprocating carriage, so as to prevent the withdrawal of the coin by the thread, as the thread would come be-
110 tween the claws of the piece T.

The lever L is provided with a secondary pin *m* to remove from the coin-carrier any bent or broken parts of slugs or dummies which may be left therein by the adjustable
115 pin M. Thus the clearing of the coin-carrier is doubly guaranteed. The end of this secondary pin *m* extends far enough down to pass through the coin-carrier almost in direct contact with the bottom thereof, and the
120 entrance and passage of the pin take place simultaneously with the ejection of the coin by pin M. It will thus be seen that the secondary pin *m* has no part in the removal of the coin from the carrier, but is simply for
125 the purpose of following after the coin to clear the carrier of any possible obstruction to succeeding coins.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a vending-machine, of a reciprocating carriage supporting a piv-

oted lever having at one end a delivery-arm and at the other end a coin-carrier, and a separate movable device for depressing the carrier to eject a predetermined coin and to elevate the arm, substantially as described.

2. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, and a separate movable device for depressing the carrier to eject a predetermined coin and to elevate the arm, substantially as described.

3. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, and a movable device operated from the carriage for depressing the carrier and elevating the arm and ejecting a predetermined coin from said carrier, substantially as described.

4. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a movable device for depressing the carrier and elevating the delivery-arm, and a cam on the carriage for operating said movable device, substantially as described.

5. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a pivoted weighted lever having a pin for impinging upon a coin to depress the carrier and to elevate the arm, and a cam for elevating the weighted end of said lever on the inward movement of the carriage, substantially as described.

6. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier open at the top, means tending to elevate the carrier and to depress the arm, a pivoted weighted lever having a pin for impinging upon a coin to depress the carrier and to elevate the arm, and also a follower-pin passing through said carrier, and means for elevating the weighted end of said lever on the inward movement of the carriage, substantially as described.

7. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a pivoted weighted lever, an adjustable pin carried by the latter for impinging upon a coin in the carrier, and means for lifting the weighted end of said lever on the

inward movement of the carriage, substantially as described.

8. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, means for regulating the size of the passage in the carrier, and a movable device for depressing the carrier and elevating the arm, and ejecting a predetermined coin from said carrier, substantially as described.

9. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, an adjustable screw having a tapered end for regulating the size of the passage in the carrier, and a movable device for depressing the carrier to eject a coin and to elevate the arm, substantially as described.

10. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, a pivoted lever with one arm thereof engaging the under side of the carrier, a retracting-spring for the carriage acting on the other arm of said lever, to elevate the carrier and to depress the arm, and a movable device for depressing the carrier to eject a coin and to elevate the said arm, substantially as described.

11. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a separate movable device for depressing the carrier to eject a coin and to elevate the arm, a coin-guide, and a magnet projecting into the path of the coin to the carrier, substantially as described.

12. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a separate movable device for depressing the carrier to eject a coin and to elevate the arm, a coin-guide, a magnet projecting into the path of the coin to the carrier, and means for stripping said magnet of any attracted object, substantially as described.

13. The combination in a vending-machine, of a reciprocating carriage supporting a pivoted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a separate movable device for depressing the carrier to eject a coin and to elevate the arm, a coin-guide, a magnet projecting into the path of the coin to the carrier, and a slot-closer having a support passing between the arms of the magnet to strip the

latter of any attracted object, substantially as described.

14. The combination in a vending-machine, of a reciprocating carriage supporting a piv-
5 oted lever having at one end a delivery-arm and at the other end a coin-carrier, means tending to elevate the carrier and to depress the arm, a separate movable device for de-

pressing the carrier to eject a coin and to ele-
vate the arm, and a slot closer moving with the carriage, substantially as described.

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Witnesses:

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