

(No Model.)

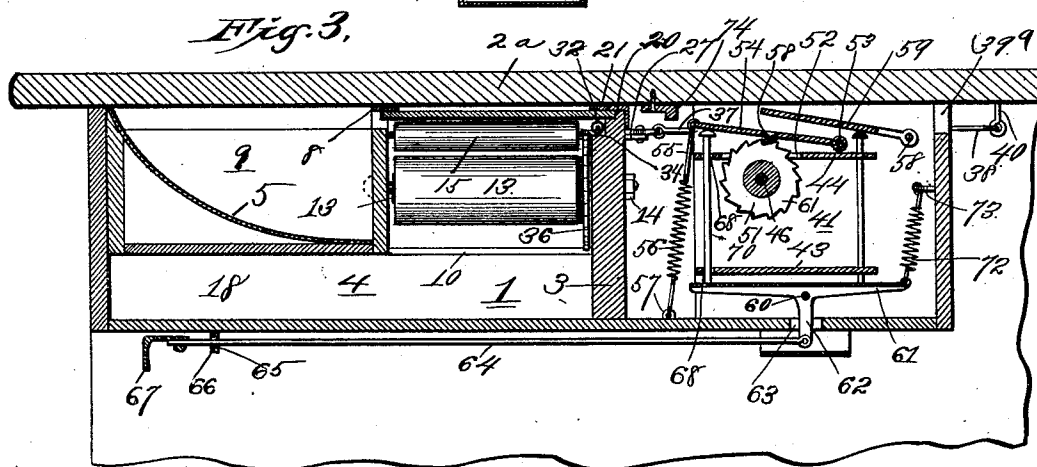
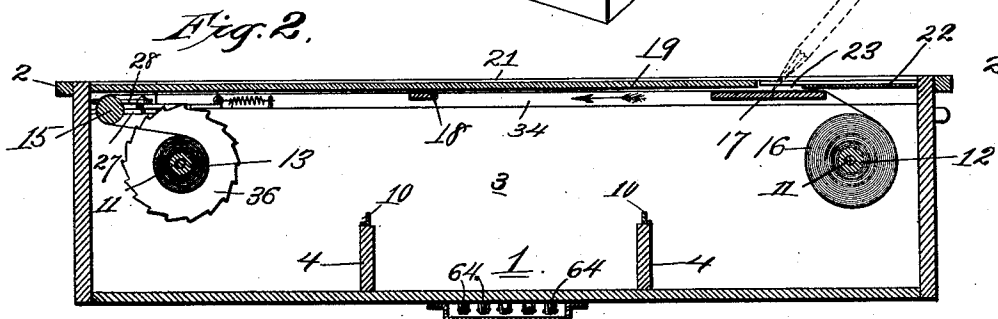
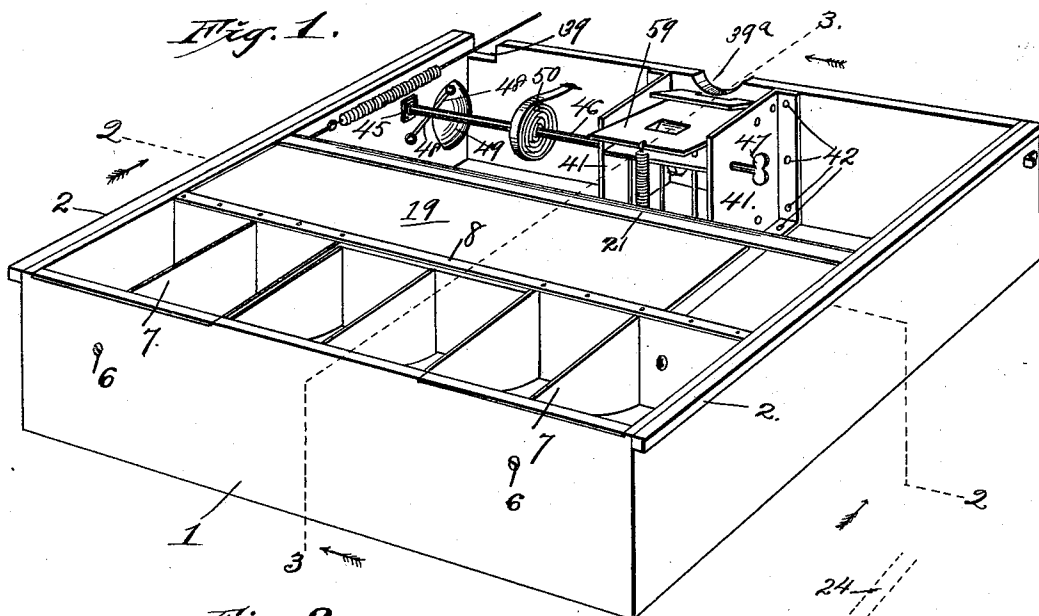
2 Sheets—Sheet 1.

C. E. PUTNAM.

CASH DRAWER AND MANUAL RECORDER.

No. 507,592.

Patented Oct. 31, 1893.



Witnesses:-

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Fig. 1

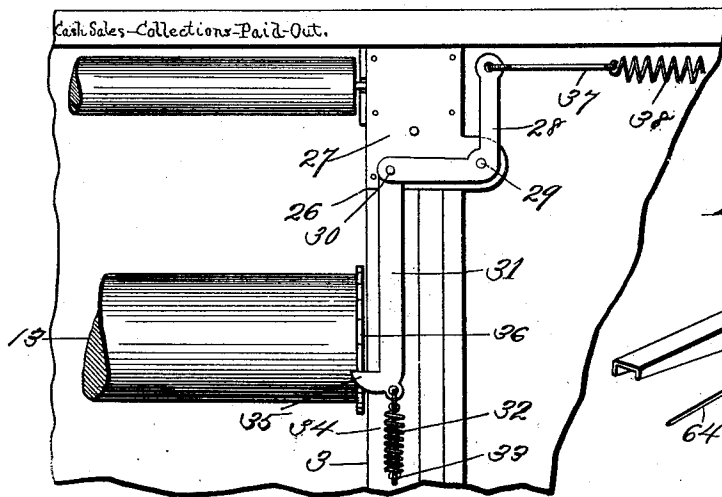


Fig. 9.

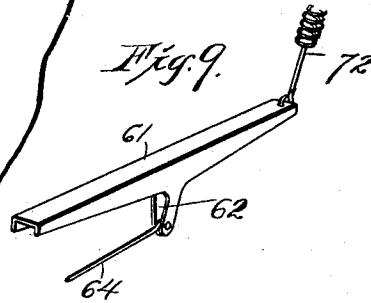


Fig. 5.

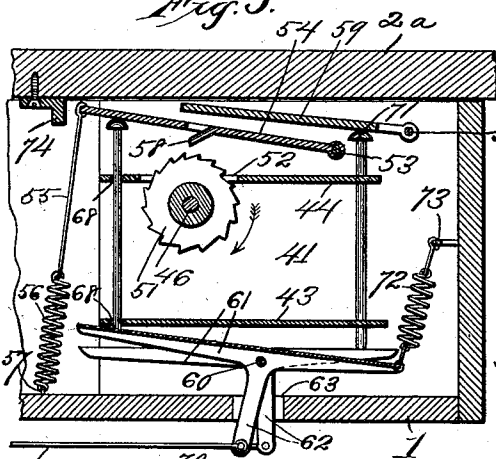


Fig. 6.

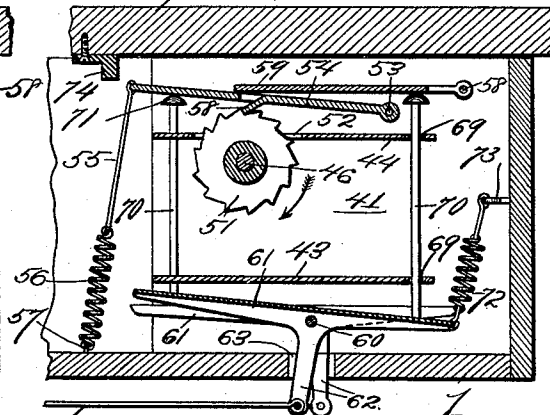


Fig. 8.

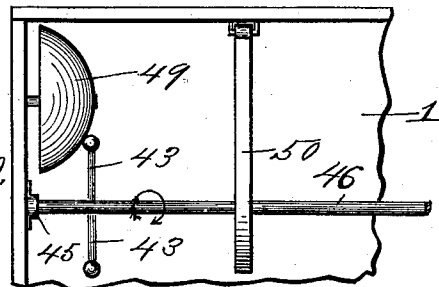


Fig. 7.

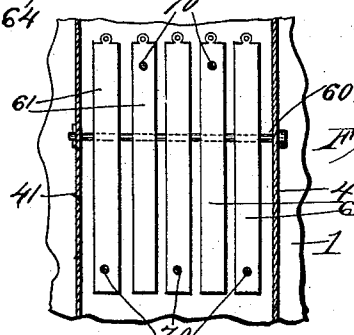
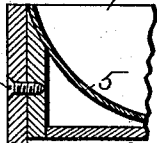


Fig. 10.



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UNITED STATES PATENT OFFICE.

CHARLES E. PUTNAM, OF RICHMOND, KANSAS.

CASH-DRAWER AND MANUAL RECORDER.

SPECIFICATION forming part of Letters Patent No. 507,592, dated October 31, 1893.

Application filed April 20, 1893. Serial No. 471,085. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. PUTNAM, of Richmond, Franklin county, Kansas, have invented certain new and useful Improvements in Cash Drawers and Recorders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in cash drawers and recorders, and consists in a drawer of suitable construction having recording strips of paper, beneath a transparent plate, and suitable mechanism by which, when the drawer is opened, the paper is automatically fed a certain distance.

The primary object of my invention is to produce a drawer, and recorder therefor, of this character, which is positive and reliable in operation, and which is simple, durable and inexpensive of construction.

Other objects of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, represents a perspective view of a cash drawer constructed in accordance with my invention, and showing the recording paper therein. Fig. 2, is a vertical transverse section taken on the line 2—2 of Fig. 1. Fig. 3, is a vertical longitudinal section taken on the line 3—3 of Fig. 1, and showing the keys in their normal position. Fig. 4, shows a plan view of a portion of the drawer, and also shows the mechanism whereby the paper web is automatically fed one space when the drawer is opened. Fig. 5, is a vertical sectional view of the locking mechanism, and showing its position when one or more wrong keys are operated. Fig. 6, is a vertical sectional view, and showing the locking mechanism when the correct combination keys have been operated and in position to allow the drawer to open. Fig. 7, is a horizontal sectional view to show the arrangement of the key levers. Fig. 8, is a plan view of a portion of the drawer, and showing the alarm mechanism. Fig. 9, is a detail perspective view of

one of the key levers, and Fig. 10, is a detail sectional view showing one of the stationary coin receptacles, and the method of securing it to the front wall of the drawer.

Referring to the drawings, 1 designates a drawer of the usual construction, which is formed at its upper side margins with flanges or strips 2; these strips 2 being adapted to engage retaining cleats (not shown) of the usual construction which are secured to the under side of the counter 2^a, or other suitable place.

Extending transversely of the drawer for its entire width is a vertical partition 3, and extending forwardly from said partition to the front end of the drawer are a pair of parallel supporting strips 4; these supporting strips being arranged preferably, so as to divide the space forward of the partition 3 into approximately three equal portions. A series of coin receptacles are of rectangular form, and have their bottom 5 curving forwardly and upwardly to the upper margin of the front end of the drawer, for convenience in extracting change. These coin receptacles are located above the end spaces formed by the driving strips 4, and have the screws 6 passing through the front end of the drawer to secure them in position at that point; these coin receptacles also rest at their inner side margins upon the upper edge of the dividing strips 4, and extend rearwardly for a suitable distance toward the partition 3. The coin receptacles are also preferably divided into compartments 7, to provide for coin of different denominations. The upper and rear margins of these coin receptacles, are longitudinally aligned and in the same horizontal plane, and are connected by the horizontal and transverse bar or rail 8; said bar or rail 8 extending from side to side of the drawer. The space formed between the end coin receptacles, is occupied by a similar but slidable coin receptacle 9; this receptacle being also divided into two compartments, and resting upon the dividing and supporting strips 4, and is adapted to slide rearwardly between the guide rails 10 which extend rearwardly from the inner sides of said receptacles to the adjacent side of the partition 3, and are secured upon the dividing strips 4. This re-

ceptacle 9 is of less depth than the receptacles 5, so as not to extend upward to the under side of the bar or rail 8.

Journalled longitudinally of the drawer and transversely of each end of the space formed between the rear walls of the end or stationary receptacles, and the partition 3, on the bolts 11, are the paper roller 12, and the winding drum 13; these being preferably arranged in horizontal alignment with each other, and the inner or rear ends of the bolts 11 are engaged by nuts 14, arranged to bear against the rear side of the partition 3 and force the same to frictionally engage the rear ends of said rollers, so as not to allow them to be accidentally rotated. A guide roller 15 also extends transversely of and is journaled at its opposite ends in the rear wall of one of the stationary receptacles and the partition wall 3. The paper roll 16 is secured upon the roller 12, and is thence carried upwardly and over the horizontal guide and rest-plate 17 which is located adjacent to the roller 12 and to the upper side of the partition 3; being secured at its opposite ends to the upper portion of the partition 3, and to the under side of the bar or rail 8. The paper is then carried horizontally over the guide strip or plate 18 which is secured at its opposite ends to the under side of the guide bar or rail 8 and the upper portion of the partition 3 for a purpose to be hereinafter explained; the paper is then carried around the guide roller 15, and has its end wound upon the drum 13. It will now be seen from reference to Figs. 2 and 3 that the sliding coin receptacle 9, may be moved rearwardly under the web of paper and the guide plate or strip 18, so that the space 18^a for the reception of bills and paper which is located between the dividing strips 4 and beneath the sliding receptacle 9, may be accessible. A glass cover 19 is secured at its forward side margin beneath the retaining rail or bar 8, and at its rearward side margin, rests in a recess 20 formed in the upper edge of the partition 3, and a retaining strip of tin or other suitable material 21 secured to the partition 3, flanges over and retains said plate 19 in position. This transparent covering or plate extends preferably from the left hand nearly to the right hand end of the drawer, so as to be above at its free end, the rest plate 17. A top-plate 22 which is of metal preferably, but may be of glass if desired, is secured at its inner end above said rest plate 17 so as to form a slot or open space 23 between said inner end and the adjacent edge or end of the plate 19, and has its outer end secured to the inner side margin of the drawer. It will thus be seen that the paper feeds from the roll in the direction of the arrow, Fig. 2, passes over the rest plate 17, the guide plate 18 and roller 15 to the winding drum 13; thus allowing a record of a sale, collection and payment to be made thereon by a pencil or pen 24, shown in dotted lines; said pen or pencil being in-

terposed through the slots 23 formed by the adjacent edges of the plates 19 and 22. The paper is preferably divided into three columns by longitudinally extending lines 25, as shown; one column being opposite the words "Cash-sales" the second column being opposite the word "Collection" and the third column opposite the words "Paid out;" these words being painted or inscribed upon the upper edge of the drawer, as shown in Fig. 4. The upper edge or margin of the partition 3 is further formed with a recess or depression 26 and has a plate 27 secured therein and adjacent to the guide roller 15. A bell-crank lever 28 is pivoted at 29 upon said plate 27 and has its inner and longitudinally extending arm pivotally connected at 30 with one end of a pawl 31; said pawl extending transversely toward the opposite side of the drawer, and having secured to its inner end a retracting-spring 32, the opposite end of which is secured at 33 to a pin secured to the upper margin of the recess 34; this pawl 31 is further formed adjacent to its inner end with the forwardly extending shoulder or tooth 35; said tooth being adapted to engage successively the teeth of a ratchet wheel 36 secured upon the inner end of the drum 13. The transversely extending arm of the bell-crank lever 28 has pivotally attached to its outer end the rod 37, which in turn is attached to the forward end of a retracting-spring 38, the rear end of which is extended and passes through a notch 39 in the rear wall of the drawer, and is secured to a pin 40 depending from the under side of the counter. It will thus be seen that as the drawer is pulled outward, the spring 38 being rigidly connected to the counter, will pivotally operate the bell-crank levers 28, and cause the tooth or shoulder 35 of the pawl 31 engaging the ratchet wheel 32, to rotate the winding drum 13 a suitable distance; thus moving the paper from the roller 12 upon the winding drum 13. When the drawer is closed, the retracting spring 32 pulling upon the inner end of the pawl 31 causes the bell-crank lever 28 to resume its normal position as shown in Fig. 4.

A casing is located at the rear and inner side of the drawer, and has its vertical side walls 41 secured by screws or other suitable means 42 to the rear wall of the drawer and to the bottom thereof. This casing is formed with a horizontal partition 43, extending from the front margins and from side to side of said side walls to within a suitable distance of the rear wall of the drawer, and located within a suitable distance of the upper margins of said vertical walls 41 and extending from the front margin thereof and from side to side to within a suitable distance of the rear wall of the drawer; is a horizontal partition 44, said partition 44 being arranged preferably parallel with the partitions 41.

Extending transversely of the rear end of the drawer and journaled to revolve at one end in a bearing 45 secured to one of the in-

ner sides thereof, and also extending transversely through the vertical side walls 41 of the casing, is a shaft 46; said shaft being formed with its free end with a head or thumb piece 47. Adjacent to the inner side of the drawer this shaft is provided with the outwardly extending bell-clapper arms 48, which are each provided with a head or enlargement at their outer ends.

Secured to the side wall of the drawer adjacent to the bell clapper arm is a bell 49, this bell being adapted to be sounded by the clapper arms 48 coming in contact therewith as the shaft 41 is revolved, as will be hereinafter referred to. A coil-spring 50 is mounted upon the shaft 46, and is secured thereto at one end and to the rear wall of the drawer at its opposite end. This portion of the shaft 46 which passes between the side walls 41 of the casing is located a suitable distance below the upper horizontal partition 44, and has rigidly mounted thereon a ratchet wheel 51; said ratchet wheel projecting upwardly through a slot 52 formed in the upper horizontal partition or wall 44 of the casing. Pivoted on a rod 53 extending from side wall to side wall and above the rear portion of the horizontal partition 44 of the casing is a locking pawl 54, said pawl extending forwardly above the horizontal partition 44, and having its free end secured to the upper end of a rod 55, which rod is secured to the upper end of a retracting spring 56 the lower end of this spring being secured at 57 to the bottom of the drawer, and the tendency of this spring being to hold the depending tooth 58 stamped from the locking plate 54 into engagement with the ratchet wheel 51, and prevent the rotation thereof by the coil-spring 50.

Pivotally secured upon a rod 58 extending from side wall to side wall of the casing, is a locking plate 59, said locking plate extending forwardly above the locking plate 54, and being adapted to rest thereon at its front end, when the drawer is in its unlocked position, as shown in Fig. 6. These locking plates 54 and 59 are adapted to be operated, as hereinafter referred to, respectively when the wrong keys are operated, and when the correct keys are operated. Pivotally secured upon the horizontal and transversely extending rod 60 a suitable distance below the horizontal partition 43 and extending from side wall to side wall of the casing, are a number of key levers 61; said levers being formed approximately T-shaped, and have their lower depending arms 62 passing through the slot 63 in the bottom of the drawer, and have their lower ends pivotally connected to the rear ends of the horizontal rods 64; the forward ends of these rods passing through guide openings 65 formed in a plate 66, secured to the under side of the drawer near its forward end. Secured upon the free end of each rod is a finger plate 67; these plates being adapted to be engaged by the fingers when desiring to pull the rods to

operate the locking plates to allow the drawer to be opened.

In the drawings, I show five keys, keys numbered 2 and 4 being shown as the correct combination, and keys 1, 3 and 5 being shown as the incorrect combination. By the operation of either or all of the keys 1, 3 and 5 as will be hereinafter more particularly referred to, the locking plate 54 is raised so that the pawl 58 thereof is out of engagement with the teeth of the ratchet wheel 51; thus allowing the spring 50 to rotate the shaft 46 and sound the alarm. When the keys 2 and 4 are operated, as also hereinafter referred to, the locking plate 59 is allowed to move pivotally downward to the position shown in Fig. 6, so that the drawer may be opened. The horizontal partitions 43 and 44 are provided near their forward edge each with a series of openings 68, equaling in number the keys 61, and in vertical alignment with each other, and near their rear edges and in longitudinal alignment with the forward openings a series of openings 69, corresponding in number to the openings 68. A series of vertical lifting rods 70, corresponding in number to the key-levers 61, are adapted to be passed through a number of the vertically aligned openings of the upper and lower partitions 44 and 43 and rest upon the forward ends of the corresponding key levers 61; said rods being preferably formed with a head 71 upon their upper ends adapted to bear against the under side of the locking plate 54, and the remaining rods 70 are passed vertically through the aligned openings in the rear ends of said horizontal plates, and rest at their lower ends upon the rear ends of those key-levers 61 not occupied by the front series of rods, and have their upper ends preferably provided with a head 71 bearing against the under side of the locking plate 59. The rear end of each of the key-levers 61 is attached to the lower end of a retracting-spring 72, the upper end of which is secured to a pin 73 projecting from the rear wall of the drawer; the tendency of said springs being to hold the key-levers in their horizontal position as shown in Fig. 3, and also to hold the gravity locking plate 59 in its elevated position by means of the rear rods 70, so that should the drawer be pulled outward without operating any of the keys the forward and upper edge or margin of said locking plate 59 would come in contact with the stop plate 74 secured to the under side of the drawer just forward of the free or forward end of the locking pawl 54, and prevent the opening of the drawer.

In the drawings, the keys 61 are numbered 1, 2, 3, 4 and 5, and the proper combination is set for keys 2 and 4, upon the rear ends of each of which a rod 70 is placed, said rods passing through corresponding and vertically aligned openings 64 in the partitions 43 and 44. The remaining rods 70 rest upon the front ends of keys 1, 3 and 5, and pass up-

ward through the openings 68 in the front ends of partitions 63 and 64, and bear against the under side of locking plate 54. By the operation of the proper combination, keys 2 and 4 it will be seen that the key levers are moved in the position shown in Fig. 6, which allows the rods 70 supporting the locking plate 59 in its elevated position to descend, allowing the locking plate 54 to assume the position shown in 56, when the drawer is unlocked. Should the wrong combination keys be operated the locking pawl 49 not only releases the ratchet 46 and allows bell to ring, but also moves said plate to the position shown in Fig. 5, so that its forward end, should the drawer be pulled outward, would come in contact with the limit or stop plate 69. By moving the rods 70, into different openings in the rear end of the partitions 43 and 44, to rest upon the rear ends of the corresponding keys, and by moving the remaining rods so that they shall rest upon the front ends of the unoccupied keys and pass up through the corresponding openings in the front end of the partitions 43 and 44 and bear against the lower side of the locking-plate 54, the combination may be changed at will.

A recording apparatus, consisting of a roll of paper located in the drawer near one side, and extending horizontally across the drawer beneath a transparent top-plate to a receiving drum, and means to automatically feed said paper a certain distance with each opening of the drawer, as described, has great advantage over all others now in use, as all of each day's transactions or a very large number of transactions are in full view each time the drawer is opened; thereby avoiding the necessity of tearing off or removing slips each day. Another and very great advantage, is the use of a continuous strip or roll of paper, so that each day's business is in full view to foot up, and the roll of paper be used without being removed until entirely filled with the record of past transactions; thus enabling the merchant to file away rolls of several days', weeks' or months' business, to which he may refer when necessary or desirable.

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

1. In a cash drawer and recorder, the combination with a drawer having a transverse and vertical partition, and stationary coin-receptacles at each inner side of the drawer, of a recorder, comprising a paper roll journaled between said partition and the rear side of one of said stationary coin-receptacles, and a winding drum journaled between said partition and the stationary coin-receptacle at the opposite side of the drawer, and having one end of the web of paper secured thereto, a rest-plate, a guide plate or strip, and a guide roller, also extending transversely of the space between the partition and the coin-receptacles over which the paper web is guided, and means whereby said paper is fed

one space each time the drawer is opened, substantially as set forth.

2. In a combined cash drawer and recorder, a drawer having a partition and end stationary coin-receptacles, a roller journaled transversely of the space between one of said coin-receptacles, and the partition; and having a paper roll mounted thereon, and a winding drum located at the opposite end of the space to which the end of the paper is attached, a rest-plate supported horizontally across the space between the partition and one of said coin-receptacles, and a glass top-plate extending from one side of the drawer nearly to the other, and a top-plate extending from the other side of the drawer nearly to the adjacent end of the glass top-plate so as to form a slot or space therebetween, and retaining strips secured upon each side margin of the top-plate, substantially as set forth.

3. In a combined cash drawer and recorder, a drawer having a partition, and end stationary coin-receptacles, a roller journaled transversely of the space between said partition and one of said coin-receptacles, and a winding drum journaled transversely of the space between said partition and the other coin-receptacle, a paper roll mounted upon the roller and having one end attached to the winding drum, a ratchet-wheel mounted rigidly upon one end of said winding drum, a spring retracted pawl engaging the teeth of said ratchet-wheel, and means whereby said pawl is operated to rotate the ratchet wheel one space when the drawer is opened, substantially as set forth.

4. In a cash drawer and recorder, a drawer having a partition, and stationary coin-receptacles located in said drawer, a roller journaled transversely of the space between one of said coin-receptacles and the partition, and a winding drum carrying a ratchet wheel at one end located transversely of the space between the other coin receptacles and the partition, a spring retracted pawl engaging said ratchet wheel, and a bell crank lever pivotally connected to the end of said pawl, and a retracting spring connecting said bell-crank lever with a pin depending from the under side of the counter, so that each time the drawer is opened the bell-crank lever will be moved to operate the roll, substantially as and for the purpose set forth.

5. A cash drawer and recorder, comprising a drawer having a partition and stationary coin-receptacles, a roller journaled transversely of the space between one of said coin-receptacles and the partition, a paper roll mounted upon the roller, and a winding-drum revolubly mounted between the other coin-receptacle and the partition, and having one end of the paper roll attached thereto, a guide-plate or strip for supporting the paper-web near its middle, and a central slidable coin-receptacle having its bottom a suitable distance above the bottom of the drawer, so as to form a space beneath said coin-receptacle,

and guide-rails extending rearwardly under the web of paper, to the partition, so that the slidable coin-receptacle may be moved under the web of paper that the lower space may
5 be accessible, substantially as set forth.

6. In a combined cash drawer and recorder, a drawer having a vertical transverse partition, and end stationary coin-receptacles, a roller journaled transversely of the space between one of said coin-receptacles and the
10 partition, and a winding-drum journaled transversely of the space between the other coin-receptacle and the partition, and tie-bolts

passing through the rear walls of said stationary coin-receptacles and the partition, 15 clamping nuts engaging the rear ends of said tie-bolts, so that the partition may be moved to clamp or tension the roller and winding drum so that they will not be accidentally rotated, substantially as set forth. 20

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

CHARLES E. PUTNAM.

Witnesses:

ROBT. S. MCCREA,
A. R. HARSHBERGER.