

C. F. CROWDER.
CASH REGISTER.

APPLICATION FILED JULY 14, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

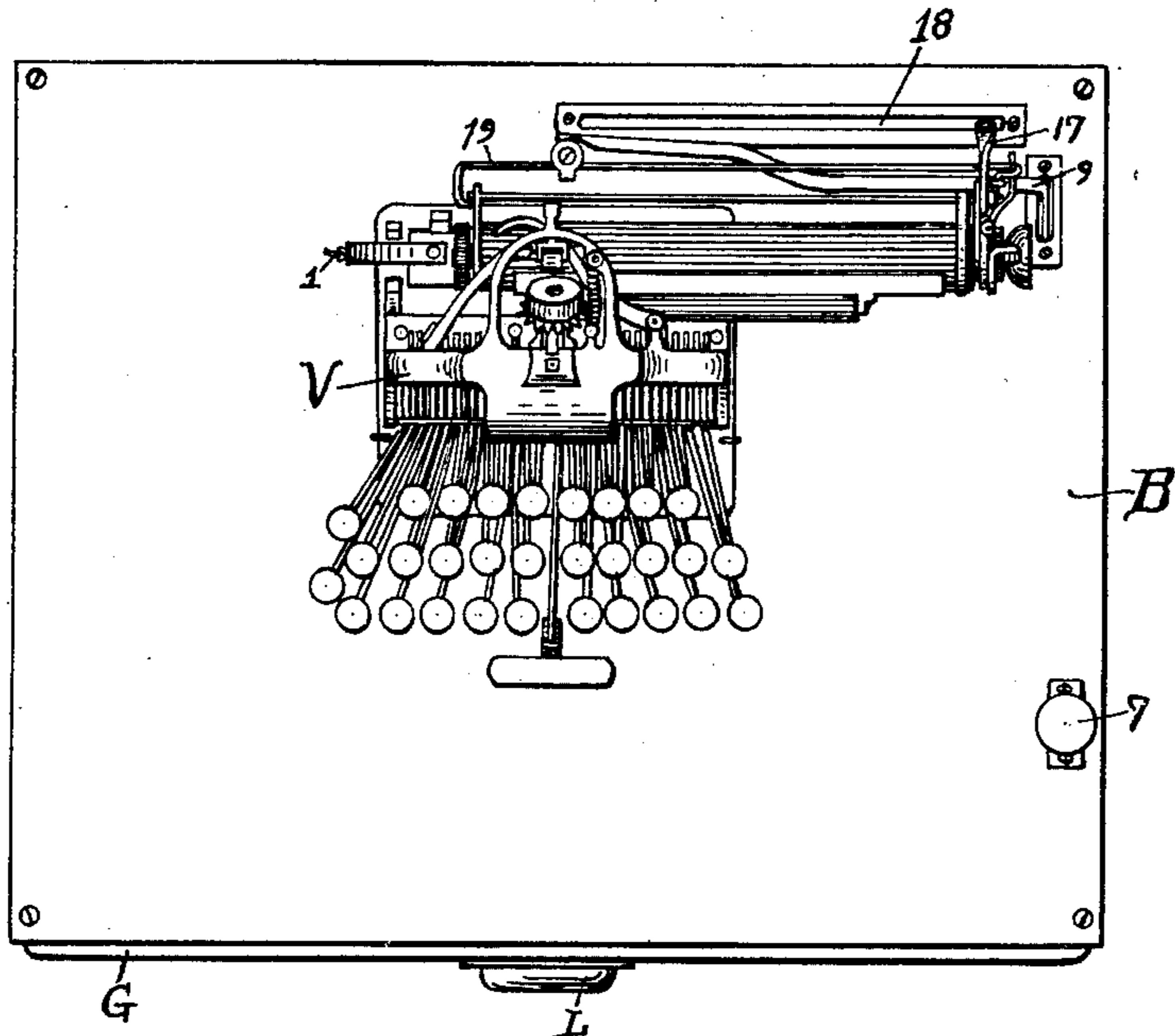


Fig. 1.

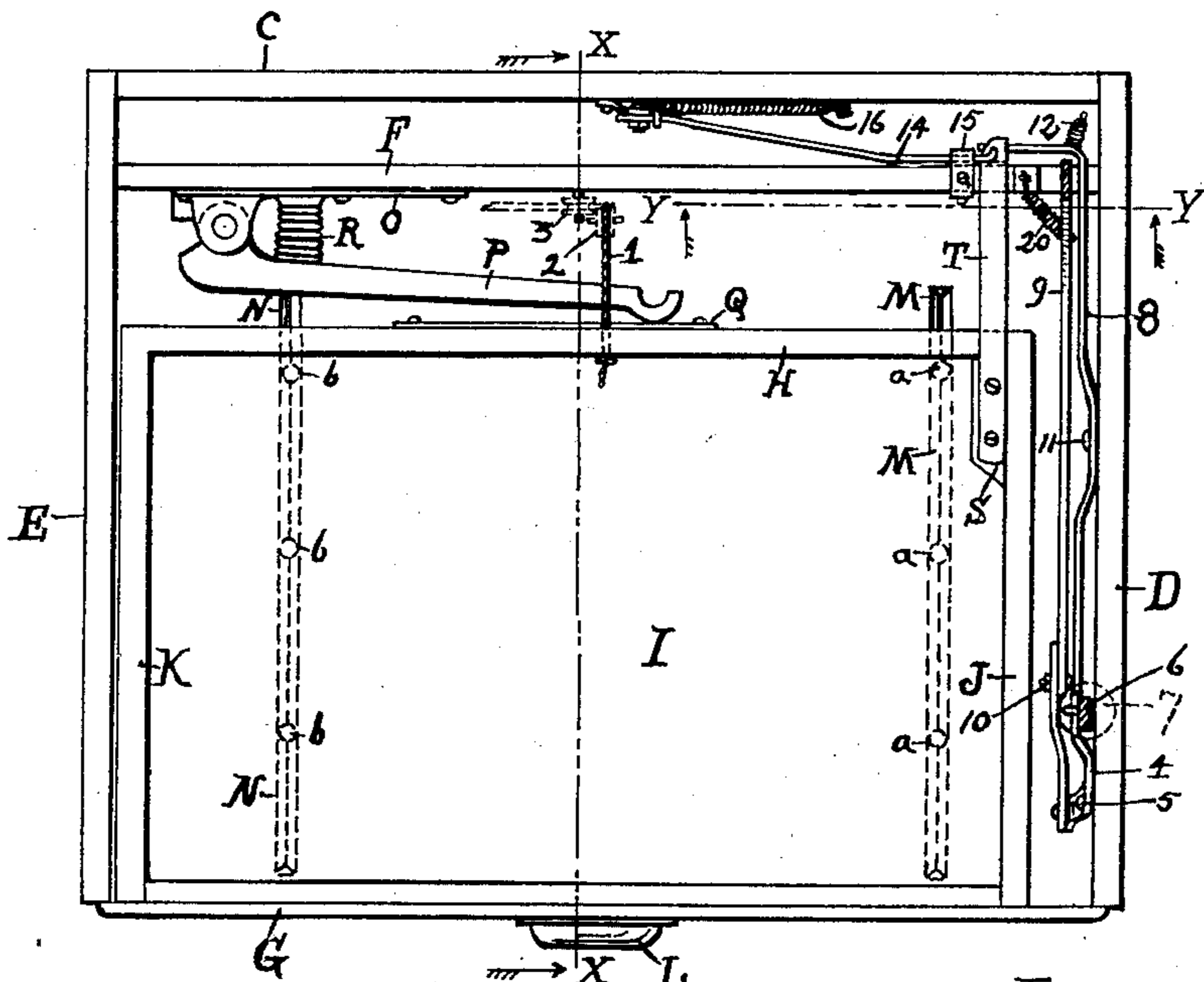


Fig. 2.

Witnesses:

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R. G. Harrell.

Inventor:

C. F. CROWDER;
by his attorney,
Robert W. Harrell.

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3 SHEETS—SHEET 2.

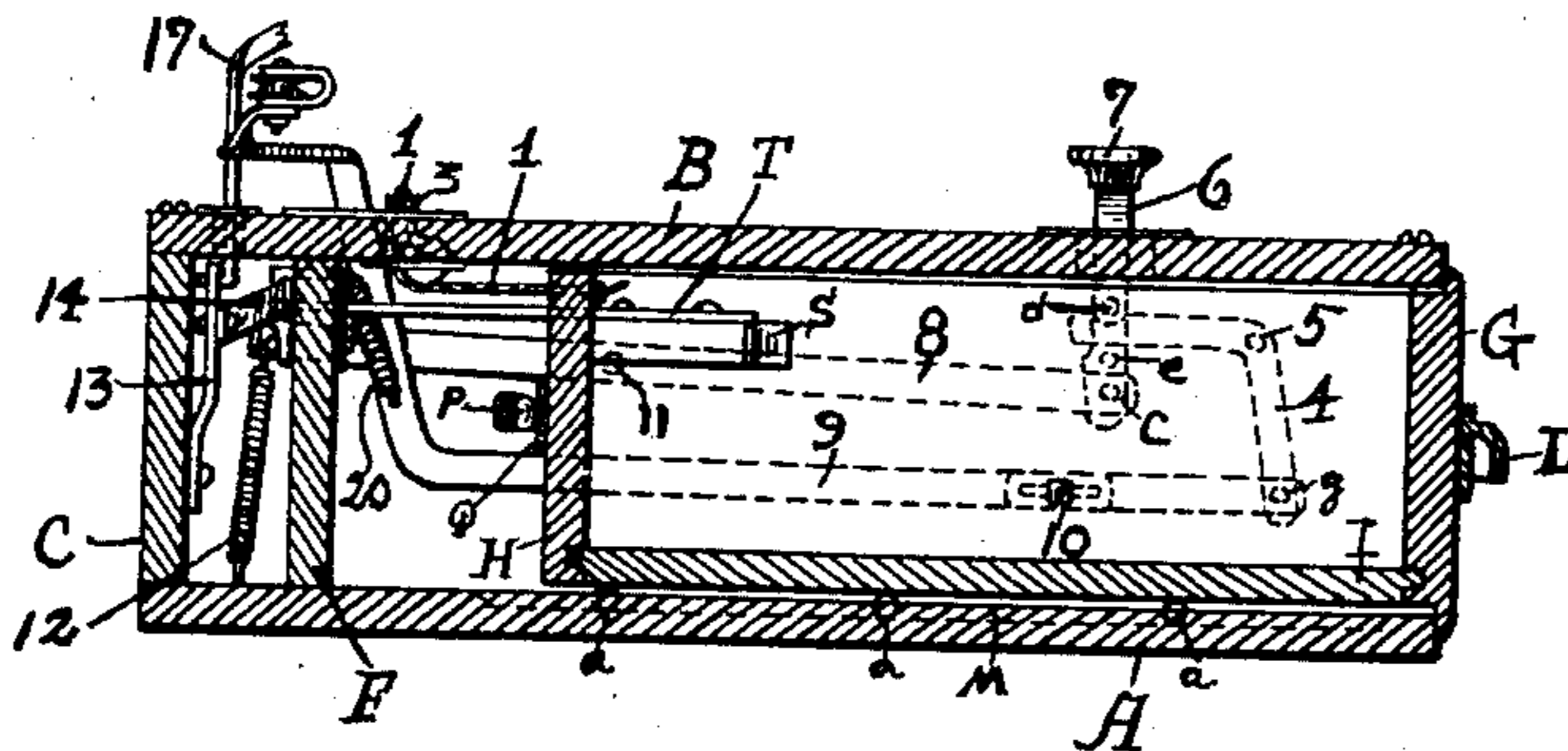


Fig. 3.

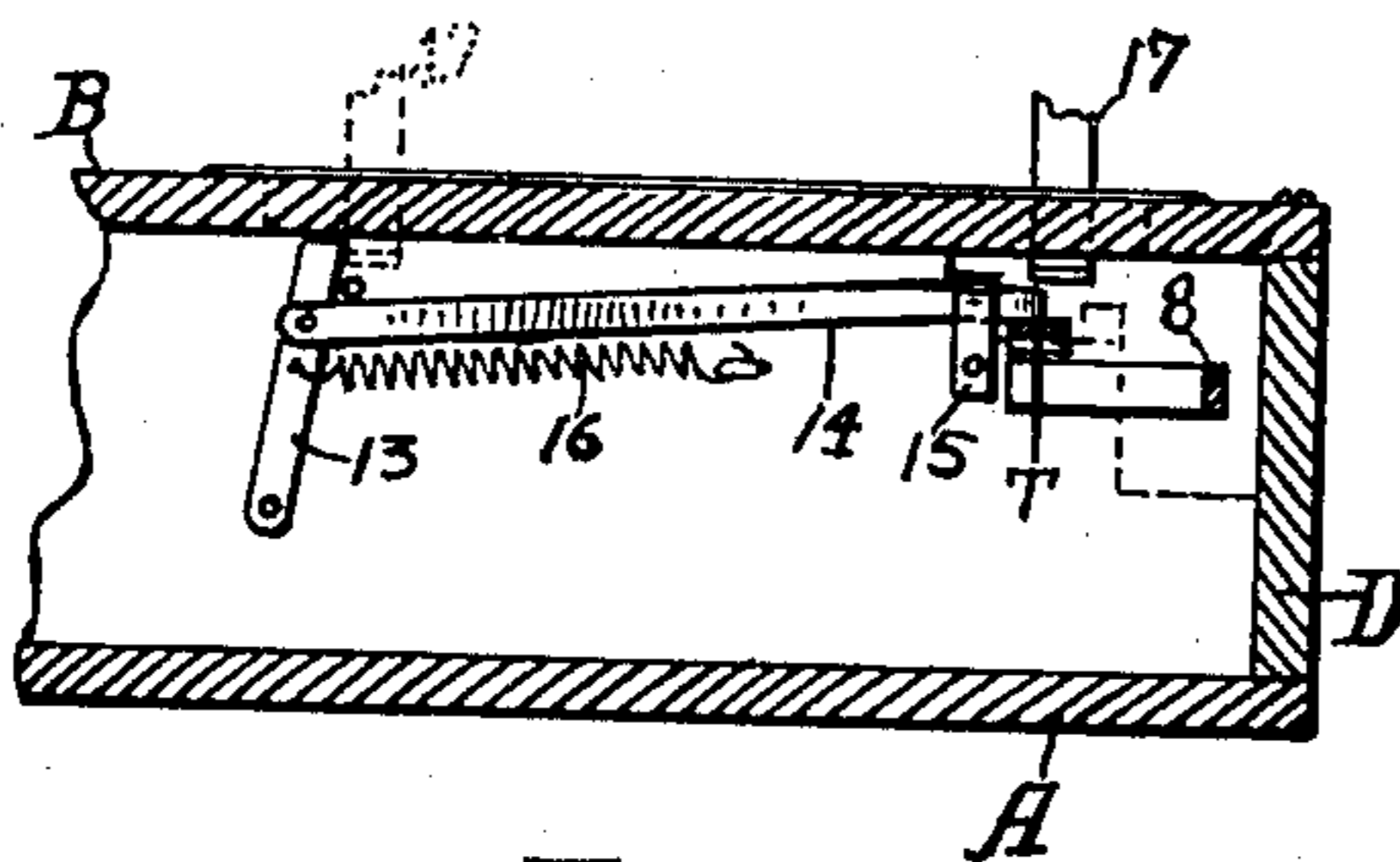


Fig. 4.

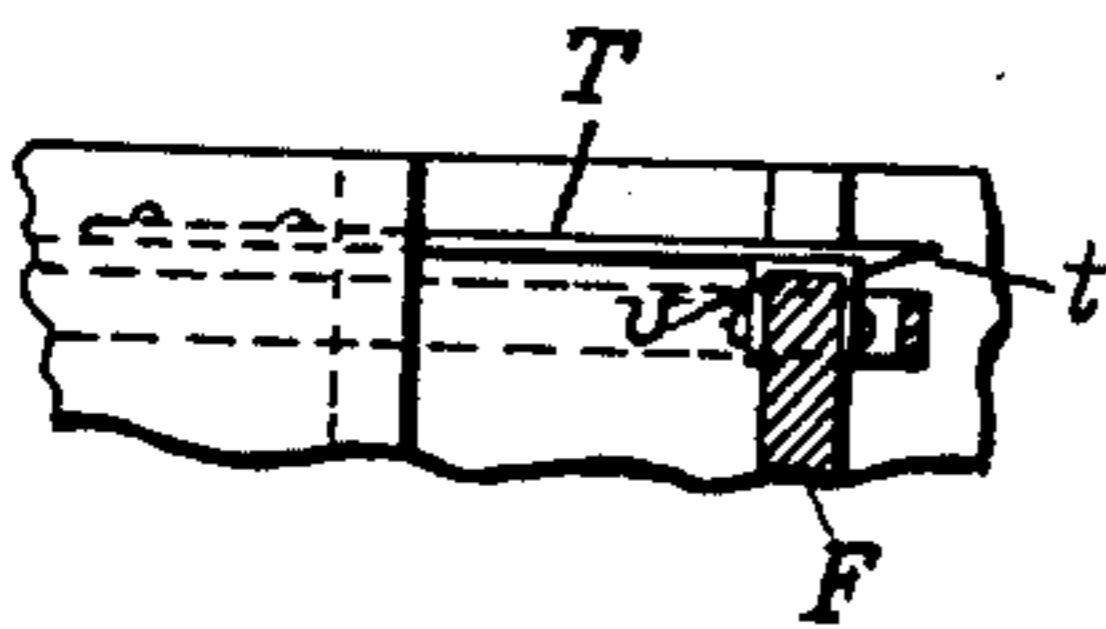


Fig. 5.

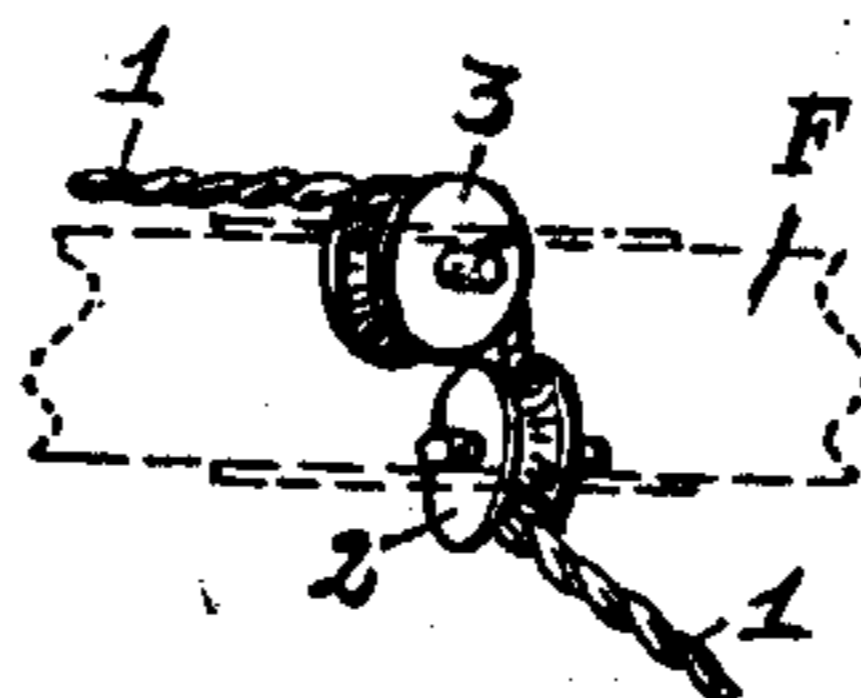


Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES F. CROWDER, OF RICHMOND, INDIANA, ASSIGNOR OF ONE-THIRD
TO J. BENNETT GORDON, OF RICHMOND, INDIANA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 733,815, dated July 14, 1903.

Application filed July 14, 1902. Serial No. 115,422. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. CROWDER, a citizen of the United States, residing in the city of Richmond, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Cash-Registers; 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.

The invention relates to cash-registers, or more particularly to a cash-drawer and operating mechanism therefor, in combination with a type-writing machine or recording mechanism.

The invention has for its object the provision of a cash-drawer in combination with a type-writing machine, whereby a complete and accurate record of various cash transactions may be recorded in such a manner as to keep a permanent record thereof and accounting for all moneys placed in and taken from the cash-drawer.

Another object is to provide a cash-register whereby a tally may be kept of all sales and expenditures and of all receipts and disbursements and whereby the money-drawer cannot be opened without first having made a printed record of the transaction.

Another object is to provide a cash-register which will be simple in character, compact in form, easily operated and maintained, and by which various transactions may be recorded with certainty and precision, and another object is the provision of a new article of manufacture in a cash-register which can be manufactured and sold at a comparatively low price.

Other objects and advantages of my invention will appear from the following specification and from the drawings forming a part thereof, and the invention also consists of other features which are specifically set forth in the claims hereunto appended.

By means of my improvements the movements of the different parts of the device are easily, automatically, and quickly controlled and the operator is enabled to accomplish the objects sought with certainty and precision and to time such movements with exactness

without any supervision other than is required to operate the keys.

The invention consists in a cash-register embodying certain new and novel features and details of construction and relative disposition of parts, as hereinafter particularly set forth, illustrated in the drawings, and incorporated in the claims terminating this specification.

In detail the invention relates to cash-registers substantially as shown in the accompanying drawings, in which—

Figure 1 is an external top plan of the invention. Fig. 2 is a top plan of the interior mechanism, the top plate and type-writer being removed. Fig. 3 is a cross-section of the invention, taken on the line X X of Fig. 2 in the direction of the arrows. Fig. 4 is a detail view taken on the line Y Y in the direction of the arrows. Fig. 5 is a detail of the drawer-securing latch. Fig. 6 is a detail of the right-angular pulleys and a portion of the cord operating thereon, and Fig. 7 is a rear elevation of the invention with the back of the base removed.

Similar letters and figures of reference denote and refer to like parts throughout the several views.

In the following specification for convenience the lower part of the invention, as shown in Figs. 1 and 2, will be regarded as the front, the upper part of said views will be regarded as the rear, the right-hand end as the right, and the left-hand end as the left.

The terms "upward," "downward," "right," "left," "front," "rear," and other similar terms, as will hereinafter appear, are simply used for convenience of description, and it is not intended by the use of such terms to limit the invention or its operation to the positions indicated.

The base of the device consists of a box in which A represents the bottom; B, the top; C, the back; D and E, the right and left sides, respectively. F represents a partition parallel with, located near, and of same size as the back C. I provide a cash-drawer which is adapted to slide in said base forward and backward; and it consists of the front member G, the back H, the bottom I, and the

right and left sides J and K, respectively. The face side of the member G is provided with a suitable handhold L. The interior of the drawer thus formed should be divided
 5 into suitable compartments for various kinds of change. The bottom I of the drawer should not contact with the bottom A of the base, but is adapted to be carried parallel there-
 10 with by the balls *a* and *b*, which travel in the grooves M and N, by which said balls are guided.

Secured to the forward face of the parti-
 tion F, near the center of the left end there-
 of, is a hinge member O, to which is pivotally
 15 mounted the arm P, which latter extends to the right slightly beyond the center of the base, and its free end is provided with a curved
 contacting-surface which is adapted to con-
 tact with the plate Q, secured on the rear
 20 face of the back H. The arm P is adapted to be held in contact with the plate Q by the
 coil-spring R and to normally press the
 drawer outward for substantially two-thirds
 25 of the length of the drawer. Secured on the
 inside of the drawer a slight distance below
 the upper edge and at the junction of the
 members H and J is a block S. Secured on
 the upper edge of the block S, extending rear-
 30 ward through a notch in the back H, is a flat
 spring T. The spring T extends rearward
 through a notch in the upper edge of the par-
 tition F. The bottom of said notch in the par-
 tition F is reinforced with a metal member
 U, Fig. 5, the rear upper corner of which is
 35 adapted to engage the shoulder formed by
 the half-arrow point *t* of the spring T. By
 this arrangement it is apparent if the drawer
 be opened that when closed the bevel of the
 point *t* will carry the point *t* of the spring T
 40 over the member U and the shoulder of the
 point *t* will engage the upper rear corner of
 the member U and the drawer will be locked
 in that position, and should the shoulder of
 the point *t* be disengaged from the member U
 45 the spring R will cause the arm P to auto-
 matically open the drawer.

Secured on the top surface of the top mem-
 ber B is a type-writing machine, which may
 be of any well-known make or it may be a
 50 machine made especially for operation in
 connection with this invention.

The numeral 1 represents a cord one end
 of which is secured in the center of the back
 H of the drawer. The cord 1 then extends
 55 rearward, then upward through an aperture
 in the top B at a point directly under the pa-
 per-carriage of the type-writer V, and then
 extends to the left and is secured to the left
 end of the paper-carriage. Mounted in the
 60 lower edge of said aperture is a pulley 2, and
 at right angles thereto in the upper edge of
 said aperture is a similar pulley 3, as shown
 in detail in Fig. 6. The cord 1 passes under
 and over said pulleys 2 and 3, respectively,
 65 by which the course of travel is turned, as
 stated. By this arrangement it will be seen
 that the drawer being closed the type-writer

can be operated until the carriage is carried
 to the extreme left, and should the drawer
 then be opened this movement will return the
 70 carriage to the extreme right in readiness for
 a new line. Between the sides J and D is a
 space for the mechanism, which will herein-
 after be described.

The numeral 4 represents a substantially
 75 right-angular arm pivotally mounted near
 its center to the inner face of the side D by
 the pivot 5.

6 represents a perpendicular arm passing
 through a slot in the top B, its upper end be-
 80 ing provided with a key 7. Pivotally mount-
 ed to the lower end of the arm 6 by the pivot
c, at right angles thereto and extending rear-
 ward therefrom, is the lever 8. Extending
 inward from the arm 6 and secured thereto
 85 are the two lugs *d* and *e* to engage the upper
 end of the arm 4. Pivotally secured to the
 lower end of the arm 4 by the pivot *g* is the
 arm 9, which extends rearward and should
 be made in two parts overlapping each other
 90 and the parts united by a thumb-screw 10,
 by which the length of the arm 9 may be ad-
 justed. The lever 8 is pivotally mounted by
 the pivot 11 to the inner face of the side D
 and then extends rearward through and be-
 95 yond the partition F, where it is turned in-
 ward at right angles, and this inner extension
 is adapted to engage the rear end of the spring
 T for lifting it from engagement with the
 member U. The lever 8 is held normally
 100 down out of engagement by the coil-spring
 12, which extends from it to the bottom A.

13 represents a perpendicular arm with its
 lower end pivotally mounted to the inner face
 of the back C, its upper end terminating just
 105 underneath the top B. Pivotally secured to
 the arm 13, below its upper end and at right
 angles thereto, is the arm 14, which extends
 to the right, and a portion thereof lies par-
 110 allel with and contacting with the rear face
 of the partition F. The free end of the arm
 14 passes through the hanger 15, by which it
 is surrounded with only space sufficient for
 it to move laterally and beyond which it ex-
 115 tends over the point of the spring T and is
 normally held in this position by the spring
 16, which latter is secured to the center of
 the arm 13 and to the back C, as shown, by
 which it is apparent that the arm 13 is nor-
 120 mally held to the right, and consequently the
 free end of the arm 14 is in contact with and
 above the point of the spring T, by which the
 shoulder of the point *t* is held in engagement
 with the member U, and while the arm 14 is
 125 in this position the drawer cannot be opened.

Extending rearward and then downward
 from the right-hand end of the carriage is the
 arm 17, which passes through the slot 18,
 formed in the top B, and is then bent rear-
 130 ward a slight distance to engage the upper
 end of the arm 13. This arm is at all times
 carried laterally by the carriage and slides in
 the slot 18, and the drawer can only be opened
 when the carriage and arm 17 have reached

almost their extreme leftward movement, at which point the lower end of the arm 17 will engage the upper end of the arm 13, pushing it slightly to the left, which movement will withdraw the free end of the arm 14 from contact with the point of the spring T, and then by pressing on the key 7 the rear end of the lever 8 will press up on the point of the spring T and the arm P will then throw open the drawer and the carriage will be returned to the extreme right. The point of the arm 14 is bent slightly rearward at an angle and the inner corner of the point of the spring T is beveled at a corresponding angle in order that when the drawer is closed the spring T will push the arm 14 to the left until the shoulder of the spring T has engaged the member U, after which the arm 14 will return to its normal position, as shown. The arm 9 extends rearward from the arm 4 and then upward through a slot in the top B, and it then extends to the left to near the center of the machine, where it is slidably mounted to the rod 19, which latter extends rearward from and lies parallel with the carriage, to which it is secured at either end. The rod 19 is adapted to be moved up and down a slight distance by means of the arm 9, whereby each full stroke of the lever will cause the rod 19 to turn the paper-roll one space in any well-known manner. The arm 9 is returned to its normal position by the coil-spring 20 after the paper-roll has been turned one space.

Supposing the drawer to be closed and the carriage in the position shown in Fig. 1, a sheet of paper may be placed on the roll in the usual manner. The keys of the type-writer are then operated to print on the paper any entry desired, by which operation the carriage is carried to the left step by step until the end of the line is reached, when the arm 17 will engage the arm 13 and withdraw the arm 14 from engagement with the spring T. Should the key 7 now be pressed, the lever 8 will release the shoulder of the spring T from engagement with the member U. The action of the spring R will cause the arm P to push open the drawer. The latter, pulling on the cord 1, will return the carriage to the right. The lower end of the arm 4 will be carried forward by the action of the pressure on the key 7, carrying with it the arm 9, by which the paper-roll will be turned one space. The proper change being made in the contents of the drawer to correspond with the entry made by the type-writer, the drawer is then closed and cannot again be opened until another entry is made, as before.

The advantages of employing my invention in connection with a type-writing machine will be apparent to any one familiar with the art, and while I have illustrated and described the best means now known to me for carrying out my invention I wish it to be understood that I do not restrict myself to the exact details of construction shown, but hold that any slight changes or variations in such

details as would suggest themselves to the ordinary mechanic would fall within the limit and scope of my invention.

Having now fully shown and described my invention and the best mode for its construction and use to me known at this time, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a cash-register, the combination with a type-writing machine, a paper-carriage and a paper-roll mounted on the type-writing machine, a base on which the type-writing machine is mounted, a drawer adapted to be operated in the base, a spring-actuated mechanism for opening the drawer, and a catch for securing the drawer closed, the means for returning the paper-carriage of the type-writer to its starting-point, the mechanism for locking the drawer and allowing it to be opened only when the carriage of the type-writing machine has arrived at a predetermined point, the mechanism operated by the key 7 whereby the drawer is released and the device for revolving the paper-roll, all substantially as shown and described and for the purposes set forth.

2. In a cash-register, the combination with a base provided with a cash-drawer and a type-writing machine mounted thereon, the mechanism for releasing the cash-drawer and allowing it to open when the paper-carriage of the type-writer has reached a certain point, and means for automatically returning the paper-carriage to its starting-point and advancing the paper-roll one space, all substantially as shown and described.

3. In a cash-register, the combination with a cash-drawer inclosed in a suitable base and a type-writing machine mounted on the base, the cord 1 secured to the rear of the drawer and then extending rearward, upward, and to the left and secured to the paper-carriage, the pulleys 2 and 3 mounted in an aperture in the top of the base at right angles to each other and adapted to carry the cord 1, all substantially as shown and described and for the purposes set forth.

4. A type-writing machine mounted on a base provided with a cash-drawer, means whereby the cash-drawer is locked when within the base, and means whereby the cash-drawer is released and adapted to open by the action of the type-writing machine.

5. In a cash-register the combination of a base provided with a drawer, securing and opening mechanisms and a type-writing machine mounted on said base; the lever 8, pivotally mounted to the arm 6, and by the pivot 11 to the side D then extending rearward through and beyond the partition F where it is turned inward at right angles and is adapted to engage the rear end of the spring T; of the arm 6 pivoted to the lever 8; of the pivot 11 attaching the lever 8 to the side D; of the partition F dividing the interior of the base; the arm 4 pivotally mounted near its center to the side D its upper end adapted to

engage the lugs *d* and *e* and its lower end pivoted to the arm 9; the arm 9 which extends upward and to the left where it is slidably attached to the rod 19 of the type-writing machine; and the rod 19 adapted to be moved up and down for revolving the paper-roll, all substantially as shown and described and for the purposes set forth.

6. A cash-register in combination with a base provided with a drawer with securing and opening mechanisms and a type-writing machine mounted on said base, the arm 13 pivoted to the back C and held normally to the right by the coil-spring 16, the arm 14 at right angles thereto, the free end of which is adapted to rest on the rear end of the spring T, the hanger 15 for guiding the arm 14 and holding it from vertical movement, the arm 17 extending down from the paper-carriage, through the slot in the top B, the lower

end of which is adapted to engage the upper end of the lever 13 and move it to the left, all substantially as shown and described.

7. In a cash-register, the combination with a base, a drawer slidably mounted in the base, a type-writing machine mounted on the base above the drawer, means whereby the drawer may be opened only when the type-writing-machine carriage has completed a line, and means for automatically returning the type-writing-machine carriage to the beginning of a new line when the drawer is opened, all substantially as shown and described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES F. CROWDER.

Witnesses:

R. W. RANDLE,
R. E. RANDLE.