(No Model.) 3 Sheets—Sheet 1.

C. T. HARD.

MANUAL SALES RECORDER AND CASH TILL.

No. 535,900. Patented Mar. 19, 1895.

Fig. 1.

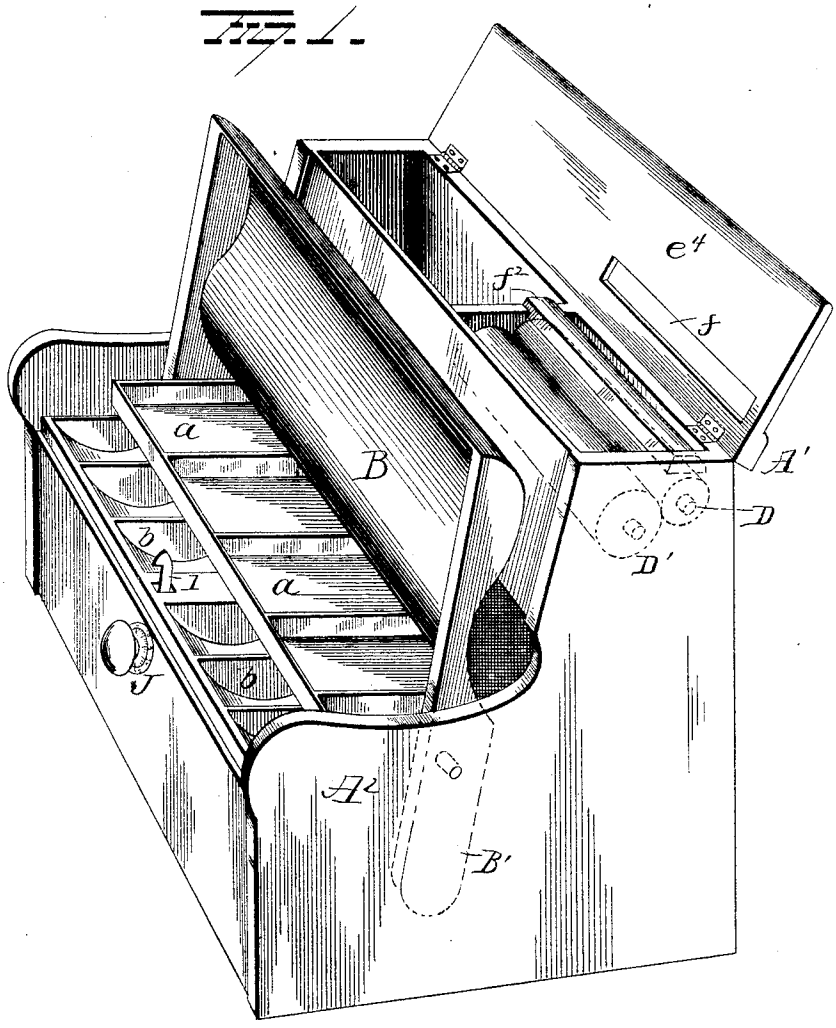
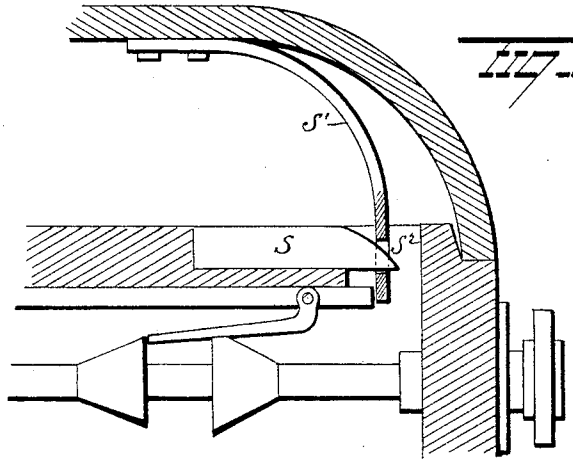


Fig. 5.



Witnesses
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(No Model.) 3 Sheets—Sheet 2.

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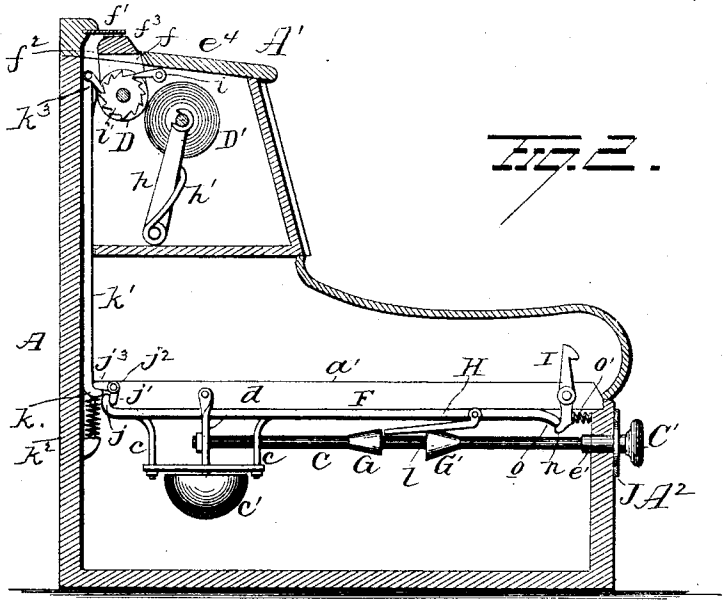


Fig. 2.

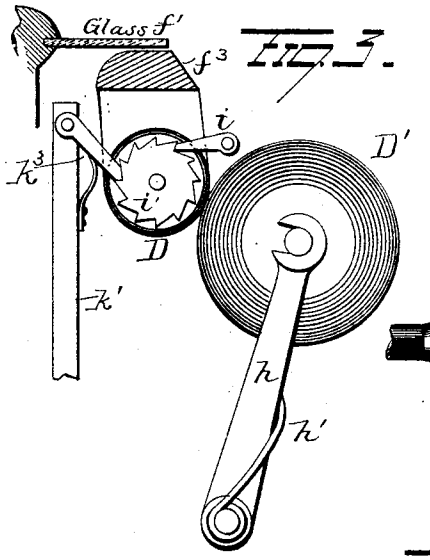


Fig. 3.

Fig. 4.

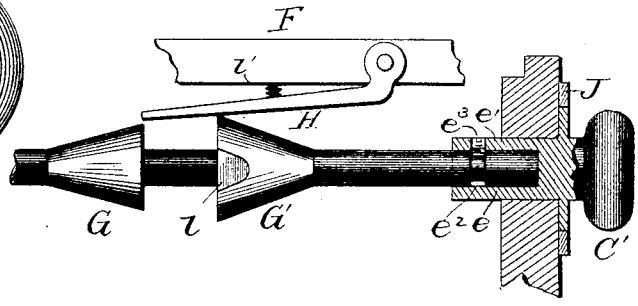
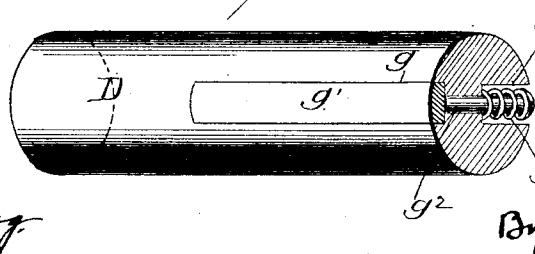


Fig. 5.



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(No Model.) 3 Sheets—Sheet 3.

C. T. HARD.

MANUAL SALES RECORDER AND CASH TILL.

No. 535,900. Patented Mar. 19, 1895.

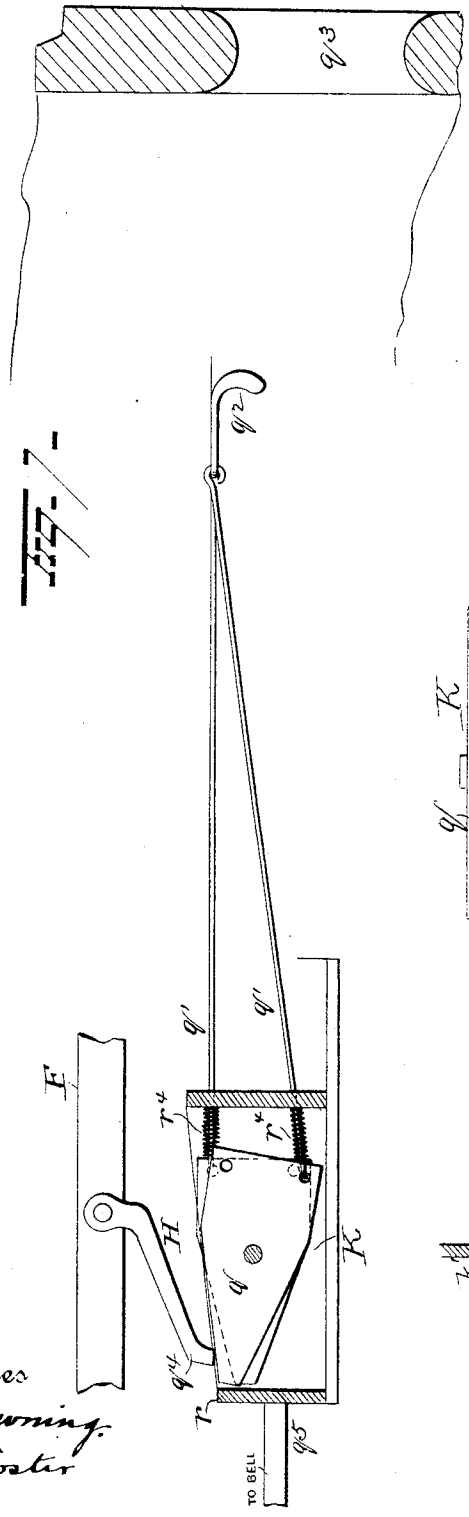

Fig. 7.

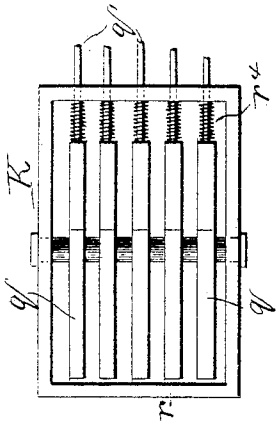

Fig. 7a.

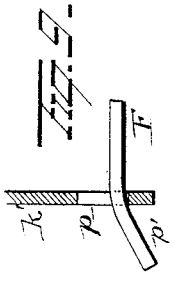

Fig. 7b.

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UNITED STATES PATENT OFFICE.

CHARLES T. HARD, OF EAST LIVERPOOL, OHIO.

MANUAL SALES-RECORDER AND CASH-TILL.

SPECIFICATION forming part of Letters Patent No. 535,900, dated March 19, 1895.

Application filed April 23, 1894. Serial No. 508,704. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. HARD, a resident of East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in a Combined Cash Till and Recorder; 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.

My invention relates to an improvement in combined cash tills and recorders,—the object of the invention being to so construct a combined cash till and recorder that its lid can be opened, a bell sounded and the strip of paper on which the record is to be produced moved, at a single operation by the manipulation of a combination locking device.

A further object is to so construct the device that after it shall have been operated, the parts will automatically assume their normal positions.

A further object is to construct the device in such manner that a plain portion of the paper strip for the reception of a record will always be exposed and so that when the device is operated the strip will be moved and the record thereon carried to such position as to prevent subsequent tampering therewith.

A further object is to produce a combined cash till and recorder which shall be simple in construction, easy to manipulate and effectual in all respects, in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a perspective view showing the lids open to expose portions of the mechanism. Fig. 2 is a sectional view on a line with the operating mechanism. Fig. 3 is an enlarged detail view showing the paper feed mechanism and the bridge or table over which the paper passes when in position to have a record written thereon. Fig. 4 is an enlarged detail view of a portion of the operating mechanism. Fig. 5 is an enlarged detail view of the paper receiving roll or cylinder and devices for securing the paper strip thereto. Figs. 6, 7, 8 and 9 are views of certain modifications.

A represents a box or casing, comprising an upper or desk portion A′ and a lower portion A^2, in which latter trays *a*, *b*, are located for the reception of bills and coin respectively. The lower portion A^2 of the casing is normally closed by means of a lid B hinged or pivotally connected at one edge to the casing and adapted at its other edge for the reception of a catch (hereinafter described) whereby to lock the lid closed. Within the casing A, preferably midway between its ends, a bar *a′* is secured and projects from front to rear of said casing. To the rear portion of this bar, depending brackets *c* are secured and at their lower ends support a bell *c′* constructed in a manner similar in all respects to an ordinary door bell, the clapper of the bell (not shown) being retained out of contact with said bell by the usual spring (not shown) and said clapper is actuated by means of a lever *d*, pivotally connected at one end to the bar *a′*. The lever *d* is adapted to be operated by means of a rod C, one end of which passes loosely through a perforation in one of the brackets *c* and the other end is supported in the socket *e* made in the shank *e′* of a knob C′ disposed exteriorly of the casing. Within the socket *e* the rod C is made with an annular groove e^3 for the reception of a set screw e^3 passing through the wall of the shank *e′*, whereby to secure said shank and rod together.

The top e^4 of the desk portion A′ of the casing is made with an elongated slot or opening *f*, over a portion of which a glass plate *f′* projects. Below the top of the desk portion A′, a bridge or bar f^2 is secured and made with a beveled face f^3 which is disposed immediately in line with the opening *f*, between the edge of the glass plate and the adjacent edge of the top e^4, said inclined edge of face of the bridge constituting, in effect, a writing table. Below the top e^4 a cylinder or roller D is mounted and provided in its periphery with a recess *g* for the reception of one end of a strip of paper D′, the end of the strip of paper being retained in said recess by means of a bar *g′* having bolts or pins g^2 secured thereto, the heads g^3 of said pins being adapted to operate in recesses g^4 made in the roll,

and between said heads and the bottoms of the respective recesses g springs g^5 are located and adapted to cause the bar g' to properly clamp the end of the strip of paper in the recess g.

In proximity to the roller D, a supply roll E is mounted in standards h, pivotally supported at their lower ends, and said roll of paper E is maintained in contact with the paper on the roller or cylinder D by means of springs h' bearing against the standards h. The paper D' passes from the roll E up between the two rolls, then over the bridge f^2 and then down and around the receiving roll D and will be always drawn tight over said bridge so that the desired record may be readily written thereon, retrograde motion of the paper being prevented by means of a dog i which engages a ratchet wheel i' carried by the receiving roller D.

Above the rod C a longitudinally movable bar F is located and at its forward end is made with an upturned lip j adapted to engage the arm j' of a bell-crank lever j^2 pivoted to the bar a'. The arm j^3 of the bell crank lever is normally disposed immediately over a lip k projecting laterally from the lower end of a vertically movable bar k', said bar k' being normally maintained at the upper end of its movement by means of a spring k^2 located beneath it. The bar k' is of a length sufficient to project to or above the ratchet wheel i' on the roller D, and carries a pivoted dog k^3 adapted to engage said ratchet wheel and turn the roller when the bar k' is made to descend.

On the rod C, two nuts or cams G, G' (preferably conical in form) are located, said nuts or cams being disposed a short distance apart and their larger ends facing each other. The larger end of the cam G is made exactly circular in form, while the larger end of the cam G' is made with a depression or flattened portion l.

To the bar F, one end of a lever H is pivotally connected and its free end is normally forced toward the cams G, G' by means of a spring l'. The larger end of the cam G' is made of a greater diameter than the larger end of the cam G, so that when the lever H is resting on the curved periphery of the cam G' its free end will be above or out of line with the cam G. When the parts are in this position (see Fig. 4) and the knob attached to the rod C is pulled, the bell c' will be sounded as above explained, but the free end of the lever H being out of line with the cam G, the rod F will not be moved and consequently the devices for operating the paper feed mechanism will not be operated, but should the rod C be turned so as to permit the lever H to fall into the depression l, the free end of said lever will move in line with the cam G, and then the pulling out of the rod C will cause the rod F also to move longitudinally, causing the vertical bar k', through the medium of the bell-crank-lever, to move downwardly and turning the receiving roller D through the medium of the dog k^3 and ratchet wheel i'. When the knob attached to the rod C is released, the roll will be made to assume its normal position by the spring in the bell. A latch I is pivoted between its ends to the inner end of the bar a' and at its upper end is adapted to engage the lid B and retain it normally locked.

The lower end of the latch lever I is made with a lip n which is normally engaged by an arm o projecting inwardly and downwardly from the forward end of the bar F. Now it will be seen that when the rod C is pulled (assuming the lever H to be in the depression l) the movement of the bar F caused thereby, will not only operate the paper feed mechanism, but will cause the latch lever I to turn on its fulcrum (against the resistance of a spring o') and release the lid B, which latter will then be opened automatically by means of weighted arms B' projecting rearwardly from the pivotal supports of said lid. When the knob shall have been released the latch lever will automatically assume its normal position ready to again lock the lid. To the front of the case A a dial J is secured and provided with suitable graduations with which a suitable index on the shank of the knob C' is adapted to register. With the parts in the positions shown in Fig. 2, the lever H will be in the depression l of the cam G', when the index on the shank e' registers with zero on the dial. By loosening the set screw e^3 and turning the knob so that the index on the shank e' will register with some other figure on the dial when the lever H is in the depression l, the combination by which the device may be operated, can be readily changed at will.

Instead of transmitting motion from the bar F to the vertical bar k' by means of the bell-crank-lever j^2, the lower end of the bar k' may be made with an elongated slot p as shown in in Fig. 9 and the forward end of the bar F adapted to project through this slot and provided with a downwardly projecting arm p', so that when the bar F is moved inwardly as above explained, the downwardly projecting arm p' will engage the bottom of the slot p and cause the bar k' to move downwardly.

Instead of the devices for operating the bar F and the bell, the devices shown in Figs. 7 and 8 may be employed. In this form of the invention a slide K is located below the bar F and has pivotally supported therein a series of V-shaped keys q, to each of which a key rod q' is attached and to the inner end of each key rod a finger bar or key q^2 is attached, said finger bars or keys being located within the casing and access may be had to them through an opening q^3 in the front of the casing. The lever H is provided with an arm q^4 disposed over the smaller ends of the keys. A rod q^5 is attached to the slide K for operating the bell. Some of the keys q are

so disposed as to engage the arm q^4 of the lever H and maintain the same normally out of line with the end r of the slide and the remainder of the keys are so disposed that their smaller ends will be below the arm q^4, said keys being retained in their normal positions by means of springs r^4.

From this construction and arrangement of parts it will be seen that when the keys which support the free end of the lever H are operated, the arm q^4 of said lever will be lowered and made to come in line with the end r of the slide K and a continued pulling on these keys will cause the slide to move whereupon, the engagement of the end r of the slide with the arm q^4 of the lever H, will cause the bar F to be moved and the operating mechanism actuated as explained in connection with the preferred form of the invention.

It will be observed that unless all the keys which support the free end of the lever H are lowered the rod F will not be brought into operation and consequently the mechanism of the device will not be operated; and it will also be seen that if the wrong finger bars or keys are operated the corresponding keys q will be raised without affecting the operative relation of the lever H with the slide K.

Instead of the pivoted latch lever I above described, the form of locking devices shown in Fig. 6, may be adopted. In this form of the device a rigid catch s is secured to the bar a', and to the lid B a spring plate s' is secured and in proximity to its free end is made with a perforation s^3 for the reception of the catch s. When the rod F is moved inwardly as above explained it will engage the free end of the spring s' and move it out of engagement with the catch s.

Various other slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to limit myself to the precise details of construction herein set forth; but

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

1. In a combined cash till and recorder, the combination with a casing, and rolls carrying a strip of paper, of a pair of movable bars, one adapted to operate the other and one constructed to operate the rolls, a slide device independent of the movable bars, and means for communicating motion from the slide device to one of the bars when said slide device is in a predetermined adjustment, substantially as set forth.

2. In a combined cash till and recorder, the combination with a casing having a slot in its top, of a bridge under said slot, a receiving roll mounted in stationary bearings, means for locking this roll against movement in one direction, pivoted standards, a roll carried in the free ends of these pivoted standards, means for yieldingly throwing said standards toward the roll in the stationary bearings, whereby the two rolls are normally thrown toward each other, said rolls adapted to receive and have a paper wound thereon, which paper is drawn over the bridge in passing from one roll to the other, and means for actuating the receiving roll, substantially as set forth.

3. In a combined cash till and recorder, the combination with a casing, of a pair of rolls, one in stationary bearings and the other in swinging bearings, the swinging bearings having openings therein extending in the direction of the other roll for the removal of its roll, and a spring for normally throwing the roll in the swinging bearings toward the other roll thereby retaining it in its bearings, substantially as set forth.

4. In a combined cash till and recorder, the combination with a casing having a slot in its top, a bridge under said slot, rolls mounted in the casing, and a strip of paper extending from one of said rolls, passing over the bridge and wound on the other roll, of a ratchet wheel carried by one of said rolls, a vertical slide bar, a dog carried by said bar and engaging said ratchet wheel, a horizontal slide bar constructed and adapted to move said vertical slide bar, adjustable devices for operating said horizontal slide bar, and a lever for communicating motion from said adjustable devices to the horizontal slide bar, substantially as set forth.

5. The combination with a casing adapted to receive cash, of a lid constructed and adapted to open automatically when released, a latch for said lid, an adjustable slide device, and means for communicating motion from said slide device to the latch when the adjustable device is in a certain predetermined adjustment, substantially as set forth.

6. The combination with a casing adapted to receive cash, of a lid constructed and adapted to open automatically when released, a latch for said lid, a movable bar, a lever connected with the latter, and an adjustable slide device adapted to operate the lever to slide the movable bar when the slide bar is in a certain predetermined adjustment, substantially as set forth.

7. In a combined cash till and recorder, the combination with a casing having a slot in its top, a bridge under said slot, rolls mounted in the casing, and a strip of paper passing from one roll, over the bridge and wound on the other roll, of a vertically movable bar constructed and adapted to turn one of said rolls, a horizontally movable bar, a bell-crank lever interposed between said bars whereby the motion of one will be transmitted to the other, a pivoted lever carried by said horizontal bar, a rod in proximity to the horizontal bar and provided with a knob, and cams on said rod, one of said cams being constructed and adapted to engage said pivoted lever and

the other cam being constructed and adapted to move the free end of the lever into or out of line with the first-mentioned cam accordingly as the rod is turned, substantially as and for the purpose set forth.

8. In a combined cash till and recorder, the combination with a casing having a slot therein, a bridge under said slot, rolls mounted in the casing, and a strip of paper passing from one roll, over the bridge and wound on the other roll, of a vertically movable bar constructed and adapted to operate one of said rolls, a horizontally movable bar, a bell-crank lever interposed between said bars whereby the motion of one will be transmitted to the other, a pivoted lever carried by the horizontal bar, a rod in proximity to the horizontal bar and provided with an adjustable knob, an index carried by said knob and adapted to register with a dial on the casing, and two cams on said rod, one of said cams being adapted to engage the pivoted lever, and the other provided with a depression at one point of its periphery whereby to permit the free end of the pivoted lever to be lowered sufficiently to align with the first-mentioned cam when the rod which carries said cams is properly turned, substantially as set forth.

9. In a combined cash till and recorder, the combination with a casing, and recording mechanism, of a vertical bar adapted to operate said recording mechanism, a horizontal bar adapted to transmit motion to the vertical bar, means for returning said vertical bar, a lever pivoted to the horizontal bar, a bell, a rod in proximity to the horizontal bar, a lever pivoted to the casing and connected with said rod, said lever being adapted to engage the clapper of the bell, and cams located on said rod, one of said cams being adapted to engage the lever pivoted to the horizontal bar and the other being constructed and adapted to move said lever into and out of line with the first-mentioned cam accordingly as the rod is turned, substantially as set forth.

10. The combination with a casing having a slot in its top and a bridge under said slot, of a supply roll and a receiving roll mounted in said casing, a strip of paper adapted to pass from the supply roll, over said bridge, the receiving roll being made with a recess for the reception of one end of said strip of paper, a strip in said recess to secure the strip of paper in place, pins secured to said strip, and springs interposed between the head of said pins and the base of sockets in which they are located, and means for actuating said receiving roll, substantially as set forth.

11. In a combined cash till and recorder, the combination with a casing having a slot in its top, a bridge under said slot, rolls mounted in the casing, a strip of paper extending from one of said rolls, passing over the bridge and wound on the other roll, of a ratchet wheel carried by one of said rolls, a dog adapted to engage said ratchet wheel and prevent retrograde movement thereof, a vertical slide bar, a dog carried by said bar and engaging the ratchet wheel, a horizontal sliding bar constructed and adapted to move the vertical slide bar, a shaft capable of sliding and turning axially, and means for communicating motion from said shaft to the horizontal movable bar when the shaft is in a certain predetermined axial position, substantially as set forth.

12. In a combined cash till and recorder, the combination with a casing and a recording mechanism, of a vertically movable bar constructed and adapted to impart motion to said recording mechanism, a horizontal movable bar adapted to transmit motion to the vertical bar, a rod mounted in proximity to the horizontal bar, a lever pivotally connected to said horizontal bar, cams carried by the rod, one of said cams being adapted to engage the free end of said pivoted lever and the other constructed and adapted to move said pivoted lever into and out of line with the first-mentioned cam, a knob having a shank adjustably connected to said rod, an index carried by said shank, and a dial secured to the casing, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES T. HARD.

Witnesses:
IDA F. WALPER,
M. L. PURINTON.