

(No Model.)

2 Sheets—Sheet 1.

A. A. SMITH.  
CHANGE MAKING DEVICE.

No. 597,301

Patented Jan. 11, 1898.

FIG. 1.

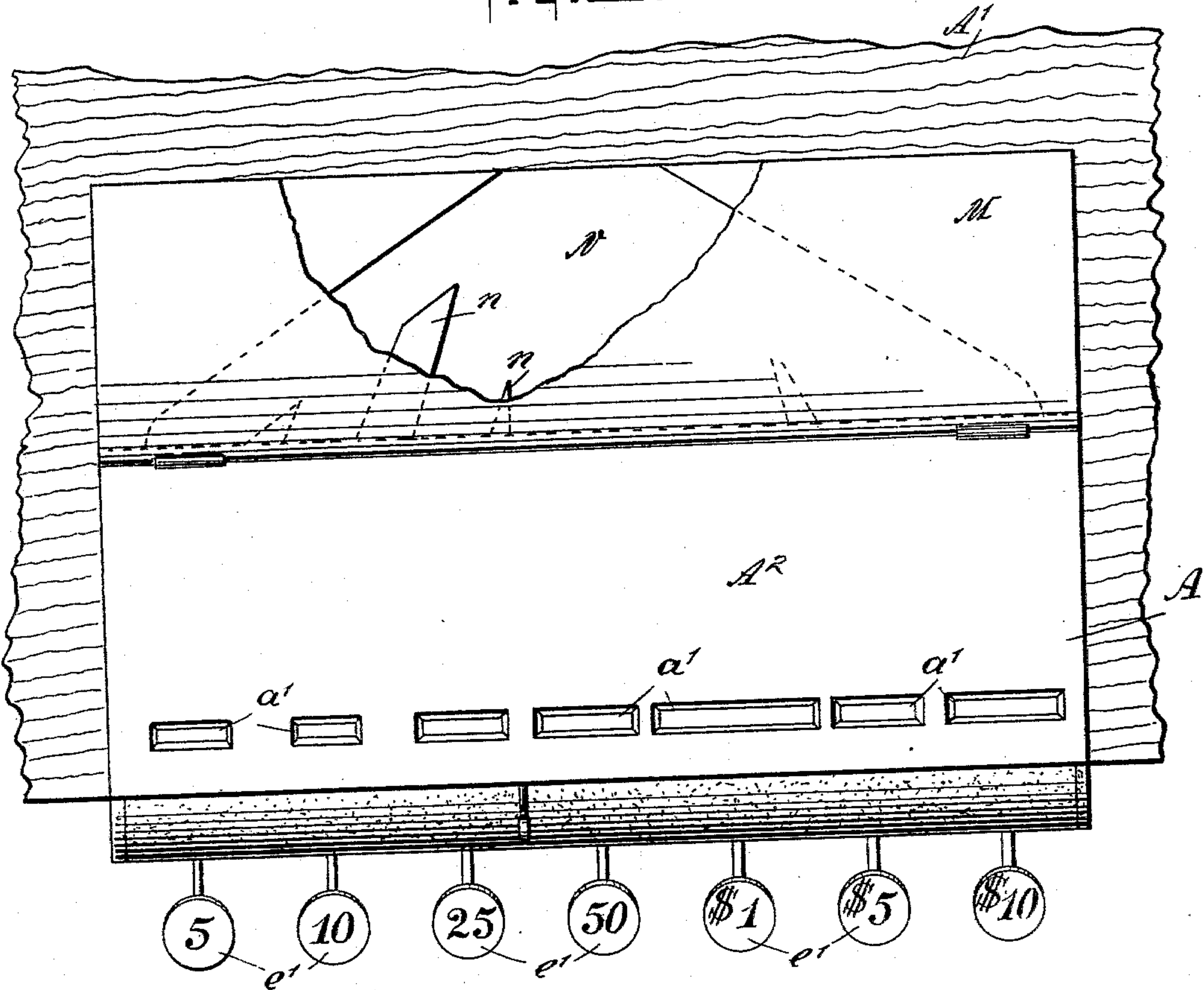
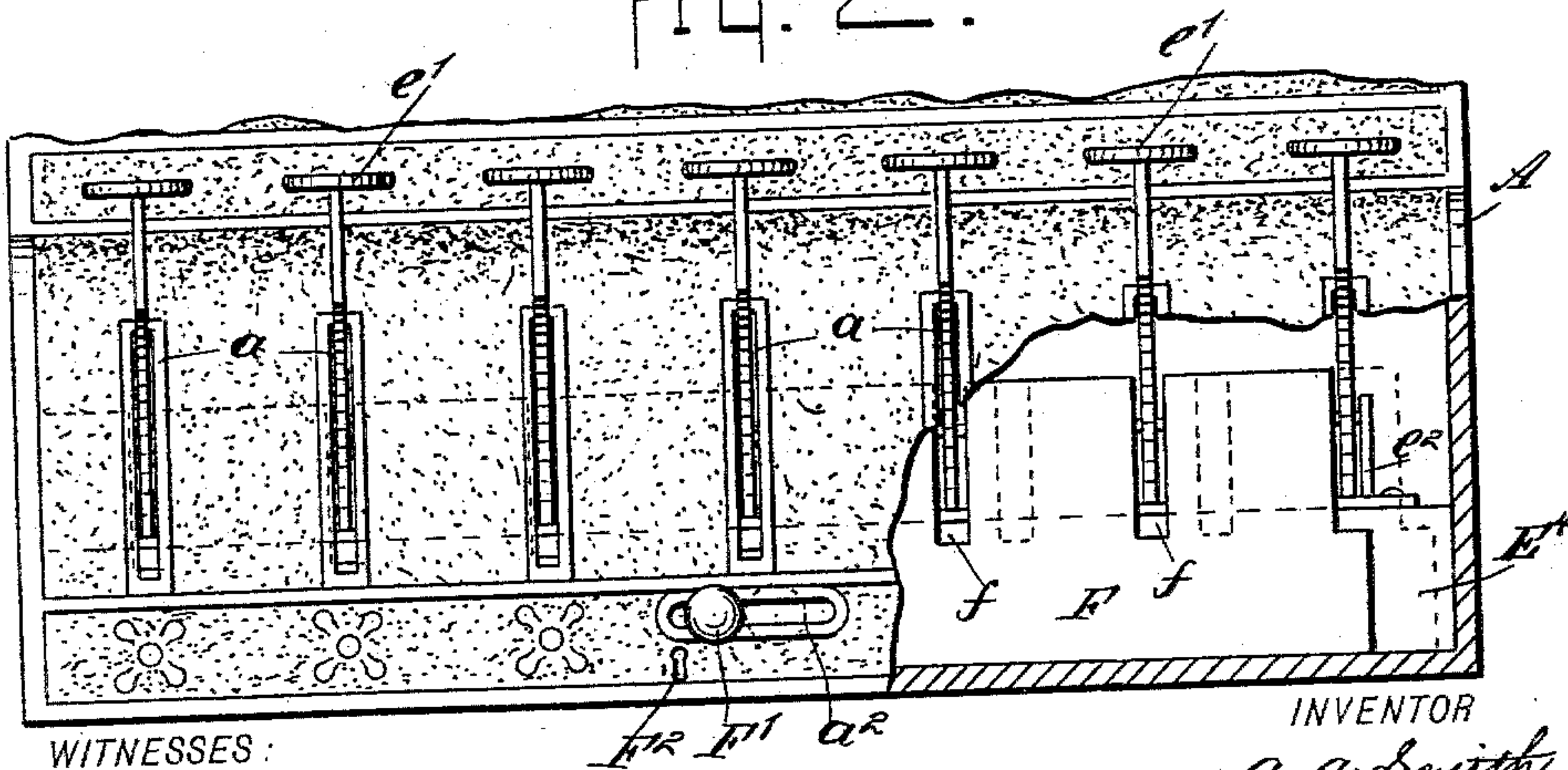


FIG. 2.



WITNESSES:

H. Kelly.  
H. L. Reynolds.

INVENTOR

A. A. Smith

BY

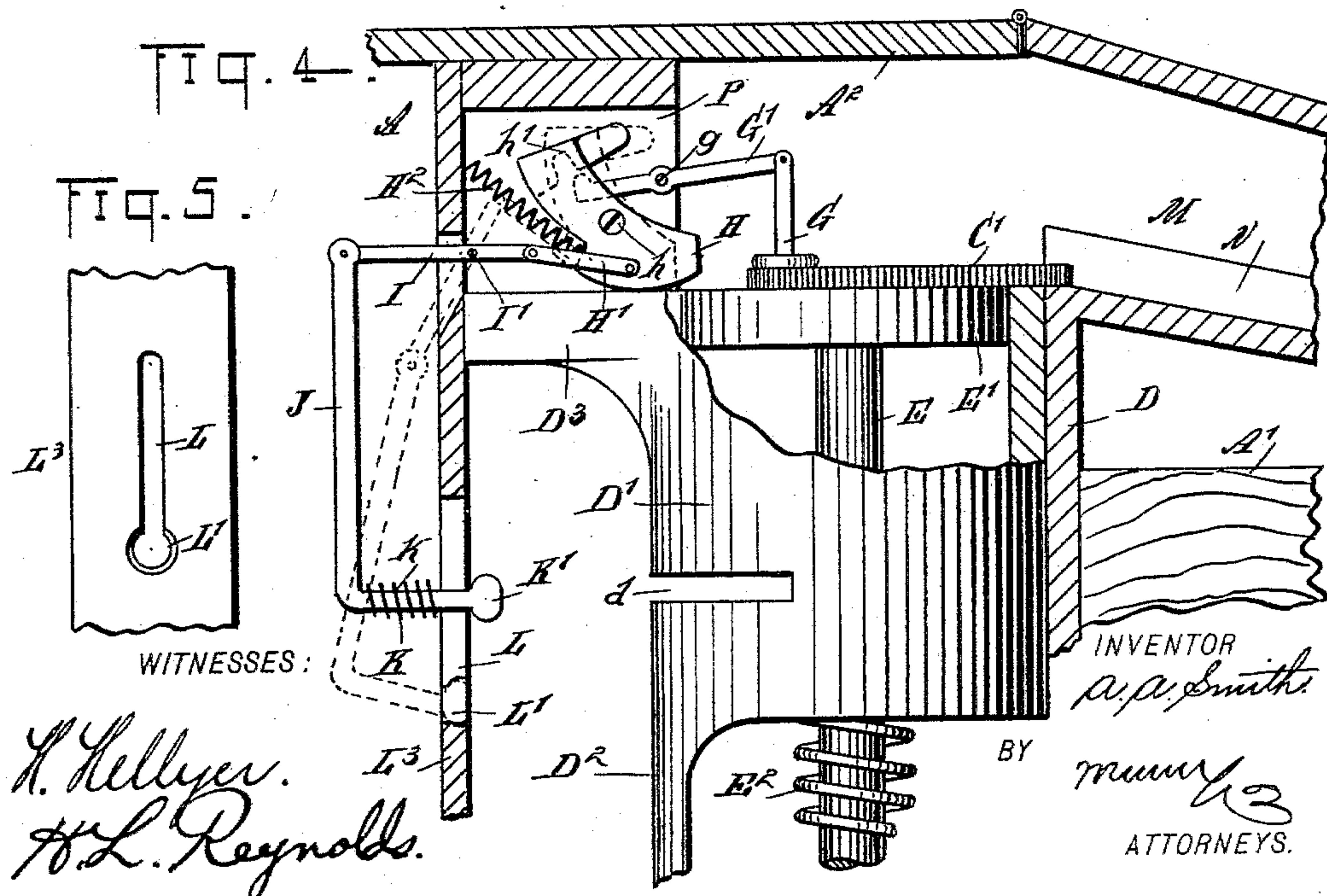
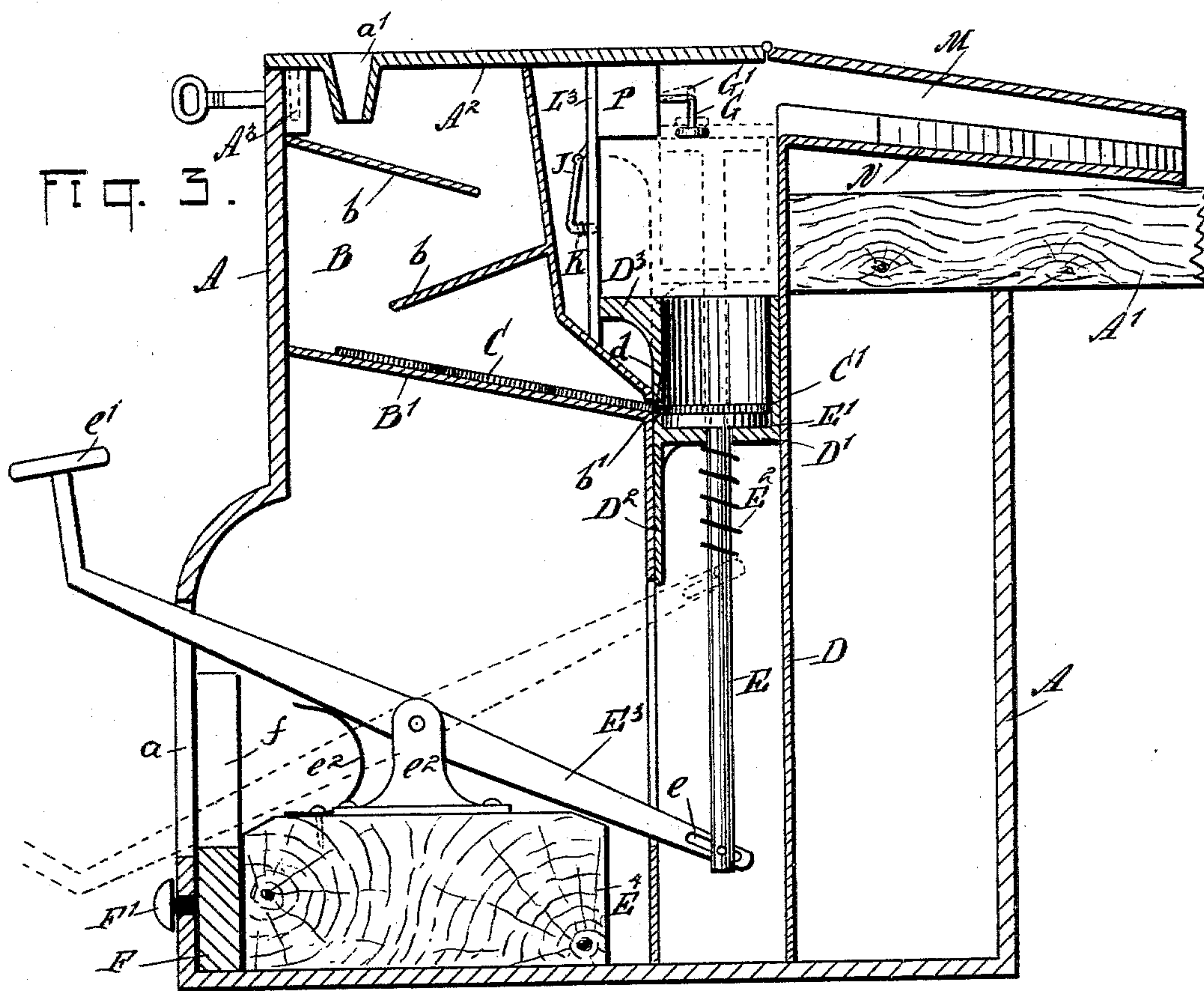
Wm. H. Smith

ATTORNEYS.

2 Sheets—Sheet 2.

No. 597,301.

Patented Jan. 11, 1898.





# UNITED STATES PATENT OFFICE.

ANDREW A. SMITH, OF ABERDEEN, WASHINGTON, ASSIGNOR OF ONE-HALF  
TO WILLIAM W. BARNUM, OF OCOSTA, WASHINGTON.

## CHANGE-MAKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 597,301, dated January 11, 1898.

Application filed August 6, 1897. Serial No. 647,335. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW A. SMITH, of Aberdeen, in the county of Chehalis and State of Washington, have invented a new and improved Change-Making Device, of which the following is a full, clear, and exact description.

My invention relates to a device for making change operated by means of levers, the object being not to change the coin or bill automatically, but to enable a salesman to rapidly and accurately produce the required change by operating proper levers.

It comprises, essentially, a casing having a number of coin receptacles or hoppers, each of which contains coins of one denomination only, and mechanism by which one coin at a time may be produced from the hopper.

It also comprises certain details of construction which will be hereinafter described and specifically claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a top plan view of my device, showing the keys upon the operating-levers and the slots through which the coins are placed in the hopper. Fig. 2 is a rear elevation of the lower portion of the device. Fig. 3 is a cross-sectional elevation of the same. Fig. 4 is a cross-sectional elevation of a portion of the same, showing the coin-discharge device; and Fig. 5 is a side view of a portion of the device hereinafter more fully described.

In outward appearance the device somewhat resembles an ordinary cash-register, the mechanism thereof being inclosed within a case A and having a number of levers projecting from one side of the case and provided with keys, each having the designation of its particular coin thereon.

The case A is intended to be placed at the rear of a counter and so that the upper portion thereof is slightly above the surface of the counter. The location of the counter is represented in the drawings by A'. The discharge-tube M is placed just above the counter, and the coins discharged from this tube will be thrown out upon the surface of the

counter, where they may be readily picked up by the customer.

The top A<sup>2</sup> of the case A of the device is hinged so that it may be raised, in order that the interior of the case may be quickly reached, and the cover is provided with a lock A<sup>3</sup> of any suitable construction, by which the cover may be secured. The cover is also provided with a series of slots a', one above each coin receptacle or hopper, and of such a size as to receive its particular denomination of coin. The coin receptacles or hoppers B are provided with inclined projections or slats b, which prevent a coin from being removed if the device is turned bottom side up.

The bottom B' of the coin-hopper slopes toward the front wall of the hopper, and in said wall is formed a slot b' of such a size as to permit the exit of one coin at a time. Next this wall of the hoppers are placed a series of tubes D, within which are placed coin-receiving cups D'. These cups are provided with a narrow slot d upon one side, so located as to register with the slots b' at the bottom of the coin-hopper when the cups are in their lower or normal position. The cups D' are provided with false bottoms E', which are attached to the upper ends of the rods E.

The cups D' are supported by means of spiral springs E<sup>2</sup>, surrounding the rods E and attached at one end thereto. The side of the cup which contains the slot d is extended downward, forming an arm D<sup>2</sup>, adapted to close the openings b' while the cup is raised. At one side of the cup at its upper end is a side extending arm D<sup>3</sup>, which is adapted to engage a stationary block P to stop the cup when it has been raised the proper distance. The rod E, which supports the cup, is attached to one end of a lever E<sup>3</sup> by means of a slot e in the lever and a pin passing through said slot and the lower end of the rod E.

The levers E<sup>3</sup> are pivoted upon standards e<sup>2</sup>, mounted upon a common base E<sup>4</sup>. The opposite ends of said levers project through slots a in the outer casing A of the device and are provided with keys e', which are labeled with the denomination of the coin contained in the hopper controlled thereby. As



the bottom of the coin-hopper is inclined, the coins placed therein will slide toward the lower corner and through the slot  $b'$  in the hopper and the slot  $d$  in the cup  $D'$  until the coin lies within the cup. As the cup is only large enough to receive one coin, the other coins are prevented from entering therein. When it is desired to discharge one of the coins, the proper lever  $E^3$  is depressed, which will elevate the cup until the arm  $D^3$  comes in contact with the block  $P$ . The cup is then stopped and the false bottom or plunger  $E'$  continues its travel, the spring  $E^2$  being compressed. The plunger or false bottom  $E'$  will be elevated until its upper surface coincides with that of the cup  $D'$ . During the last portion of the ascent of the bottom  $E'$  the coin  $C'$ , which lies upon the plunger or false bottom  $E'$ , comes in contact with the lower end of a rod  $G$ , pivoted to one end of a lever  $G'$ , pivoted at  $g$  within a slot in the block  $P$ . The opposite end of the lever  $G'$  has a side projection or tooth adapted to engage a similar notch  $h'$  in the pivoted discharge-lever  $H$ , pivoted upon a pin  $h$  within the slot in the block  $P$ . A spring  $H^2$ , pressing against a portion of the lever  $H$ , tends to throw the lower end thereof out to the position shown in full lines in Fig. 4, in which position the outer end of the lever projects slightly over the plunger or false bottom  $E'$ . The normal position of these levers  $H$  is that shown by the dotted lines in Fig. 4, in which the outer end of the lever coincides with or is back of the edge of the plunger  $E'$ . When the lever  $H$  is tripped through the intervention of the rod  $G$  and lever  $G'$ , the spring  $H^2$  forces the lower end of the lever out and into contact with the edge of the coin  $C'$ . This being done by a quick sharp action of the spring  $H^2$  gives the coin  $C'$  an impulse which will carry it entirely off of the plunger or false bottom  $E'$  and into the grooved end of the discharge-spout  $M$ . The lower end of this discharge-spout opens upon the counter, and the coin will thus be delivered upon the counter. In the manner described any one or more of the levers may be operated to discharge their proper coins, and the making of change is rendered a simple and quick matter.

A lever  $I$ , which is pivoted at  $I'$  to the frame of the device, is connected at one end by a link  $H'$  to the coin-discharge lever  $H$ . At its opposite end the lever  $I$  is connected to a bent link  $J$ , having an arm  $K$ , extending through a slot  $L$  in a bar  $L^3$ , extending downward from the top  $A^2$  of the case  $A$ . The slot  $L$  terminates at the bottom in a conical enlargement  $L'$ , adapted to receive the enlarged head  $K'$  of the arm  $K$ . The arm  $K$  is acted upon by a spiral spring  $k$  in such a way as to draw the head  $K'$  against the edges of the slot  $L$ , so that when the arm  $K$  is lowered to the end of the slot the head  $K'$  will be drawn into the enlargement  $L'$ . The side projecting arm  $D^3$  of the cup  $D'$  is close to or in contact with the

surface of the bar  $L^3$  and in its descent will engage the projecting head  $K'$ , thus forcing it down and carrying with it the link  $J$  until the head  $K'$  enters the recess  $L'$ . The arm  $D^3$  will then slide by the head, which has been drawn into the recess through the action of the spring  $k$ . The link  $J$ , acting through the lever  $I$  and link  $H'$ , will draw the discharge-lever  $H$  back to its normal position, where it will be engaged by the tooth upon the lever  $G'$  and be held locked until released by the rising of the plunger or false bottom  $E'$ .

The plate  $N$ , forming the lower side of the discharge-spout  $M$ , is preferably grooved by means of the partitions  $n$ , which converge toward the center, so that the coins in being discharged will all be guided toward the center of the device and discharged upon the counter at a common point.

Within the casing at the rear side of the device is mounted a plate  $F$ , provided with a series of vertical slots  $f$ , extending from its upper edge downward and capable of registering with the slots  $a$ , through which the operating-levers project. This plate  $F$  is capable of longitudinal motion within the casing and is provided with a knob or handle  $F'$ , extending through a slot  $a^2$  in the casing. By means of said knob or handle the plate may be slid far enough to one side to bring the slots  $f$  out of registry with the slots  $a$ . When in this position, depression of the keys and operating-levers will be impossible and change cannot be obtained from the machine. The plate  $F$  is preferably provided with a lock of some sort by which it may be locked in this last-named position. The keyhole of the lock is shown at  $F^2$  in Fig. 2.

The levers  $E^3$  are raised by springs  $c^2$ , placed beneath them, which springs cause a prompt return of the levers to their normal position after depression. The arm  $D^2$  on the bottom of the cup  $D'$  is long enough to cover the coin-slot at the bottom of the hopper when in its raised position and thus prevent the exit of coins at this time.

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

1. A change-making device, comprising a coin-hopper, a coin-receiving cup connected to the hopper, means for lifting said cup, and a spring-operated discharging-arm tripped at the rising of the cup, substantially as described.

2. A change-making device, comprising a coin-hopper, a coin-receiving cup connected to the hopper, means for lifting said cup, a spring-operated discharging-lever tripped by the rising of the cup, and means for resetting said lever by the descent of the cup, substantially as described.

3. A change-making device, comprising coin-hoppers, coin-receiving cups connected to the hoppers, vertical guides for said cups, means for raising the cups, a spring-operated



discharge-lever, means for tripping the discharge-lever by the cup, and a delivery-spout, substantially as described.

5 4. A change-making device, comprising a coin-hopper, a coin-receiving cup, means for raising the cup, a spring-operated discharge-lever, a catch therefor, and a lever projecting into the path of the cup and controlling said cup, substantially as described.

10 5. A change-making device, comprising a coin-hopper, a coin-receiving cup, means for raising the cup, a spring-operated discharge-

lever, a catch therefor, a lever projecting into the path of the cup and controlling said cup, and a lever connected to the discharge-lever and in the path of the cup in its descent whereby the discharge-lever is set by the descent of the cup, substantially as described. 15

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Witnesses:

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N. D. MCKILLIP.