(No Model.) 2 Sheets—Sheet 1.

W. BASSETT.

CASH REGISTER AND INDICATOR.

No. 570,114. Patented Oct. 27, 1896.

Fig I

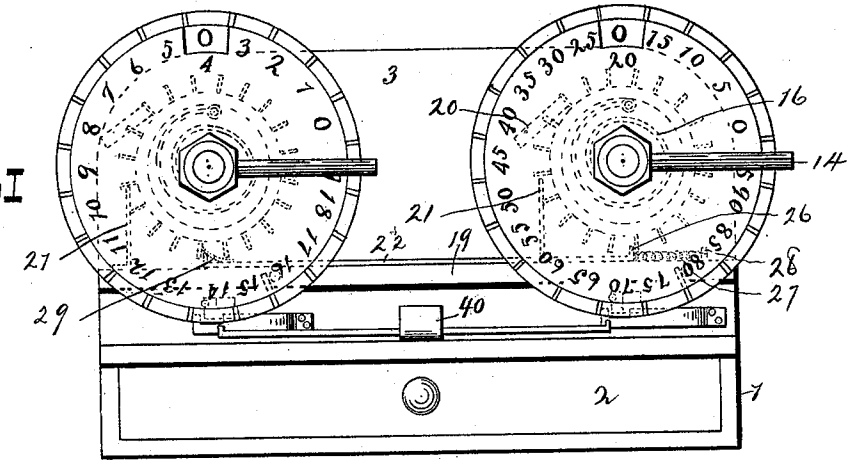
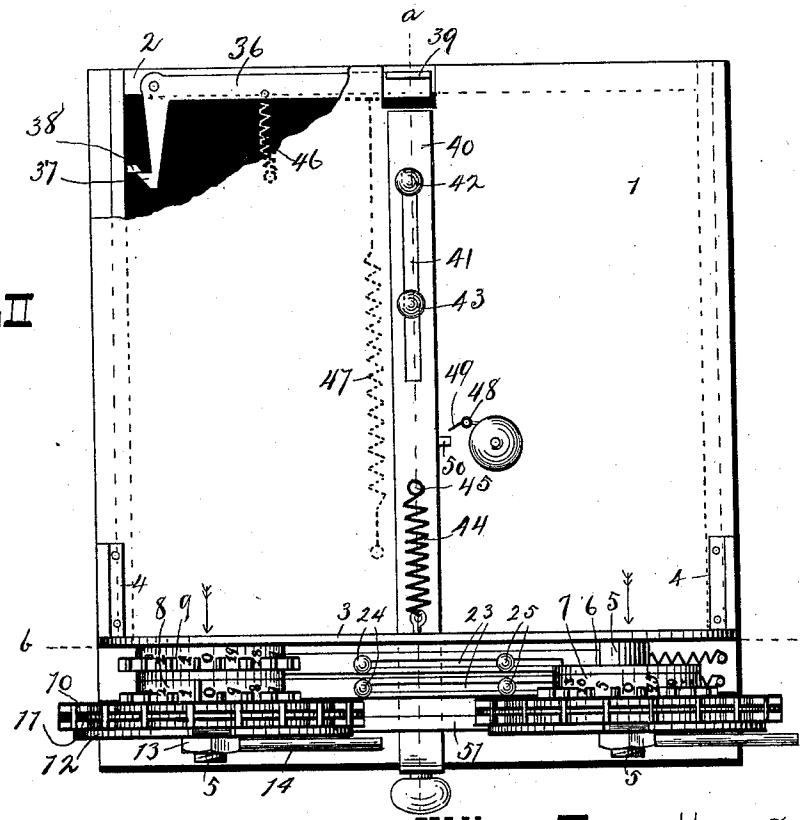


Fig II



Witnesses.
D. C. House
A. C. Nelson.

William Bassett. Inventor.
By House & Hadley,
His Attorneys.

(No Model.) 2 Sheets—Sheet 2.

W. BASSETT.

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Fig III

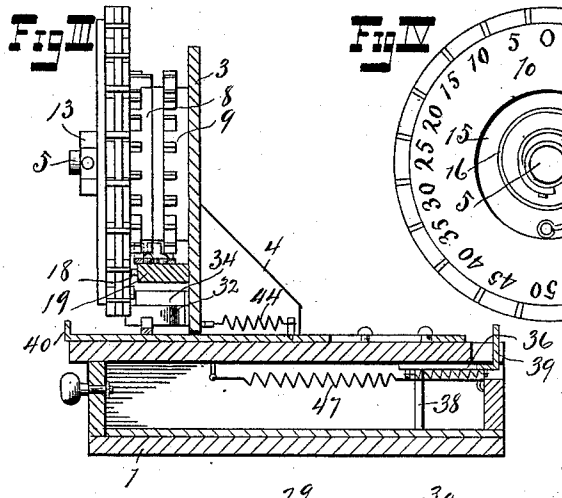


Fig IV

Fig V

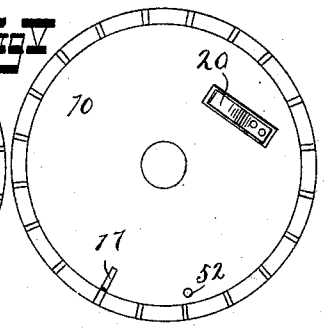


Fig VI

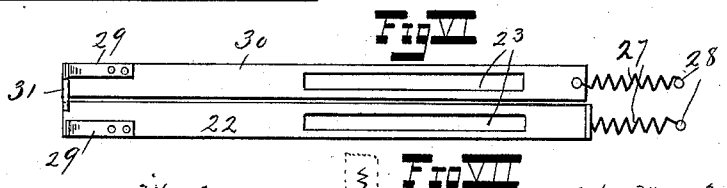


Fig VII

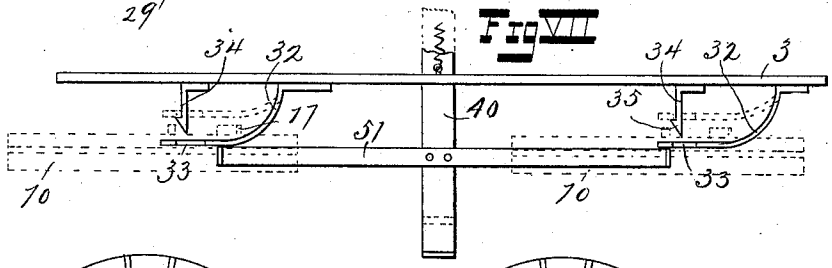
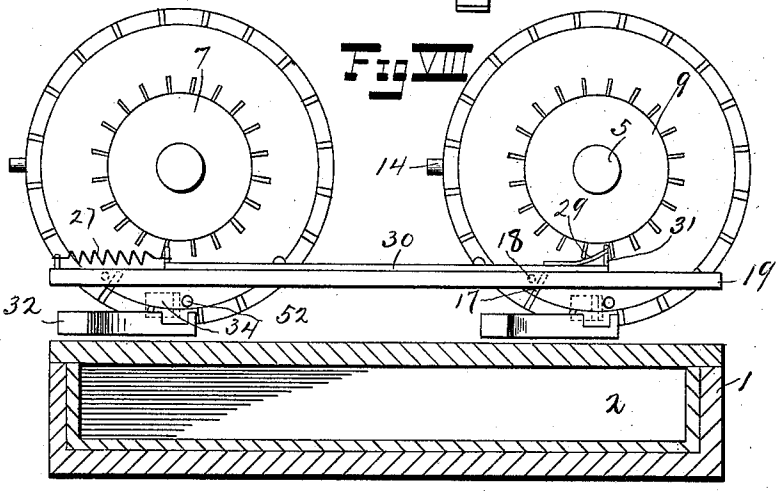


Fig VIII



Witnesses.
D. C. House
A. K. Nelson.

William Bassett. Inventor.

By House and Hadley,

His Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM BASSETT, OF KANSAS CITY, MISSOURI.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 570,114, dated October 27, 1896.

Application filed May 31, 1895. Serial No. 551,072. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BASSETT, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in cash-registers.

The object of my invention is to provide a cash-register having a cash-drawer with an indicating-wheel adapted to be rotated so as to indicate the amount of a sale and provided with means for returning the wheel to its starting-point when the cash-drawer is opened.

My invention further provides a cash-register in which the indicating-wheel is provided with ratchet-teeth which are engaged by a pawl adapted to hold the indicating-wheel in the position to which it has been rotated when indicating the sale and means for holding the pawl disengaged from the teeth, so that the wheel may return to its starting-point when the drawer is opened.

My invention also provides a cash-register having a cash-drawer, a spring-retracted indicating-wheel having ratchet-teeth, a pawl for engaging the ratchet-teeth, a catch adapted to engage the pawl and hold it from engagement with the ratchet-teeth when the drawer is opened, and means for releasing the pawl from the catch, so that the pawl may engage the ratchet-teeth after the wheel has returned to its first position.

My invention further provides adding mechanism operated by the indicating-wheel and adapted to show the total amount of the sales that have been indicated by the wheel.

Other peculiarities of construction are hereinafter described, and set forth in the claims.

In the accompanying drawings, illustrative of my invention, Figure 1 represents a front elevation of the invention and showing some of the hidden parts in dotted lines. Fig. 2 represents a plan view of the invention with a portion of the box inclosing the cash-drawer broken away, so as to show the drawer-catch. Fig. 3 represents a vertical sectional view of the left portion of the cash-register, taken on the dotted line *a* of Fig. 2. Fig. 4 represents a front elevation view of one of the indicating-wheels. Fig. 5 represents a rear elevation view of the same. Fig. 6 represents a plan view of the two spring-retracted slides for operating the adding-wheels. Fig. 7 represents a plan view of the pawls that operate the indicating-wheels, the catches for holding the pawls disengaged from the ratchet-teeth, and a portion of the mechanism for opening the cash-drawer and forcing the pawls into engagement with the catches. In this view the indicating-wheels are shown in dotted lines. Fig. 8 represents a vertical sectional view of the front portion of the register, taken on the dotted lines *b c* of Fig. 2 and looking forward, the drawer-operating mechanism being omitted and the catches for holding the pawls shown in dotted lines.

Similar numerals of reference indicate similar parts throughout the several views.

1 indicates a rectangular box in which is fitted a cash-drawer 2 of the ordinary construction.

3 indicates a vertical plate located on the top of and near the front of the box 1 and secured thereto at each end by means of a bracket 4. The said vertical plate extends from one side of the box to the other and has secured to its front side two horizontal cylindrical studs 5, the forward ends of which are shouldered and screw-threaded. The studs 5 are located one upon the right and one upon the left side of the plate 3, and are equally distant from the top of the box 1. Rigidly secured upon each of the studs 5, a short distance in front of the plate 3, is a circular disk 6, which is provided with a central opening through which passes the stud 5. Upon the right-hand stud, in front of the disk 6, is mounted a revoluble wheel 7, which is provided with twenty teeth arranged at equal distances around its periphery, and extending, with the exception of one, from the front side of the wheel rearwardly about one-half the thickness of the wheel. The other or twentieth tooth extends the full thickness of the wheel. Upon the left-hand stud 5, to the front and rear, respectively, of the disk 6, are mounted two similar revoluble wheels 8 and 9. Each of the wheels 8 and 9 is provided with twenty teeth arranged around the periphery of the wheel similarly to those on wheel 7. Two diametrically op-

posite teeth on the wheel 8 extend the full thickness of the wheel, the others being about one-half the thickness of the wheel in length. The teeth on the wheel 9 are all one-half the thickness of the wheel in length. The spaces between the teeth on the wheel 7 are numbered "0," "5," "10," "15," "20," and so on up to and including "95." The spaces between the teeth on the wheel 9 are numbered consecutively from "0" to "19," inclusive. The spaces between the teeth on each one-half of the wheel 8 are numbered from "0" to "9," inclusive, the "0" on one half being next to the "9" on the other half. Upon each stud 5, in front of the forward numbered wheel just described, is mounted a large revoluble indicating-wheel 10, which is also provided with twenty teeth arranged at equal distances around its periphery. An annular partition 11, located about midway between the front and rear of the wheel 10 and encircling the periphery of the wheel between the teeth, provides a stop for the pencil or finger used in operating the wheel.

The front of the right-hand wheel 10 near its periphery and between the teeth is numbered "0," "5," "10," "15," and so on to "95," inclusive. The left wheel 10 is provided with similarly-arranged numerals on its face, beginning with "0" and running consecutively to "19," inclusive. A circular plate 12 of the same diameter as the body of the wheel 10 is provided with a central opening fitted to the front reduced end of each of the studs 5, and is held rigidly against the shoulder on the stud by means of a nut 13, which is fitted to the forward threaded end of the stud.

An aperture 13 in the upper edge of each plate 12, and located directly in front of the path of the numerals on the face of the wheel 10 when it is revolved, is made of a size to expose but one of the numerals at once. A stop-arm 14 is secured to the nut 13 and extends horizontally to the right and beyond the plate 12, and serves as a stop for the finger or pencil used in operating the indicating-wheels 10. The face of the plate 12, which is secured to the right-hand stud 5, is provided with numerals arranged at equal distances near the periphery of the plate. The space immediately above the stop-arm 14 is numbered "0," the one next to it is "5," and so on by five up to and including "95." The left-hand plate 12 is numbered consecutively from "0" to "19," inclusive, the numerals being arranged similarly to those on the other plate.

A circular recess 15 is provided in the center of the front side of each of the wheels 10, and in this recess is located a coil-spring 16, one end of which is secured to the stud 5 and the other end to the wheel 10. The disposition of this spring is such as to retract the wheel 10 to the left as viewed from the front of the machine. A rearwardly-extending projection 17 is located near the periphery upon the rear side of each of the wheels 10 and is adapted to come in contact with a projection 18, extending from the front edge of a horizontal plate 19, which is secured at its rear edge to the vertical plate 3 when the retracting-spring causes the wheel 10 to return to a position such that "0" shall be seen in the opening in the plate 12. Mounted in a recess in the rear side of each of the wheels 10 is a spring-pawl 20, which projects at its free end beyond the surface of the wheel 10 and engages the teeth of the numbered wheel to the rear of the wheel 10 when the wheel 10 is revolved to the right.

Secured to the top of the plate 19 to the left of each toothed wheel 7, 8, and 9 is a vertical spring-pawl 21, adapted to engage the teeth on the said wheels and prevent the said toothed wheels from revolving to the left.

A slide 22, consisting of a flat substantially rectangular plate, is provided with a longitudinal slot 23, through which project vertical screws 24 and 25, the lower ends of the said screws being fitted in screw-threaded openings in the plate 19. The right end of the slide 22 is provided with a vertical projection 26, adapted to be engaged by the long tooth in the wheel 7 every time the wheel 7 is revolved once around. A retracting-spring 27, secured at one end to the right-hand end of the slide 22 and to a vertical pin 28, secured to the plate 19, causes the slide to return to its original position after each time that the long tooth in the wheel 7 has moved it to the left. Near the left end of the slide 22, and secured at one end to the top side of the same, is a spring-pawl 29, so located with respect to the wheel 8 as to engage each of the teeth thereon once during each revolution of the wheel.

A slide 30, similar in shape to the slide 22 and located upon the plate 19 to the rear of the slide 22, is provided with a slot similar to the one in the slide 22 and is secured and guided by two screws similar to the screws 24 and 25, secured to the plate 19. A retracting-spring is also secured at one end to the right end of the slide 30 and at the other end to a pin secured to the plate 19. The left end of the plate or slide 30 has secured to it a spring-pawl similar to the one on the slide 22 and adapted to engage the teeth on the wheel 9 whenever the slide is forced to the left. This occurs twice during every revolution of the wheel 8, that is, whenever the vertical projection 31 at the end of the slide 30 is brought against one of the long teeth in the wheel 8, the disposition of the projection being such as to engage only the long teeth on the said wheel.

Secured to the front of the vertical plate 3, to the right of each of the wheels 10, is a spring-pawl 32, the free end of which projects forwardly to a point beyond the rear edge of the wheel 10 and is adapted to engage the teeth of the wheel 10 in a manner such as will prevent the wheel from being retracted

by the spring 16 as long as the wheel has one of its teeth engaged by the pawl 32.

The upper edge of the pawl 32 at its outer end is provided with a notch 33, adapted to engage a spring-catch 34, secured to the plate 3, whenever the pawl is forced back into the position shown in Fig. 7 in dotted lines. The spring-catch 34 consists of a spring strip of metal horizontally disposed, the rear end being bent at a right angle and secured to the plate 3 and the front end being provided with a beveled projection 35, adapted to engage and hold the pawl 32 when the latter is forced rearwardly sufficiently.

The following is a description of the drawer-catch and opening mechanism: Pivoted to the under side of the top-plate of the box 1, near the rear left corner, is a bell-crank lever 36, horizontally disposed and provided with a beveled projection 37 at the forward end of the lever adapted to engage a vertical strip 38, secured to the inner side of the drawer, when the drawer is closed. (See Fig. 2.) The bell-crank lever has one leg transversely disposed with reference to the drawer, and is provided at its right end with a vertical projection 39, which is in the rear of and in the path of a sliding push-rod 40, extending longitudinally along the top of the box 1 near its center. The said push-rod 40 lies on top of the box 1 and extends forward to the front thereof, the end being bent upwardly, so as to serve as a rest against which the thumb may press on opening the drawer. The push-rod 40 is provided with a longitudinal slot 41, through which pass two guiding-pins 42 and 43, the lower ends of which are secured to the top of the box 1. The forward end of a retracting-spring 44 is secured to a pin fastened to the rear of the plate 3, and the rear end of the said spring is secured to the vertical pin 45, which is secured to the push-rod 40. An opening is provided in the lower part of the plate 3, through which the push-rod may operate. The bell-crank lever 36 is held normally with the forward end in the path of the vertical strip 38 by means of a coil-spring 46, the forward end being secured to the under side of the top of the box 1 at a point in front of the transverse leg of the bell-crank lever, the rear end being fastened to the said leg. The cash-drawer is automatically forced forward when released from the locking mechanism just described by means of a coil-spring 47, located parallel with the push-rod 40, but inside the drawer. The forward end of the coil-spring 47 is secured to the under side of the top of the box 1 and extends rearwardly to the rear end of the cash-drawer, to which it is secured.

The gong attachment consists of a gong of the ordinary pattern secured to the top of the box 1, the clapper 48 of which is provided with a resilient projection 49, adapted to be engaged by a transverse projection 50 on the push-rod 40 when the push-rod is forced rearwardly. The resiliency of the projection 49 permits the projection 50 on the push-rod to pass it when the rod is forced to its forward position, but is sufficiently rigid to cause the clapper to be forced away from the gong when the push-rod is forced rearwardly.

Secured transversely to the push-rod 40 is an arm 51, which extends to the right and left from the push-rod and is adapted to be pressed against the spring-pawls 32 at its ends when the push-rod is forced rearwardly. (See Fig. 7.)

The following is a description of the operation of my invention: When a sale is made, the push-rod 40 is forced rearwardly until the rear end of the rod strikes against the projection 39 on the transverse leg of the bell-crank lever, which in turn is forced rearwardly by the continued pressure of the push-rod, and the catch on the vertical projection on the inner side of the drawer is released, and the drawer is drawn forward by the coil-spring 47. The money is then placed in the drawer and the drawer is closed. The finger is then placed, if the purchase amounts to less than one dollar, between the teeth on the right-hand wheel 10 opposite the numeral on the disk 12 representing the amount of the sale, and the indicating disk or wheel 10 is then revolved to the right until the finger comes in contact with the stop-arm 14, at which time the amount of the sale will be seen on the indicator-disk through the opening in the upper edge of the plate 12. The wheel 10, in being revolved as described, carries the wheel 7 around with it through the intermediacy of the spring-pawl 20, which engages the tooth in front of it on the wheel 7. The spring-pawl 21, operating in the teeth on the wheel 7, prevents the said wheel from rotating to the left. After ninety-five cents has been counted up by the wheel 7 the long tooth in the said wheel engages the projection 26 on the right end of the slide 22 and forces the said slide to the left. The spring-pawl on the left end of the slide engaging with a tooth on the wheel 8 causes the said wheel 8 to revolve to the right one tooth, counting up one dollar on the said wheel. After the slide 22 has been released from engagement with the long tooth on the wheel 7 the retracting spring 27 causes it to return to its original position. During every half-revolution of the wheel 8 one of the long teeth on the said wheel engages the vertical projection on the left end of the slide 30, causing it to be forced to the left and through the intermediacy of the spring-pawl 29, on the left end of the slide 30, operating against a tooth in the wheel 9, forcing the wheel 9 to revolve the distance of one tooth, thus counting ten dollars on the wheel 9. After each engagement with a tooth on the wheel 9 of the slide 30 the slide is retracted to its original position by means of the coil-spring 27. The operation of counting more than ninety-five cents at a time is performed on the wheel 10 on the left side of the machine. This wheel

is operated in the same manner described with reference to the right wheel 10. When another sale is made, the push-rod 40 is forced rearwardly until the drawer is opened in the manner already described. At the same time the arm 51 forces the spring-pawls 32 from engagement with the teeth in the wheels 10, releasing the said wheels, which revolve to the left through the intermediacy of the retracting-springs 16 until the projections 17 on the rear sides of said wheels come against the projections 18 on the front edge of the plate 19, at which time "0" appears at the opening in the top of each disk 12. The continued forcing backward of the spring-pawls 32 by the arm 51 causes the pawls to engage the spring-catches 34, by which they are held until released by the projection 52 on the rear side of each wheel 10 striking against the beveled projection 35 of the catch 34, after which the pawls 32 again engage the teeth of the wheels 10. Before the push-rod has been forced rearwardly sufficiently to open the drawer the projection on the right side of the push-rod engages the gong-clapper and causes the gong to sound.

The amount of every sale is indicated through the notch in the plates 12, and the total amount of sales up to one hundred and ninety-nine dollars and ninety-five cents is shown upon inspecting the wheels 7, 8, and 9. In determining the total sales reference should be had to the uppermost numeral on each of the wheels 7, 8, and 9, as indicated by the arrows in Fig. 2. The cents are indicated on the wheel 7, the dollars on wheel 8, and the ten dollars on wheel 9. No sale can be shown on the indicating-wheels without being counted on the adding mechanism, and it is immaterial whether or not the cash-drawer is kept open or shut.

The operating mechanism, with the exception of the push-rod 40 at its forward end and the wheels 10, should be inclosed to prevent tampering with, a means being provided so that the proper person may inspect the adding-wheels to determine the amount of sales made from time to time.

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

1. In a cash-register, the combination with a revoluble indicator, of means for retracting the said indicator to its starting-point after it has been revolved in the proper direction, a ratchet-wheel rotatable with the said indicator, a pawl adapted to engage the teeth of the ratchet-wheel, a push-rod adapted when depressed to disengage the pawl from the ratchet-teeth, a locking device adapted to engage the pawl when it is disengaged from the ratchet-teeth, and means by which the pawl is released from the locking device when the ratchet-wheel is properly rotated, substantially as described.

2. In a cash-register, the combination with a revoluble indicator, of a ratchet-wheel rotatable with the said indicator, a pawl adapted to engage the ratchet-wheel, means for retracting the revoluble indicator to its starting-point after it has been rotated in one direction, means for holding the pawl disengaged from the ratchet-wheel, said holding means being released from the pawl when the indicator is retracted to its starting-point, a registering-wheel, a pawl-and-ratchet connection between the registering-wheel and the said ratchet-wheel, a second registering-wheel, and means by which the second registering-wheel is partially rotated after the first registering-wheel has been revolved a suitable distance, substantially as described.

3. In a cash-register, the combination with a revoluble indicator, of means for retracting the indicator to its starting-point after it has been revolved in the proper direction, a ratchet-wheel revoluble with the indicator, a pawl normally engaging the ratchet-wheel, means for temporarily disengaging the pawl from the ratchet-wheel, a locking device for holding the pawl thus disengaged but released therefrom upon the return of the ratchet-wheel to its starting-point, substantially as described.

4. In a cash-register, the combination with a revoluble indicator, of means for retracting the indicator to its starting-point after it has been revolved in the proper direction, a ratchet-wheel revoluble with the indicator, a pawl normally engaging the ratchet-wheel, a catch for holding the pawl when the pawl is disengaged from the ratchet-wheel, and means for releasing the pawl from the catch when the indicator has returned to its starting-point, substantially as described.

5. In a cash-register, the combination with a revoluble indicator, of means for retracting the indicator to its starting-point after it has been revolved in the proper direction, a ratchet-wheel revoluble with the indicator, a pawl normally engaging the ratchet-wheel, a cash-drawer, a locking device for holding the pawl disengaged from the ratchet-wheel when the drawer is opened but released therefrom upon the return of the indicator to its starting-point substantially as described.

6. In a cash-register, the combination with a revoluble indicator, of means for retracting the indicator to its starting-point after it has been revolved in the proper direction, a ratchet-wheel revoluble with the indicator, a pawl normally engaging the ratchet-wheel, a cash-drawer, a locking device for holding the drawer normally closed, and means for holding the pawl disengaged from the ratchet-wheel when the drawer is opened but released therefrom upon the return of the indicator to its starting-point, substantially as described.

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

WILLIAM BASSETT.

Witnesses:
WARREN D. HOUSE,
JAMES F. HADLEY.