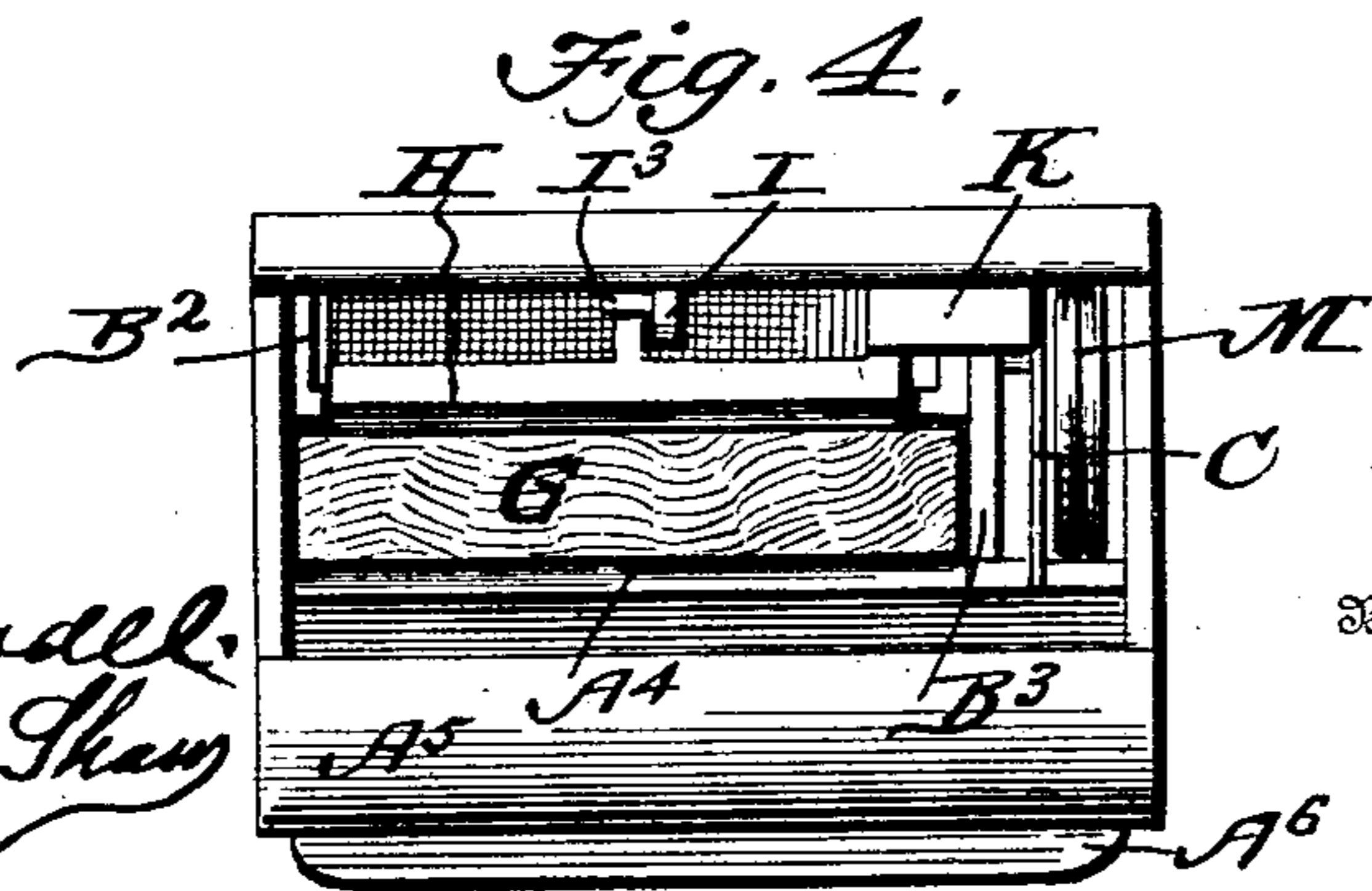
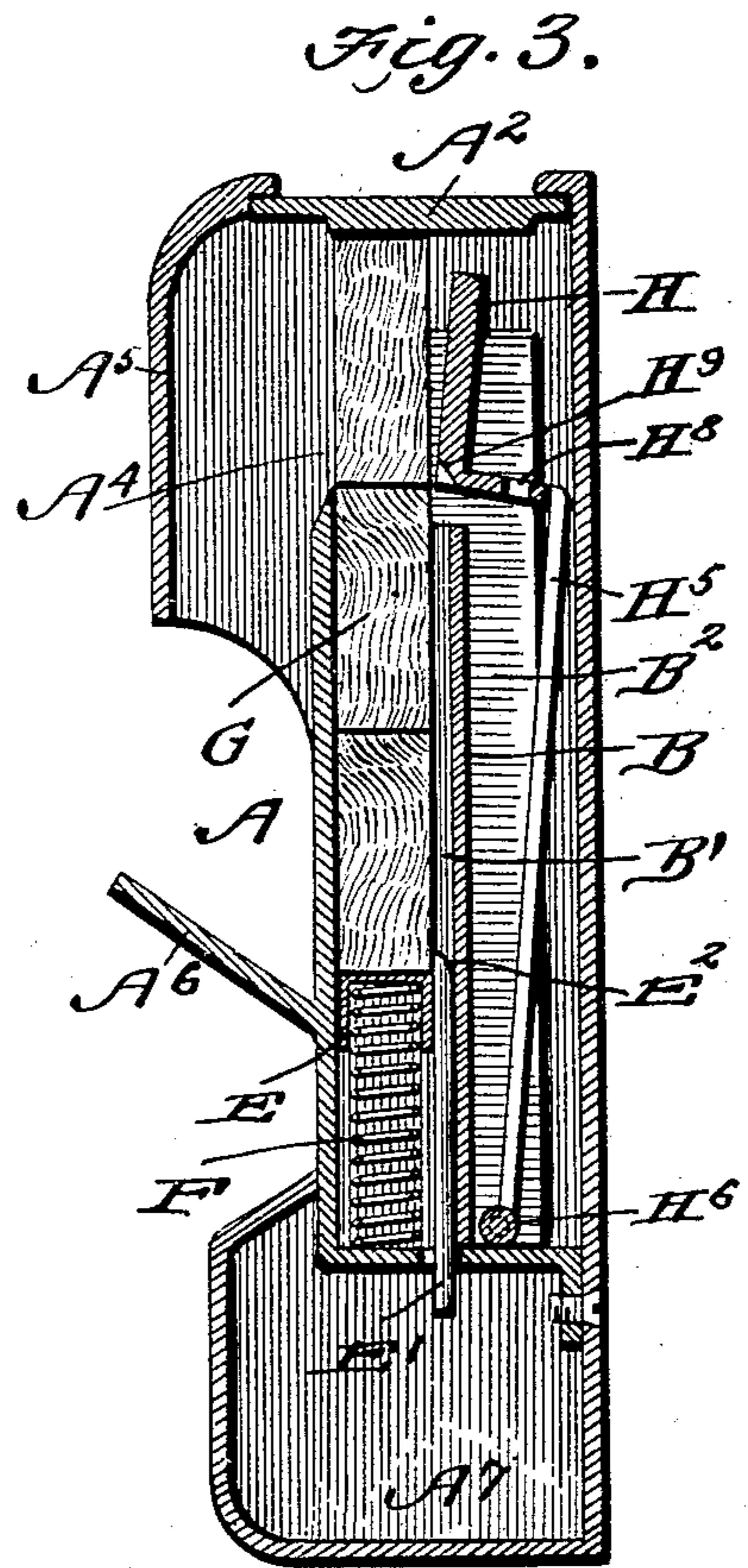
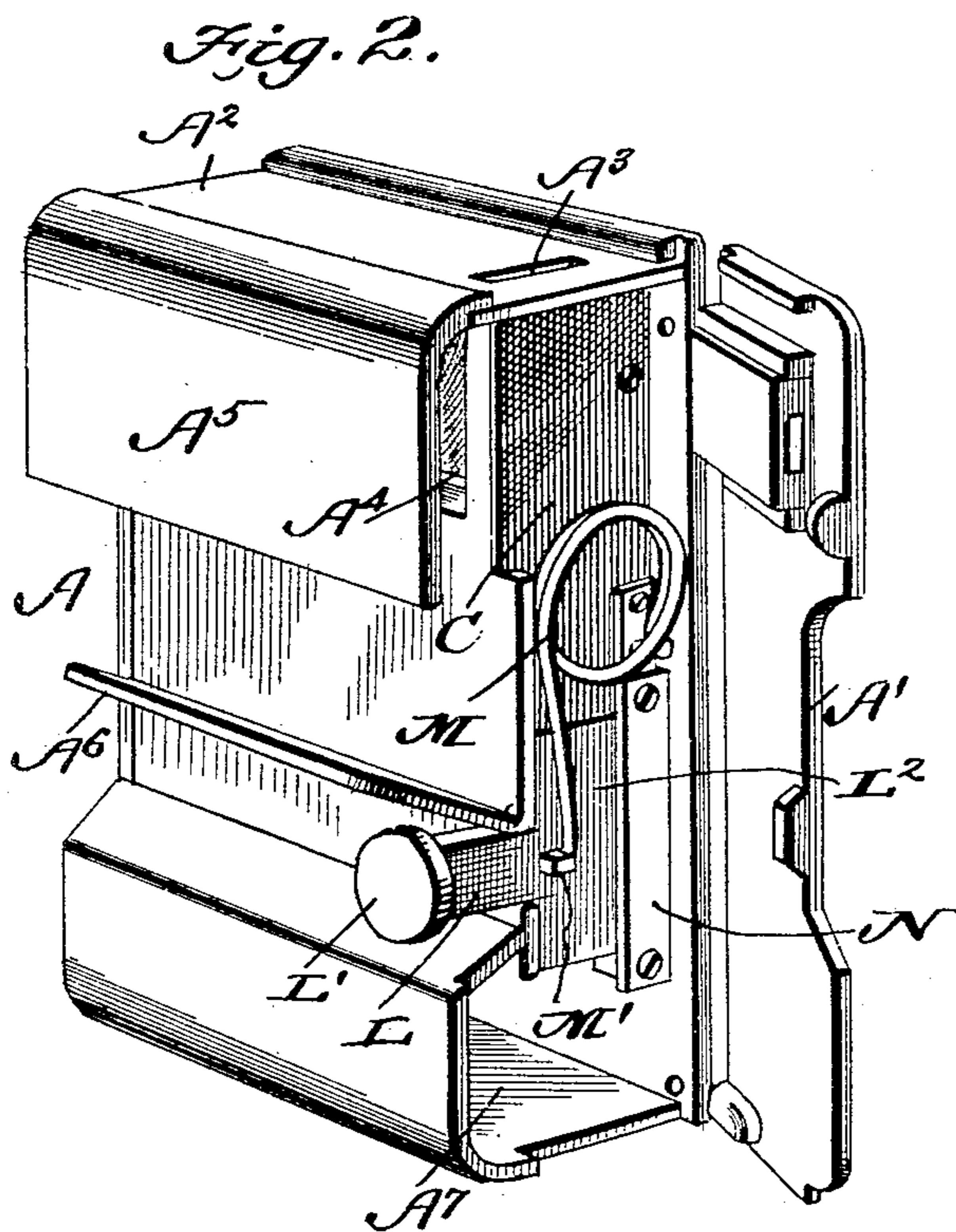
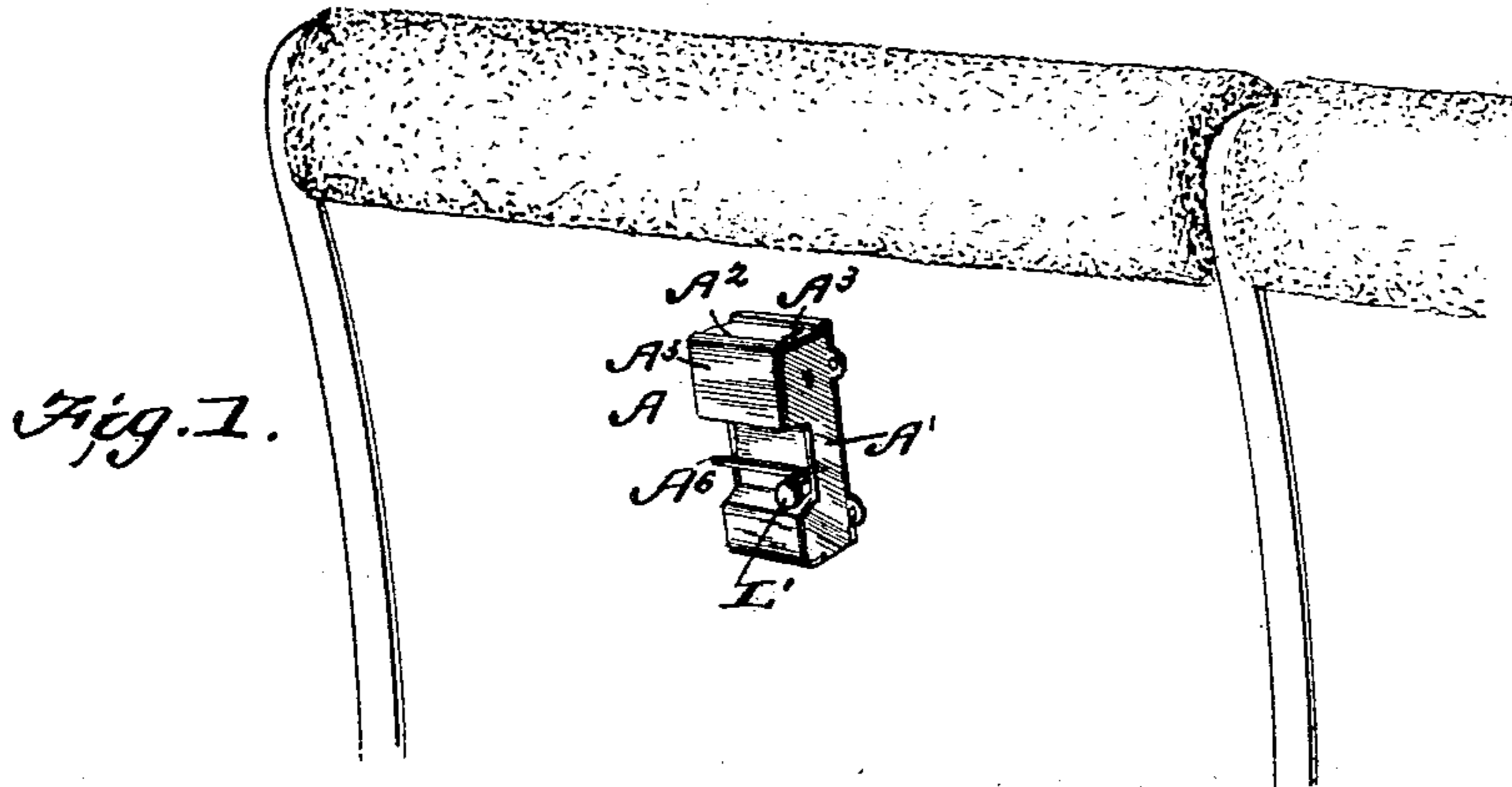


P. G. MacLEAN.  
COIN OPERATED VENDING MACHINE.

(Application filed Aug. 17, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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P. G. MacLean

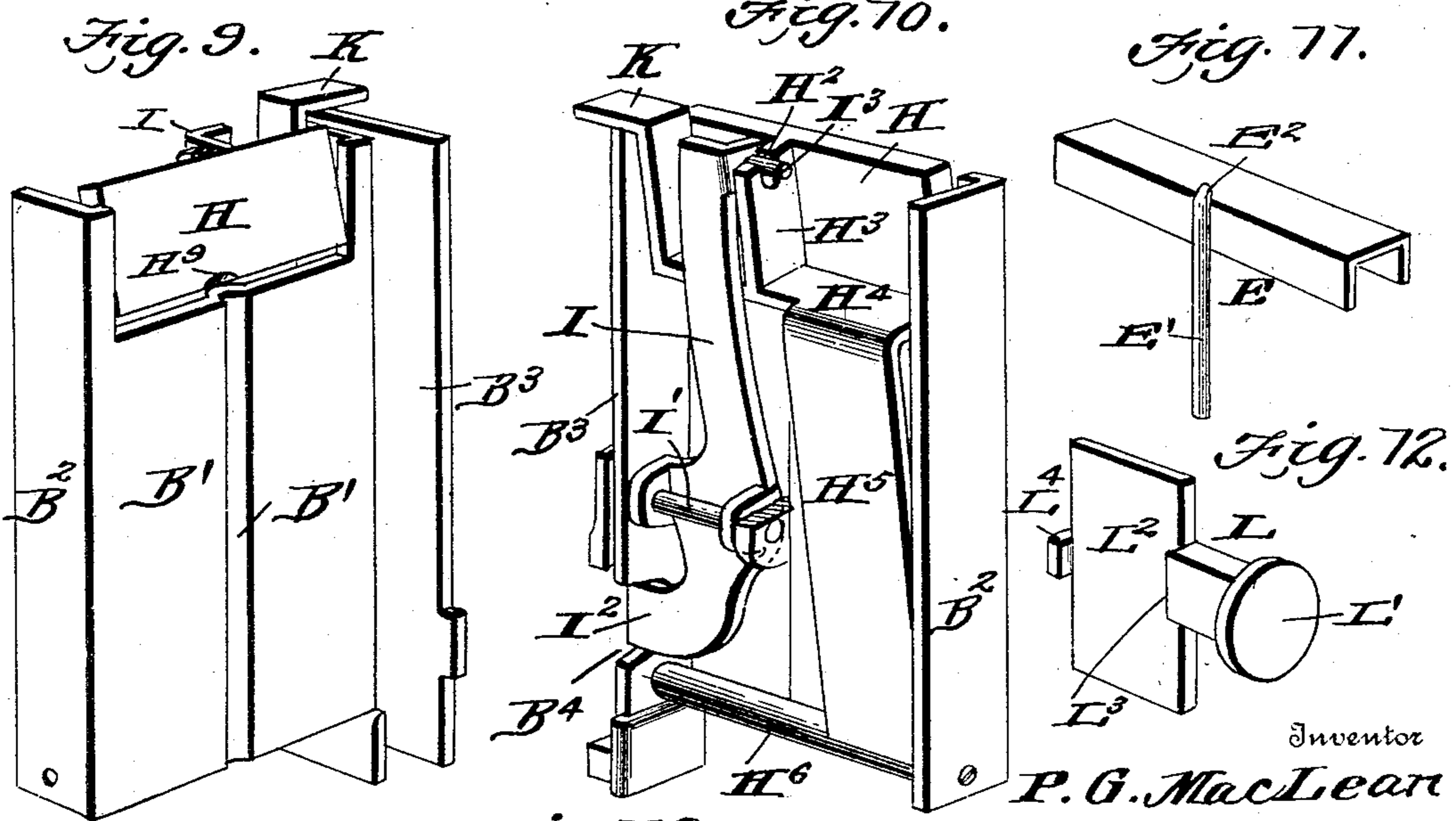
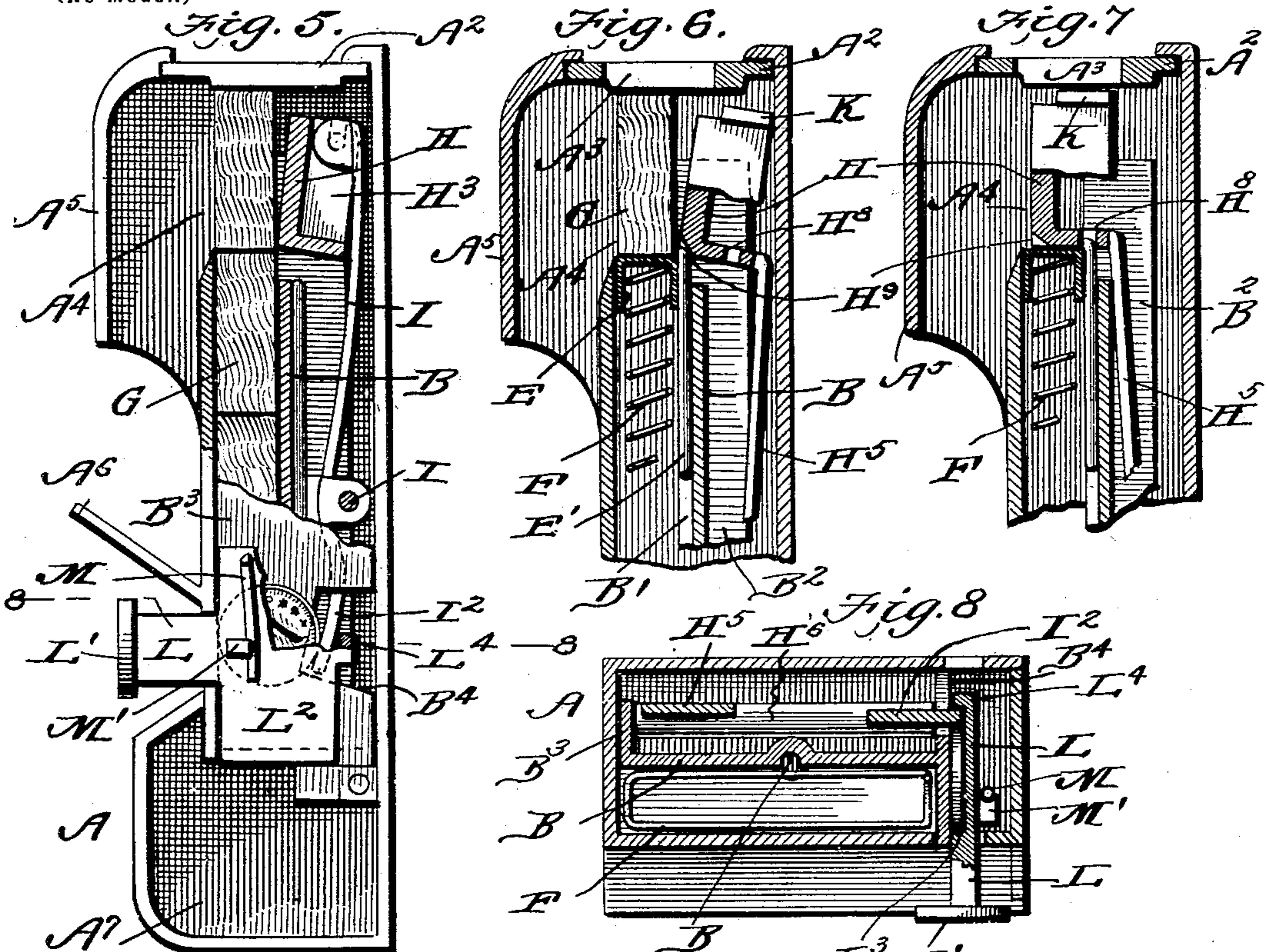
By *Wm. A. M. M. M.*  
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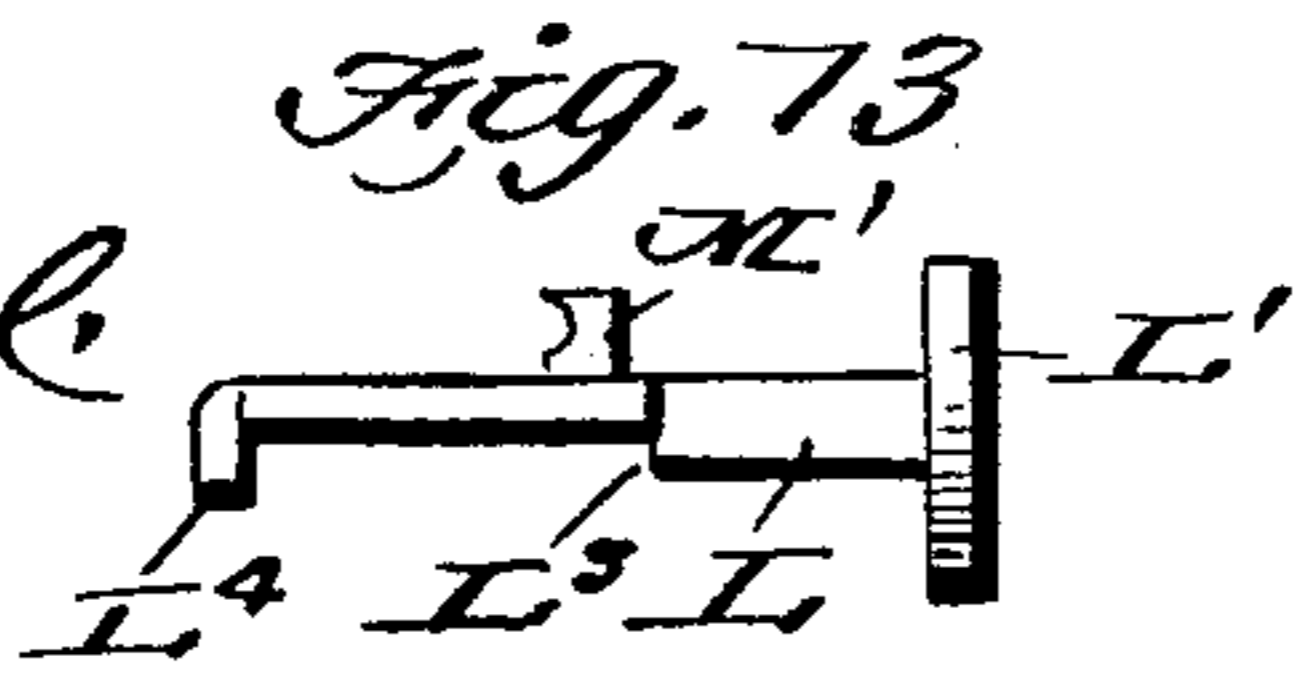
(Application filed Aug. 17, 1901.)

(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

PHINEAS G. MACLEAN, OF BOONTON, NEW JERSEY.

## COIN-OPERATED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 704,201, dated July 8, 1902.

Application filed August 17, 1901. Serial No. 72,337. (No model.)

*To all whom it may concern:*

Be it known that I, PHINEAS G. MACLEAN, a citizen of the United States, residing at Boonton, in the county of Morris and State of New Jersey, have invented a new and useful Improvement in Coin-Operated Vending-Machines, of which the following is a specification.

This invention relates generally to coin-operated vending-machines, and more particularly to certain improvements upon the vending-machines shown, described, and claimed in the applications of Phineas G. MacLean, filed April 26, 1901, No. 57,528, and August 17, 1901, No. 72,336.

This machine is particularly adapted for vending chocolates and other confections, and, owing to its size and construction, is especially adapted for use upon the backs of theater and car seats.

The object of the present invention is to provide a machine which will vend a number of sticks of chocolate or other confections at one time.

Heretofore machines have been constructed and operated by means of a one-cent piece for the purpose of discharging a single stick of chocolate or other confections, and this machine is designed to be operated by a five-cent piece or nickel for the purpose of discharging five pieces of chocolate or other confections.

With these objects in view the invention consists in the peculiar construction of the various parts and in their novel combination or arrangement, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a view showing the application of my invention. Fig. 2 is a perspective view showing one side of the case open and disclosing a portion of the operating mechanism. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a plan view with the top removed. Fig. 5 is a sectional view, partly in elevation, illustrating the mode of operation, the coin having been deposited. Fig. 6 is a detail vertical section illustrating the position of the plunger just prior to discharging the package. Fig. 7 is a detail vertical section illustrating the man-

ner of locking the plunger after the last package has been discharged. Fig. 8 is a horizontal sectional view on the line 8 8 of Fig. 5. Fig. 9 is a detail perspective view showing the front face of the casting-plate and plunger. Fig. 10 is a detail perspective view showing the rear face of the casting-plate, plunger, and operating mechanism. Fig. 11 is a detail perspective view of the follower and guide-pin. Fig. 12 is a detail perspective view of the push-rod and plate. Fig. 13 is a top plan or edge view of the said push-rod and plate.

In carrying out my invention I employ a case A, having a removable side A' and the slidably-removable cover A<sup>2</sup>, having a coin-slot A<sup>3</sup>. The front wall of the case has an opening A<sup>4</sup> adjacent to the top, through which the packages are discharged, said opening being protected by means of a depending hood A<sup>5</sup>. The front wall of the case is also provided with a shelf or rest A<sup>6</sup>, upon which the packages are caught after their discharge, and A<sup>7</sup> designates the coin-chamber at the bottom of the case, into which the coins are dropped after operating the machine. A casting-plate B is arranged within the main body of the case, dividing said body into a front and rear compartment, the front face of said casting-plate having a vertical longitudinal groove B'. The casting-plate B is formed with a side flange B<sup>2</sup>, by means of which it is connected to the side of the case, and said casting-plate is also provided with a flange B<sup>3</sup> upon the opposite side, the flange B<sup>2</sup> extending above the casting-plate B and the flange B<sup>3</sup> extending both above and below the casting-plate, as most clearly shown. The flange B<sup>3</sup> forms one side of the coin-chute, the opposite side being formed by the plate C, attached to the side of the flange B<sup>3</sup>. A follower E is arranged in the front compartment, said follower being essentially in the form of an inverted-U shaped plate, having a guide-pin E' attached to the rear side thereof, said pin working in the groove B', and has its upper end E<sup>2</sup> projecting slightly above the upper face of the follower-plate E. A coil-spring F is arranged in the front compartment beneath the follower E and serves to normally press the said follower upwardly, the packages G being arranged in vertical series within the front com-

partment upon the follower, as most clearly shown in Figs. 3 and 5. As before stated, this machine is intended to deliver five pieces of chocolate, and these five pieces may be contained in a single wrapper or they may be arranged in separate wrappers and delivered five at a time through the opening  $A^4$  in the manner hereinafter described.

H indicates a plunger which is essentially in the form of a plate working across the top of the casting-plate B, the height of said plate being sufficient to project five packages through the opening  $A^4$ . This plunger H is operated by means of a lever I, pivoted at I, at the rear of the said casting-plate, the lower end  $I^2$  working in a cut-out portion  $B^4$  at the rear side of the flange  $B^2$ , said end  $I^2$  projecting into the path of the coin and being adapted to engage the same, as most clearly shown in Fig. 5. A laterally-projecting pin  $I^3$  is carried at the upper end of the lever I, which pin works in a slot  $H^2$ , produced in the upper end of the flange  $H^3$ , said plate also having a flange  $H^4$ , to which the arm  $H^5$  is connected, said arm in turn being rigid with the rock-shaft  $H^6$ , journaled between the flanges  $B^2$  and  $B^3$ . The plunger is also provided with a laterally-projecting plate K, which serves as a cut-off to close the coin-slot  $A^3$  when the supply of confections has become exhausted. The plate  $H^4$  has an aperture  $H^8$  produced therein and adapted to receive the upwardly-projecting end  $E^2$  of the guide-pin  $E'$  after the last package has been discharged from the follower, as most clearly shown in Fig. 7, and the forward face of the plunger has a beveled notch  $H^9$ , which permits the plunger to move across the projecting end  $E^2$ , as most clearly shown in Fig. 6. It will thus be seen that when the last package has been delivered the plunger will be automatically locked in its forward position and the plate K will close the upper end of the coin-chute, and thereby prevent any additional coins being dropped into the machine. A push-rod L has a knob  $L'$  at its forward end and carries a plate  $L^2$  at its rear end. A shoulder  $L^3$  is formed at the juncture of the push-rod L and plate  $L^2$ , the coin being caught between said shoulder  $L^3$  and a laterally-projecting end  $I^2$  of the lever I, as most clearly shown in Figs. 5 and 8. A laterally-projecting finger  $L^4$ , carried at the rear end of the plate  $L^2$ , is adapted to engage the rear side of the lower end of the lever, as shown in Fig. 8. A wire spring M bears at one end against the case and at the opposite end against a lug  $M'$  on the plate  $L^2$ , the normal tendency of the spring being to force the push-rod and plate outwardly or forwardly, as most clearly shown in Fig. 2, thereby throwing the plunger back to the position shown in Fig. 3. The plate  $L^2$  slides against the flange  $B^3$ , beneath the plate C, thereby receiving the coin as it drops through the coin-chute, and a guide-plate N serves as a guide for the said plate  $L^2$ , said guide-plate N being most clearly shown in Fig. 2.

In operation a coin is deposited through the slot  $A^3$  and passes down the coin-chute formed by the flange  $B^3$  and plate C and is caught between the shoulder  $L^3$ , end of lever  $I^2$ , and the plate  $L^2$ . By pressing upon the knob  $L'$  the lever I is operated, pushing the plunger H forwardly, thereby forcing or discharging five packages or one package containing five pieces of confection through the opening  $A^4$ . The moment pressure is relieved from the knob  $L'$  the spring M will force the said knob outwardly, dropping the coin into the coin-chamber  $A^7$ , there being a limited amount of play, so that when the package has projected through the opening a certain amount of pressure will be relieved from the coin, thus permitting it to drop by its own weight, and at the same time the lever I and plunger H will be returned to their normal positions, as indicated in Fig. 3. These operations are continued until the last package has been discharged. The end  $E^2$  of the guide-pin  $E'$  will engage the opening  $H^8$  and securely lock the plunger in a forward position, at which time the plate K will close the coin-chute, and thereby prevent another coin being introduced into the machine. It will thus be seen that I provide a simple and efficient machine by means of which articles can be delivered by depositing a coin and operating the machine, and it will also be noted that the machine becomes automatically locked and closed as soon as the supply of articles becomes exhausted.

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

1. In a vending-machine the combination with a case, of a casting-plate arranged therein, said casting-plate having side flanges, a plunger working between the flanges and across the top of the casting-plate, said plunger having integral webs or flanges, one of which is provided with a lateral extension, and another slotted vertically, a rock-shaft to which the plunger is connected, an operating-lever having a laterally-projecting pin adapted to engage the slotted flange of the plunger, the coin-chute, operating-rod and spring for returning the several parts to their normal positions, substantially as shown and described.

2. In a vending-machine the combination with a case, of a casting-plate arranged therein dividing the case into front and rear compartments, the spring-actuated follower arranged in the forward compartment and adapted to support a plurality of packages, a plunger consisting of a plate provided with a number of rearwardly-extending flanges, one of which is formed with a lateral extension, the other slotted vertically and another connected by means of an arm to a rock-shaft, the operating-lever having a laterally-projecting lower end attached to the said casting-plate, said casting-plate having flanges at each side, one of the flanges being cut away

at its rear side to receive the laterally-projecting lower end of the lever, the push-rod and plate, the spring for bearing upon said plate, and the guide-plate for guiding the inner end of the push-rod plate, all arranged and adapted to operate substantially as shown and described.

3. In a vending-machine the combination with a case, of a casting-plate arranged therein dividing the case into front and rear compartments, the spring-actuated follower arranged in the forward compartment and adapted to support a plurality of packages, a plunger consisting of a plate having a perforation therein and provided with a number of rearwardly-extending flanges, one of which is formed with a lateral extension, the other slotted vertically and another connected by means of an arm to a rock-shaft, the operat-

ing-lever having a laterally-projecting lower end, said lever being connected to the afore-said casting-plate, said casting-plate having flanges at each side, one of the flanges being cut away at its rear side to receive the laterally-projecting lower end of the lever, the push-rod and plate, the spring for bearing upon said push-rod and plate, and the guide-plate for guiding the inner end of the push-rod plate, and a guide-pin carried by the follower, the upper end projecting above the follower and adapted to engage the perforation in the plunger when the supply of confections becomes exhausted, substantially as described.

PHINEAS G. MACLEAN.

Witnesses:

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