

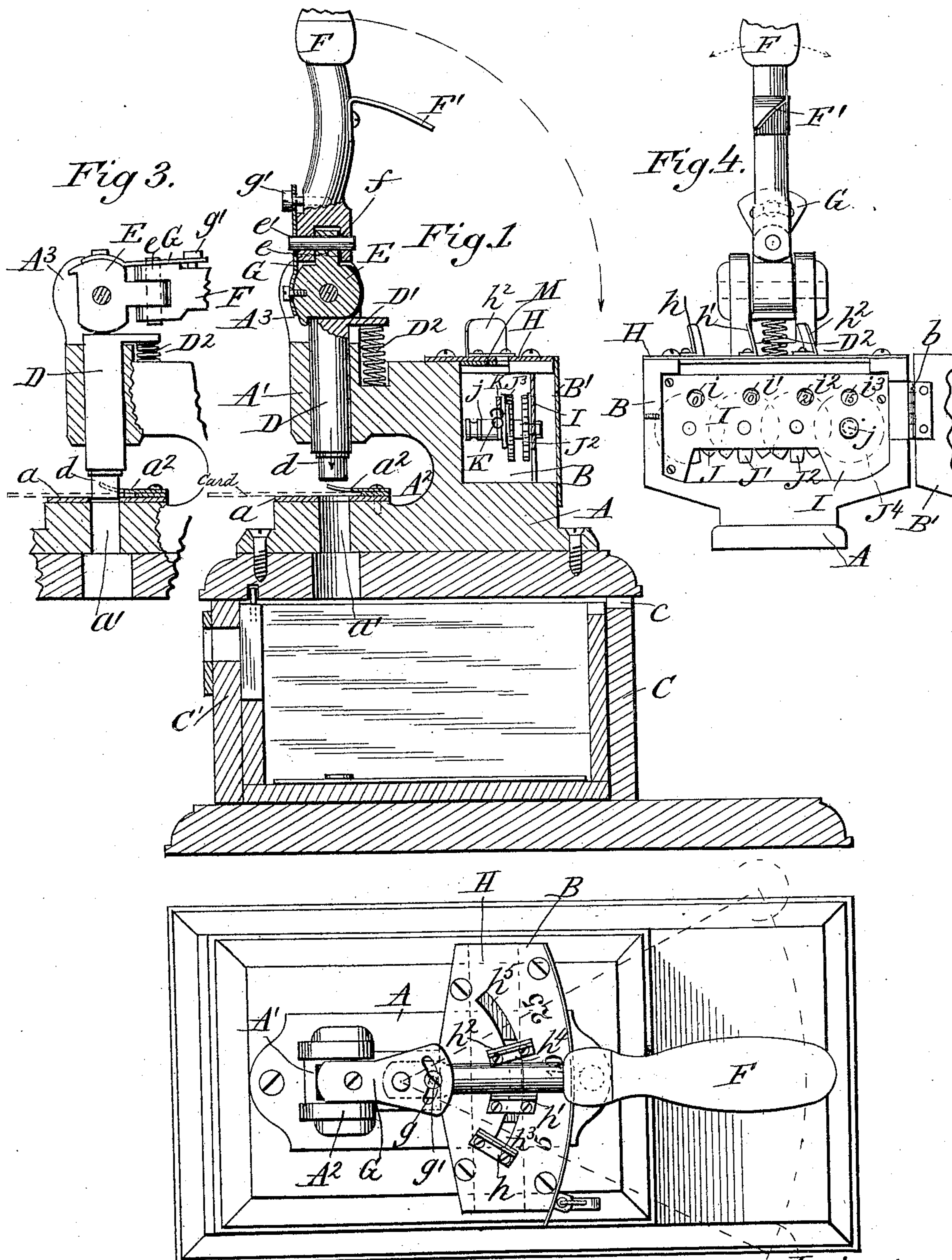
(No Model.)

2 Sheets—Sheet 1.

C. T. PAINTER.  
SELF REGISTERING CHECK PUNCH.

No. 575,616.

Patented Jan. 19, 1897.



Attest:  
H. H. Schott  
J. Schul

Fig. 2.

Inventor:  
Carl T. Painter  
per Fred W. Packen,  
Atty.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

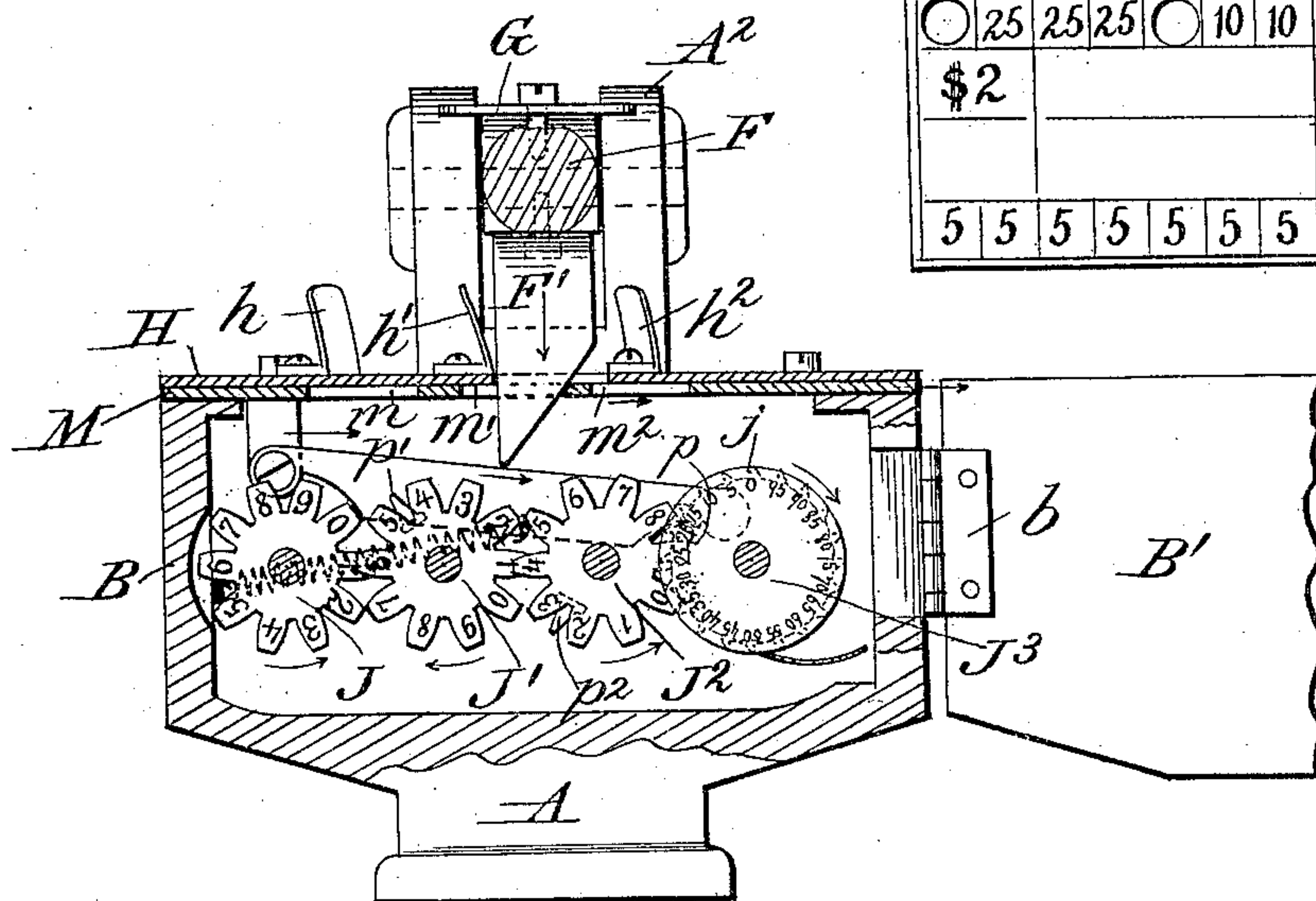


Fig. 8.

○	25	25	25	○	10	10	10
\$	2						10
							10
5	5	5	5	5	5	5	○

Fig. 6.

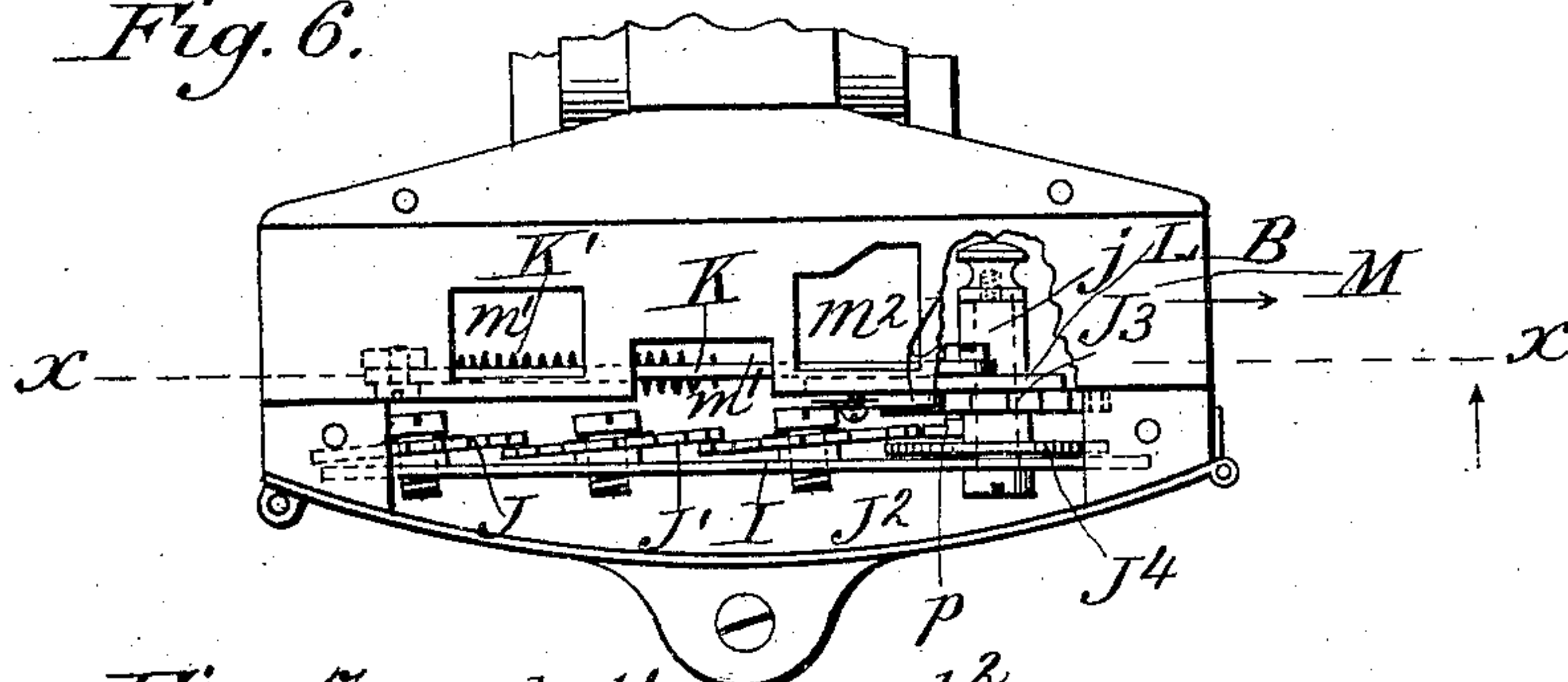
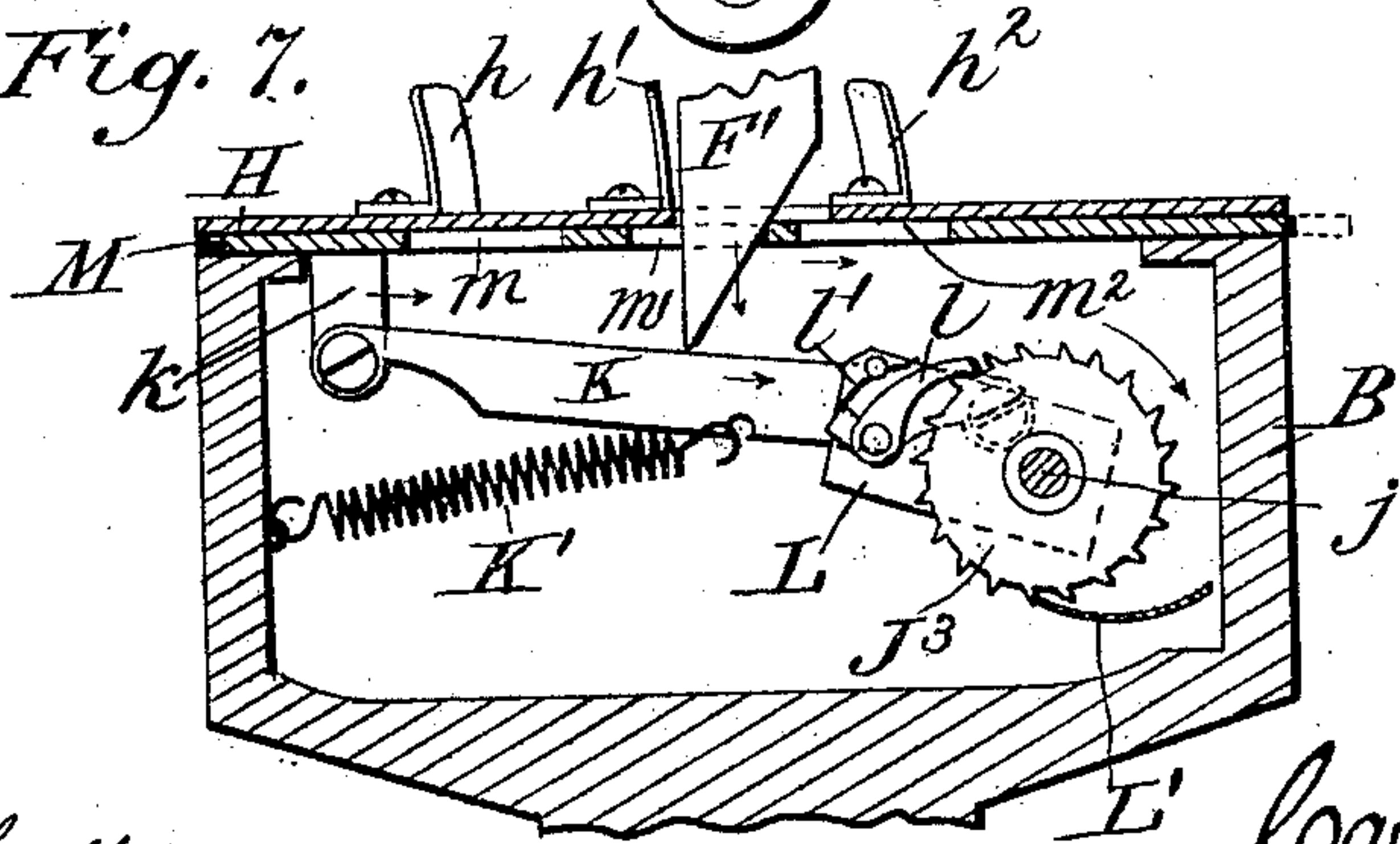


Fig. 7.



Attest:

H. H. Schott  
J. A. Saul

Inventor:

Carl T. Painter  
per Fred W. Parker,  
Att'y.



# UNITED STATES PATENT OFFICE.

CARL THEODORE PAINTER, OF CHATTANOOGA, TENNESSEE, ASSIGNOR TO  
GEORGE M. BRADT, OF SAME PLACE.

## SELF-REGISTERING CHECK-PUNCH.

SPECIFICATION forming part of Letters Patent No. 575,616, dated January 19, 1897.

Application filed July 3, 1896. Serial No. 598,025. (No model.)

*To all whom it may concern:*

Be it known that I, CARL THEODORE PAINTER, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Self-Registering Store-Check Punches; 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 invention relates to an improvement in self-registering punches of the kind used in commissary stores, such, for instance, as those carried on by furnace or mining companies where the employees have their wages paid in orders on the store.

The object of the punching device is to provide a simple, easily-operated punch by means of which the amount of the purchase may be punched out of a punch-out card, while at the same time the registering mechanism arranged in connection with the punching device will automatically record the amount punched out each time.

The invention therefore consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described, and then more particularly pointed out in the claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical sectional view of my improved store check-punch. Fig. 2 is a top plan view of the same. Fig. 3 is an enlarged sectional detail side elevation of the punching device, showing the same operating upon a card to punch the same. Fig. 4 is an end elevation of my improved self-registering store-punch with the rear door of the compartment containing the registering mechanism opened to expose the interior arrangement of said mechanism. Fig. 5 is another sectional rear elevation of the registering mechanism, the rear door of its compartment being opened and the rear plate removed, so as to exhibit the arrangement and suggest the operation of the recording-wheels. Fig. 6 is a top plan view of the registering mechanism. Fig. 7 is a vertical sectional elevation on the line  $x x$  of Fig. 6. Fig. 8 is a detail plan view of one of the checks or punch-out cards.

Similar letters of reference designate cor-

responding parts throughout the different figures of the drawings.

A designates the main casting or supporting bed or frame of my improved automatically registering store check-punch, said main frame or casting being mounted upon the card-receiving box C, having a door C', by means of which access can be had to the interior of the box C, said box having a slot  $c$ , through which the cards or checks may be introduced therinto, and being designed for the purpose of holding said cards or checks.

The front portion of the main casting A is recessed at A<sup>2</sup>, and below this recess is the vertical passage  $a'$ , which leads down into the box and in which the puncher-die operates, the plate  $a$  resting within the recess A<sup>2</sup> upon the main casting A and around the passage  $a'$ , so that on this plate a card like that shown at O in Fig. 8 may be placed for the purpose of being punched. This plate  $a$  is provided with a bifurcated guide  $a^2$ , secured thereto by a screw or other means, and being of spring form, so that it may act to hold the card in place while it is being punched. The part A' of the main frame which is directly above the plate  $a$  is formed with a vertical bore or passage to receive the vertically-movable punching-rod D, which carries the punch or die  $d$ , that operates upon the card and punches out therefrom the desired numeral or numerals, the punched-out parts dropping down through the passage  $a'$  into the box C.

The punching-rod D is provided with a rearwardly-projecting lug D', under which is a spiral spring D<sup>2</sup>, which acts to normally lift the punching-rod D, said spring D<sup>2</sup> being held in a recess in the upper part of that portion of the frame which is lettered A'. Said bored part A' of the main frame is fashioned with a bifurcation A<sup>3</sup> at its upper end, in which is pivoted a cam-block E, that operates upon the upper end of the vertical punching-rod D. This cam-block E is provided with an upwardly-projecting lug  $e$ , which is embraced by the slotted end  $f$  of an operating handle or lever F, a pin  $e'$  passing through the slotted end  $f$  of lever F and also through the lug  $e$ , and holding thereby the lever pivotally connected to the lug and consequently the lever pivotally connected to the cam.

The lever F near the slotted end F is pro-



vided with a screw  $g'$ , which engages a slot  $g$  in the upper end of a plate  $G$ , which is securely fastened to the cam  $E$ . This pin  $g'$  limits the direction of movement of the handle-lever  $F$  to the right or to the left in the direction of the arrows, as shown in Fig. 4, whenever said lever  $F$  is moved in one direction or the other upon its pivot  $e'$ .

It will be evident that the operator who may be behind the punching mechanism can operate the handle-lever  $F$ , either by drawing it toward him or by moving it to the right or left, or, in other words, it may be said that said lever  $F$  has a movement in two planes. When lever  $F$  is drawn to the rear and depressed, being moved in the direction shown by the arrow in Fig. 1, it is evident that the cam  $E$  will be rotated upon its pivot, and the consequence will be that the punch  $d$  will be forced downward in the direction shown by the arrow in Fig. 1 until it reaches the position shown in Fig. 3, where it passes through the card  $a$  and by excision removes a certain portion thereof. When this action is taking place, the spring  $D^2$  will be depressed, and said spring will assist in restoring the parts to their normal position, as shown in Fig. 1, after the punching operation has been accomplished. The handle-lever  $F$  is provided with a pointed cam-plate  $F'$ , projecting rearwardly from the handle  $F$  when the latter is in its vertical position, as shown in Fig. 1. Said cam  $F'$  operates whenever the handle-lever  $F$  is depressed into a horizontal position to actuate the registering mechanism to a greater or less extent and to cause said mechanism to register the same amount as is punched simultaneously from the card by means of the punch  $D$ .

The main casting  $A$  is formed at its rear with a compartment or receptacle  $B$  of greater or less size, which contains the registering mechanism, said compartment having the removable horizontal cover  $H$ , which is secured in place by means of screws or other suitable fastening devices, and having also the hinged rear door  $B'$ , which is hinged at  $b$  and which when closed may be locked by means of a padlock, as shown in Fig. 2, or may be fastened in any other way. The plate  $II$  is provided with a curved slot which is divided into sections by the vertical inclined division-plates  $h$ ,  $h'$ , and  $h^2$ , secured rigidly upon the upper side of said plate  $II$ , said sections of the curved slot being marked  $h^3$ ,  $h^4$ , and  $h^5$  and being designed to receive therein the flat-pointed cam-plate  $F'$ , carried by the operating-lever  $F$ . The division-plates  $h$ ,  $h'$ , and  $h^2$  are so inclined that when the cam  $F'$  is brought down it may, if it so happens, strike against the face of one or the other of said plates and be thereby surely directed into one or the other of the slot-sections, as may be required. The slot-section  $h^3$  has delineated contiguous thereto on the top face of plate  $II$  the numeral "5," and likewise there is contiguous to the slot  $h^4$  the numeral "10," and contiguous to the

slot  $h^5$  the numeral "25." These numerals indicate that when the cam  $F'$  is thrust down into the slot  $h^3$  the registering mechanism will record "5." When it is thrust through the slot  $h^4$ , the registering mechanism will record "10," and when through the slot  $h^5$  the registering mechanism will record "25," and while such records are being made by the registering mechanism there will be a simultaneous punching of the same amounts or numerals out of the card, which is at the time beneath the die  $d$ .

Within the receptacle  $B$  is a vertical rear plate  $I$ , which supports studs on which are mounted the registering-wheels  $J$ ,  $J'$ ,  $J^2$ , and  $J^3$ . The wheels  $J$   $J'$   $J^2$  are set at an angle to the plate  $I$ , as shown in Fig. 6, their edges slightly overlapping, as shown. These wheels are toothed wheels of any ordinary construction. The wheel  $J^4$ , which is parallel to the plate  $I$ , is a ratchet-wheel, as shown in Fig. 7, and on its shaft is a registering disk or plate  $J^3$ , there being on the same shaft a lug  $p$ , which at each rotation of the disk  $J^3$  strikes one of the teeth of the wheel  $J^2$  and rotates it one notch. The disk  $J^3$  is a units-disk, the toothed wheel  $J^2$  is a hundredths-wheel, the wheel  $J'$  is a thousandths-wheel, and the wheel  $J$  is a ten-thousandths wheel. Every time the disk  $J^3$  rotates once the disk  $J^2$  advances one notch. Every time the wheel  $J^2$  rotates once the wheel  $J'$  advances one notch, and every time the wheel  $J'$  rotates one time the wheel  $J$  revolves one notch. This is in accordance with the ordinary principles of registering mechanisms. The wheel  $J^2$  is provided with a projection  $p^2$ , which engages the wheel  $J'$  at each rotation of the wheel  $J^2$ , and the wheel  $J'$  is provided with a projection  $p'$ , which engages the wheel  $J$  at each rotation of the wheel  $J'$ .

In the upper part of the receptacle  $B$  and directly beneath the top plate  $II$  is a sliding plate  $M$ , having the slots  $m$ ,  $m'$ , and  $m^2$ , which are respectively opposite and substantially in coincidence with the curved slots  $h^3$ ,  $h^4$ , and  $h^5$ . On this horizontal sliding plate  $M$  is a depending lug  $k$ , to which is pivoted the inclined lever  $K$ , the farther end of which is pivoted to a plate  $L$ , which is pivotally supported upon the shaft of the ratchet-wheel  $J^4$ , and which carries a pawl  $l$ , engaging the teeth of the ratchet-wheel  $J^4$ , said pawl being a spring-pressed pawl in that it is acted upon by the spring  $l'$  for the purpose of keeping the point thereof in engagement with the teeth of the wheel  $J^4$ . A flat spring  $L$ , placed below the ratchet-wheel  $J^4$ , is used for the purpose of preventing any reverse movement of said wheel. This ratchet  $J^4$  normally rotates in the direction shown by the arrow, being fed forward by the pawl  $l$ . A spring  $K'$  is attached to the rod  $K$  and also to the wall of the receptacle  $B$ , and acts to retract the rod  $K$  and likewise the plate  $M$  whenever the agency which operates to project said parts in the opposite direction ceases its action and



releases them. It will be obvious that the horizontal sliding of the plate M toward the right will serve to rotate the ratchet-wheel J, and that the extent of the rotation will be governed by the extent of movement of the sliding plate M. Now when the cam F' is thrust downward through the slot  $h^3$  and through the slot  $m$  and acts against the edge of said latter slot, the result will be of course to thrust the sliding plate M toward the right and cause the ratchet-wheel J<sup>4</sup> to be rotated to an extent sufficient to record an advance of five points upon the disk J<sup>3</sup>, and such record will be readily observed through the opening  $i$  in the plate I, it being understood that the figures on the disk J<sup>3</sup> may be read through the opening  $i^3$ , the figures on the wheel J<sup>2</sup> may be read through the opening  $i^2$ , the figures on the wheel J' may be read through the opening  $i'$ , and the figures on the wheel J may be read through the opening  $i$ , all as clearly shown in Fig. 4. If the cam F' instead of going through the slots  $h^3$  and  $m$  is thrust through the slots  $h^4$  and  $m'$ , then the plate M will be driven farther to the right than before and the result will be that the ratchet-wheel J<sup>4</sup> will be given a sufficient movement to cause an advance of ten to be recorded by the disk J<sup>3</sup> and observed through the opening  $i^3$ . Similarly if the cam F' operates through the slots  $h^5$  and  $m^2$  the result will be to slide the horizontal plate M sufficiently far to cause such an operation of the attached mechanism as that an advance of twenty-five will be read upon the disk J<sup>3</sup>. So the operation may go on, the amount which is punched from the card at  $a$  being each time properly registered by the recording mechanism.

In Fig. 8 the card O is represented simply by way of example. Said card has several sections marked "25," several marked "10," and several marked "5." It will be obvious that other kinds of cards may be employed; also that the registering or recording mechanism may be differently arranged to permit a recording of other amounts than five, ten, and twenty-five. There may be more than three amounts recordable, and, if desired, a larger number of slots may be made in the plate H and a consequently larger number of index-wheels may be provided in the recording mechanism.

Numerous changes may be made in the various mechanical parts of my invention in order to adapt it for use in various locations and for manifold purposes without destroying the identity of the invention or varying from the legitimate breadth of the claims hereto appended.

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

1. In an automatic check-punch, the combination with a punching-die, of an actuating-cam, a lever pivoted thereto and provided with a projecting cam, a slotted plate having di-

vision-plates thereon to guide the projecting cam, and registering mechanism operated by the projecting cam simultaneously with the punching operation, substantially as described.

2. In a self-registering check-punch, the combination with a spring-provided punching device, of a cam operating thereon, a lever pivoted to the cam and provided with a projecting cam, a slotted plate having division-plates thereon to guide the projecting cam, registering mechanism, consisting essentially of a sliding plate and registering-wheels operated thereby, all arranged so that the cam of the lever may shift the sliding plate simultaneously with the punching operation, substantially as described.

3. The combination of a punching device provided with a spring, a pivoted cam operating on said device, a lever pivoted to the cam and having a projecting pin engaging a slotted plate affixed to the cam, said lever being also provided with a projecting pointed cam, and registering mechanism, consisting essentially of the horizontally-sliding plate and registering-wheels operated by said sliding plate, all arranged so that the projecting pointed cam on the lever may slide the plate, substantially as described.

4. The combination of the punching device, the operating-cam thereof, a lever pivoted to the cam and having a projecting cam, a slotted plate having inclined division-plates secured thereto, a sliding plate arranged beneath the latter plate, a train of registering-wheels operated by said sliding plate, all arranged so that the sliding plate may be actuated by the lever-cam simultaneously with the punching operation, substantially as described.

5. The combination with the punching device, its actuating-cam, and the operating cam-provided lever, the slotted plate having guiding division-plates, the slotted horizontally-sliding plate arranged beneath the latter plate, a train of registering-wheels, a lever pivoted to the sliding plate and provided with a retracting-spring, and a feed-pawl whereby the motion of the sliding plate is communicated to the train of registering-wheels, substantially as described.

6. The combination with the punching device, its actuating-cam and the cam-provided operating-lever, of the registering mechanism, consisting essentially of the stationary slotted guide-provided plate, the horizontally-sliding plate beneath the latter adapted to be operated by the action of the lever-cam, a train of registering-wheels, a rod pivoted to the sliding plate and having a retracting-spring, a pawl-carrying plate pivoted to said rod and supported upon the shaft of the units-wheel, together with a casing for the registering mechanism, substantially as described.

7. The combination of the punching device, its actuating-cam provided with a slotted plate, the cam-provided operating-lever piv-



oted to said cam and having a projection in  
the aforesaid slotted plate, and the register-  
ing mechanism, consisting essentially of the  
horizontal slotted plate having numerals de-  
5 lineated thereon indicative of the amounts  
punched, the sliding plate beneath the said  
slotted plate, said sliding plate being itself  
slotted and engageable by the cam-lever, to-  
gether with the train of registering-wheels

operated by said sliding plate, substantially as  
as described.

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

CARL THEODORE PAINTER.

Witnesses:

GEORGE GARDENHIRE,  
EDGAR MCKENNEY.