(No Model.)

3 Sheets—Sheet 1.

E. T. TAYLOR.

CASH REGISTER AND INDICATOR.

No. 494,534. Patented Mar. 28, 1893.

Fig. 1.

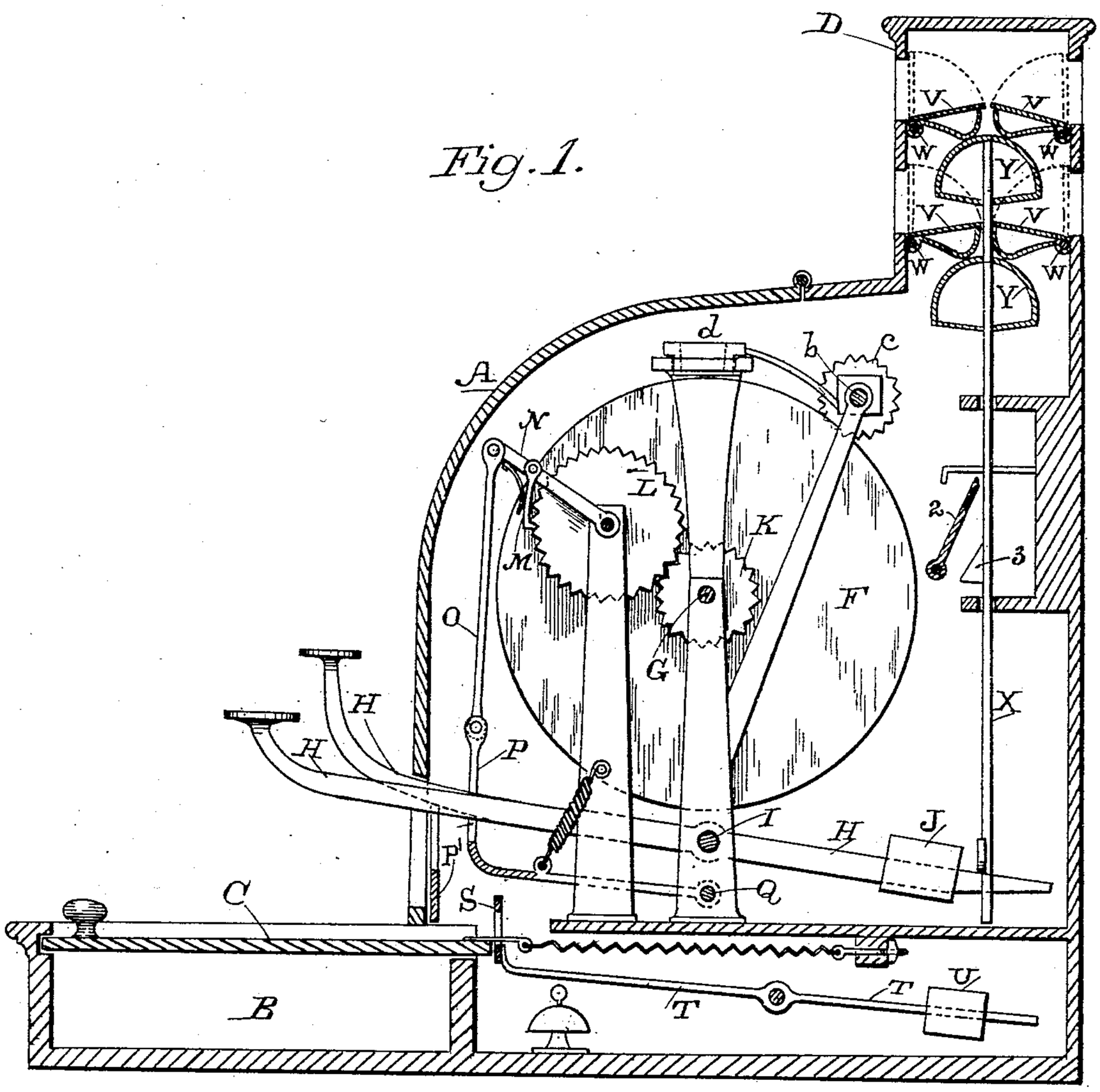
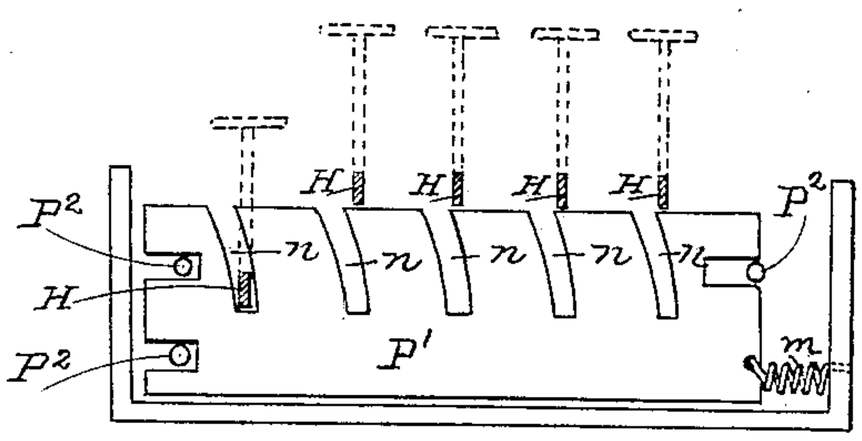


Fig. 5



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Attys

(No Model.)

3 Sheets—Sheet 2.

E. T. TAYLOR.

CASH REGISTER AND INDICATOR.

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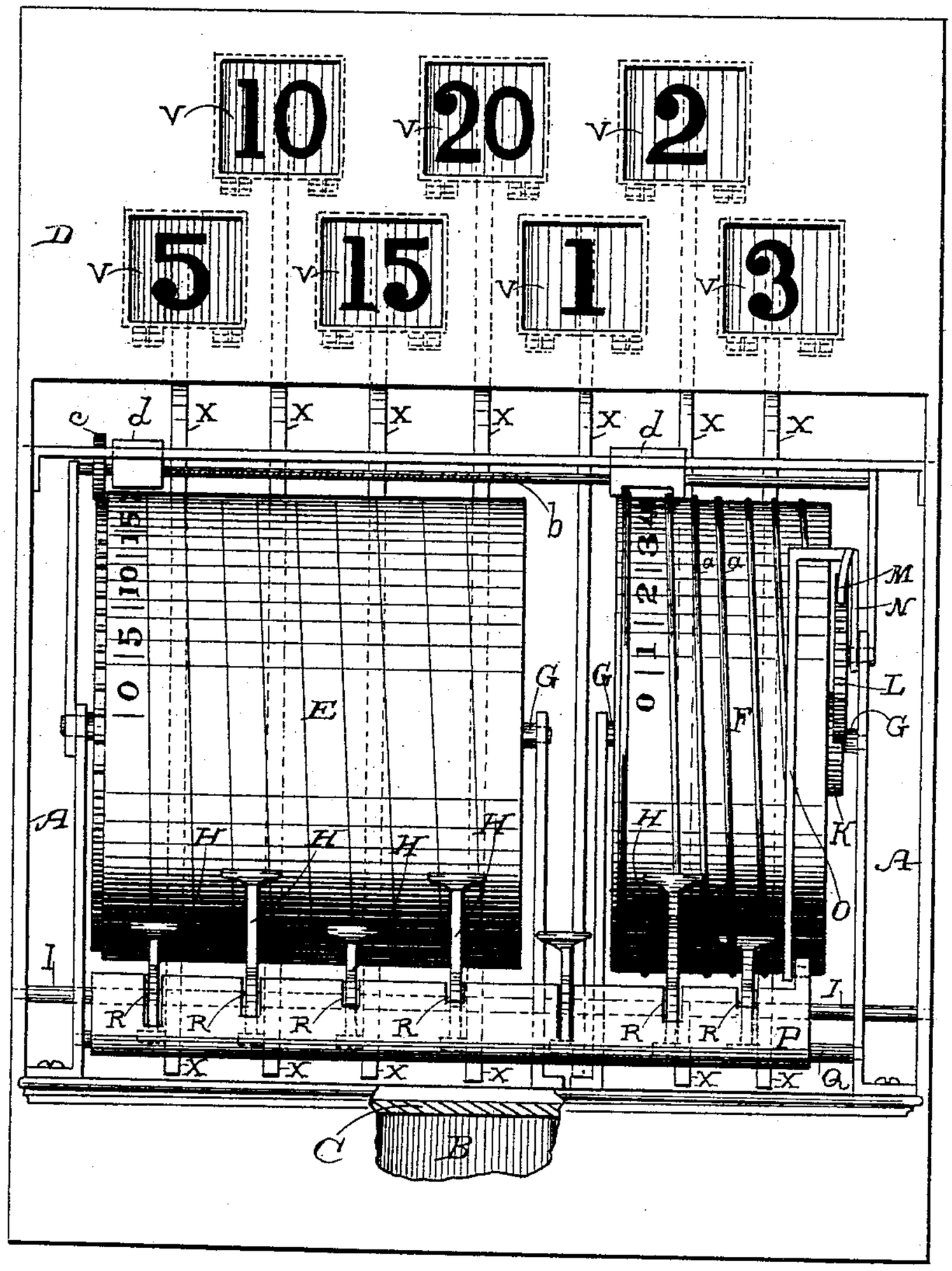
Fig. 2



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(No Model.)

3 Sheets—Sheet 3.

E. T. TAYLOR.

CASH REGISTER AND INDICATOR.

No. 494,534. Patented Mar. 28, 1893.

Fig. 3

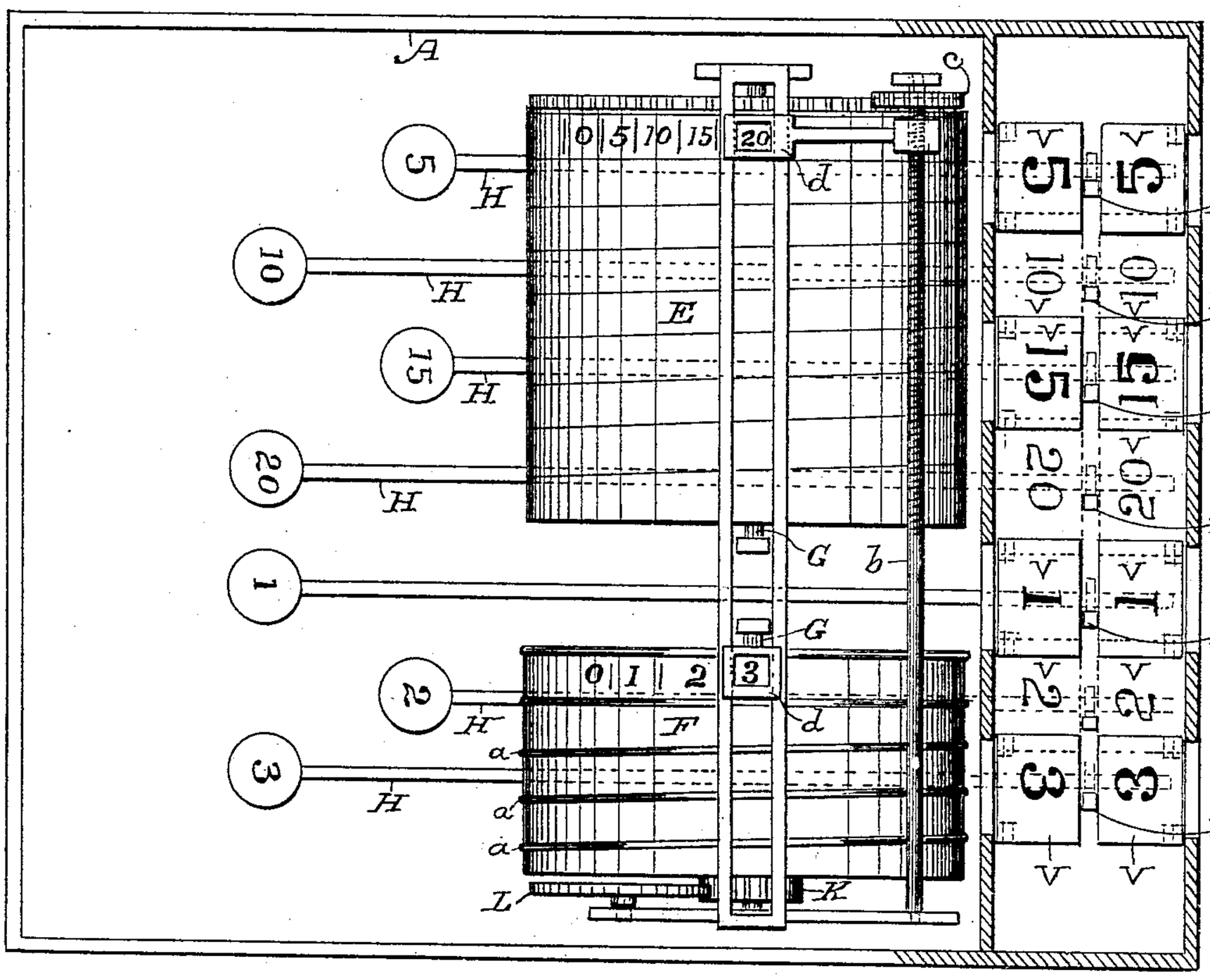
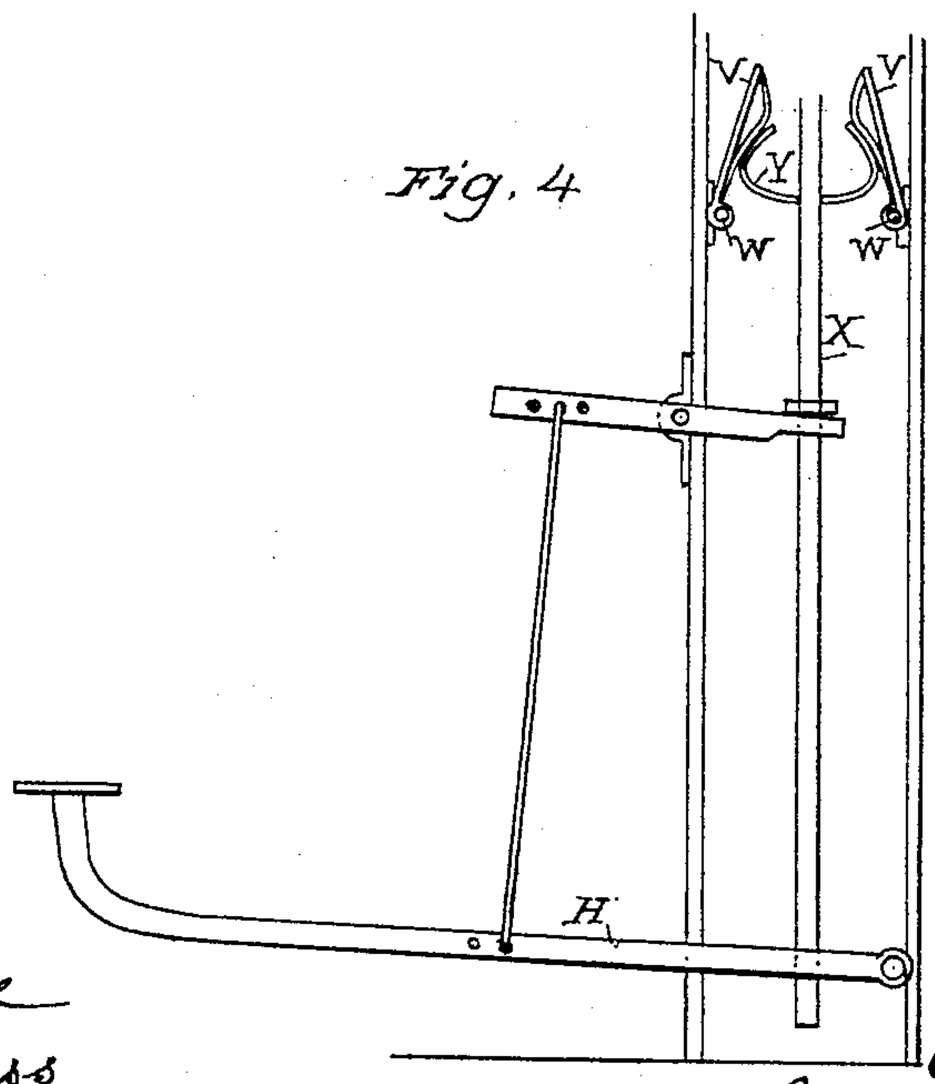


Fig. 4



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UNITED STATES PATENT OFFICE.

EDWARD T. TAYLOR, OF OAKLAND, CALIFORNIA.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 494,534, dated March 28, 1893.

Application filed December 1, 1892. Serial No 453,757. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. TAYLOR, a citizen of the United States, residing at Oakland, Alameda county, State of California, have invented an Improvement in Cash-Registers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to registers by which the amonnt of cash received is indicated, and also by which consecutive amounts are added up so that the total may be observed at any time.

It consists in certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side sectional elevation of the apparatus. Fig. 2 is a front view. Fig. 3 is a plan with horizontal section of that part of the case containing the indicating plates and figures. Fig. 4 is a view showing a modification of the indicating mechanism. Fig. 5 is a view of the stop plate.

A is a casing within which the mechanism is contained.

B is a cash drawer situated below and in front of the casing A, and having a sliding spring or weight actuated cover C which is automatically opened whenever one of the levers is depressed, to indicate an amount of cash received, and which may be again closed and automatically locked after the lever has been released.

D is a rectangular extension of the upper and back part of the casing having openings upon opposite sides through which the figures indicating the amount of the purchase are exposed.

In this apparatus I employ two cylinders E and F. One of these cylinders has marked spirally around its periphery figures indicating cents with any desired interval between them. In the present case I have shown intervals of five, so that five, ten, fifteen cents, &c., are indicated up to any desired amount. The other cylinder is in like manner divided to indicate dollars, with intervals between. These cylinders are mounted to rotate upon a shaft or shafts G, and they are caused to rotate upon these shafts by means of lever arms H which are fulcrumed, as shown at I, so that either of the arms may be depressed independently of the other, and they are returned to their normal position, as soon as released, by means of weights or springs as shown at J. These arms act upon the drums E or F, as the case may be by means of pawls or ratchet teeth. The movement of the different arms H is regulated so that the dollar drum, for instance, may be moved forward to indicate one dollar by pressing upon the lever which acts upon the plate having the most limited movement, and which will advance the drum only one point, while a lever to indicate fifteen or twenty dollars would haye a considerably greater amount of movement.

It will be manifest that the intermediate mechanism may be made in various ways. In the present case I have shown it as consisting of a gear-wheel K fixed so as to rotate the drum F by the action of a second gear-wheel L which is moved by a pawl M pivoted to a lever N which is fulcrumed upon the shaft of the gear L so as to move about the same center. The lever N is connected by a rod O with a plate P which is fulcrumed to the standard as shown at Q. This plate has slots made in it as shown at R, corresponding with each of the levers H, and one of these levers moves up and down in one of the slots. These slots are all made of different depths, the one corresponding with the lever which is to operate the drum to indicate one dollar being so deep that the lever does not strike the bottom of the slot until it has nearly reached the lowest point to which it can be pressed. It, therefore, moves the plate and through it the gears and drum, only sufficiently to indicate one dollar on the periphery. For any amount above one dollar the slot R of the corresponding lever H is made of such depth that the lever will strike it so as to advance the drum two, three, or more points, corresponding to the number of dollars to be indicated, twenty dollars being the highest amount recorded by one movement of the lever H. With the depression of each of the levers H, the cover C of the drawer B is opened by means of a bar S which extends across the apparatus beneath the plate P, so that when the latter is depressed it also depresses the bar S. This forces down the stop

levers T which are fulcrumed in the space beneath the machine and behind the drawer B until the rear edge of the cover C is released, when it will be moved backward by the spring or weight attachment which actuates it and the drawer will be opened for the deposit of the amount received. As soon as the lever H is released, the plate P is drawn up by a spring or weight, as shown, and the lever T is correspondingly actuated by a spring or weight as shown at U. The drawer cover is then pulled forward by the operator until it is in front of the stop bar T which immediately moves up behind it, and this locks it.

In order to indicate the amount of each purchase I employ a series of plates V. One edge of each plate is hinged, as shown at W, just beneath one of the openings in the extension D at the back of the case, and when the plates are moved about the hinges so as to stand in a vertical position, the figures will be exposed in the openings. When the plates are released they drop into an approximately horizontal position within the case D and are not visible. In order to operate these plates I have shown vertically moving rods X, the lower ends of which are engaged by the rear ends of the levers H, so that when the front ends of the levers are pressed down, the rear ends are forced up and move the vertical rods X with them. Upon the upper ends of these rods X are fixed the arcs or segments Y, and these segments engage the movable edges of the plates V so as to force them upward, turning in the arc of a circle about their hinges W. These plates are shown in duplicate, one facing toward the machine and the operator, and the other toward the back of the apparatus, so that the operator and the customer can inspect the figures equally well if the apparatus be placed with the back toward the customer. When the lever which operates either of the plates is released and returns to its normal position, the plates V carrying the figures, will remain exposed until released by the raising of another set of indicating plates, which acts to release the first set and allow them to fall by gravitation into their normal position in which they are not visible. This takes place as follows: 2 is an inclined bar, the ends of the lower edge of which are fulcrumed so that the upper edge rests against the vertical rods X. Each of these rods has a lug 3 fixed to it which is normally below the contacting edge of the bar 2. When one of these rods X is raised by pressing upon the corresponding hand lever, its lug 3 passes above the edge of the plate 2, and is thus prevented from falling when the hand lever is released. When another rod X is raised, its lug 3 forces the edge of the bar 2 back, and releases the rod which is held up by the plate, and it falls and allows the indicators controlled by it to resume their normal position, and the last one raised is held up by the bar 2 in the same manner.

In the present case I have shown two series of openings and plates, one corresponding with the dollar drum and its plates, being operated in unison with the movements of that drum, and the other corresponding with and actuated by the drum which indicates cents. These drums are of sufficient length in the direction of the line of the axis to indicate all the transactions of one or more days, and the lines of figures upon them are spirally arranged. Each of the drums has an indicator through which to observe the lines of figures on the drum, and these indicators are moved along parallel with the axis to correspond with the number of revolutions of the drum. This movement may be accomplished either by means of ribs or flanges, as shown at *a* on the drum F, or by means of an independent screw-shaft *b* actuated by a gear *c* which is engaged by a corresponding toothed gear movable with the drum as shown in the drum E. In the first case, the projecting flanges upon each side of the row of figures runs spirally around the drum so that the register indicator *d* is advanced the distance between one pair of these flanges at each revolution of the drum, and at the end of the time when the drum is to be inspected it is only necessary to look at the register indicator, and the amount of money received for that time will be shown at once, because each movement of one of the levers H advancing the drum a space equal to the amount which has been received will add it to the amount previously indicated upon the drum. When the screw-shaft *b* is employed and actuated from the periphery of the drum, or from any proportionate gear, it is only necessary to make the threads of the screw of such fineness that when the drum has performed one revolution the screw will have advanced the indicator *d*, which it carries, a distance equal to the space between two of the lines of figures which encircle the drums.

In order to prevent more than one lever H being depressed at one time, a transversely sliding plate P′ is fitted to move on guide pins P^2, and is held normally to one side by a spring *m*. The upper edge of this plate is slotted with inclined slots *n*. When all the levers H are up the slots *n* are in line beneath the levers, but when either lever is pressed down, it enters the corresponding slot *n*, and by reason of the inclination of the slot the plate will be moved to one side, as shown, so that none of the other levers will enter their slots while this lever is down. When it is released the spring *m* will act to return the plate to its normal position.

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

1. In a cash register, one or more drums having spirally arranged rows of figures upon the periphery, pawl and ratchet mechanisms by which the drums are advanced, hinged plates

connected with the pawl carrying levers, hand levers fulcrumed so that the depression of either of the levers will move the plate and actuate the drum, slots of different depths made in the plates in the line of movement of the levers whereby the distance to which the drum is advanced by either lever is determined, a cash drawer having a sliding cover, a stop bar by which said cover is locked in place when closed, a vertically movable bar S which is engaged by the pawl actuating plate P when it is depressed, whereby the cover of the drawer is released and automatically opened, substantially as herein described.

2. In a cash register, one or more drums having spirally arranged rows of figures upon the periphery, a pawl and ratchet mechanism by which the drum is rotated, a hinged plate connected with the pawl and ratchet mechanism, hand levers fulcrumed and movable to engage the pawl actuated plate, slots in the plate corresponding with each of the levers, said slots having different depths whereby the movements of the levers advance the drum a distance equal to the amount to be indicated by the lever moved, a drawer having a horizontally sliding spring actuated cover, a weight actuated locking bar which engages the rear edge of the drawer cover and retains and locks it when the drawer is closed, said bar being moved to release the drawer cover whenever the hand levers are moved to indicate a purchase, substantially as herein described.

3. In a cash register, one or more drums having spirally arranged rows of figures upon the periphery, pawl and ratchet mechanism whereby the drums are rotated, hand levers and intermediate slotted plates connected with the pawl mechanism and moving it and the drums whenever the hand lever is depressed, indicators with screw-threads by which they are advanced over the spiral rows of figures upon the drums as the latter are rotated, whereby the total amount received during the day is indicated by inspection of the drums, substantially as herein described.

4. In a cash register, one or more drums having spirally arranged rows of figures upon the periphery and traveling indicators with a mechanism whereby they are advanced over the rows of figures as the drum rotates, pawl and ratchet mechanism and plates connected therewith, by the depression of which the drum is rotated, hand levers indicating the different amounts received hinged and engaging the pawl actuating plates so that the depression of one of the levers will advance the drum proportionately to the amount to be indicated, a case having a series of openings upon opposite sides, plates having their lower outer edges hinged adjacent to the bottom of said openings, each plate having figures marked upon it corresponding with the amount to be indicated, vertical rods, the lower ends of which are engaged by the rear ends of the hand levers so that the rods are raised when the front end of the hand levers are depressed arcs fixed to the upper ends of the vertically movable rods and engaging the inner ends of the indicating plates whereby the latter are rotated about their hinges and presented in the corresponding openings of the indicator case whenever the indicator rods are raised, substantially as herein described.

In witness whereof I have hereunto set my hand.

EDWARD T. TAYLOR.

Witnesses:
S. H. NOURSE,
J. A. BAYLESS.