

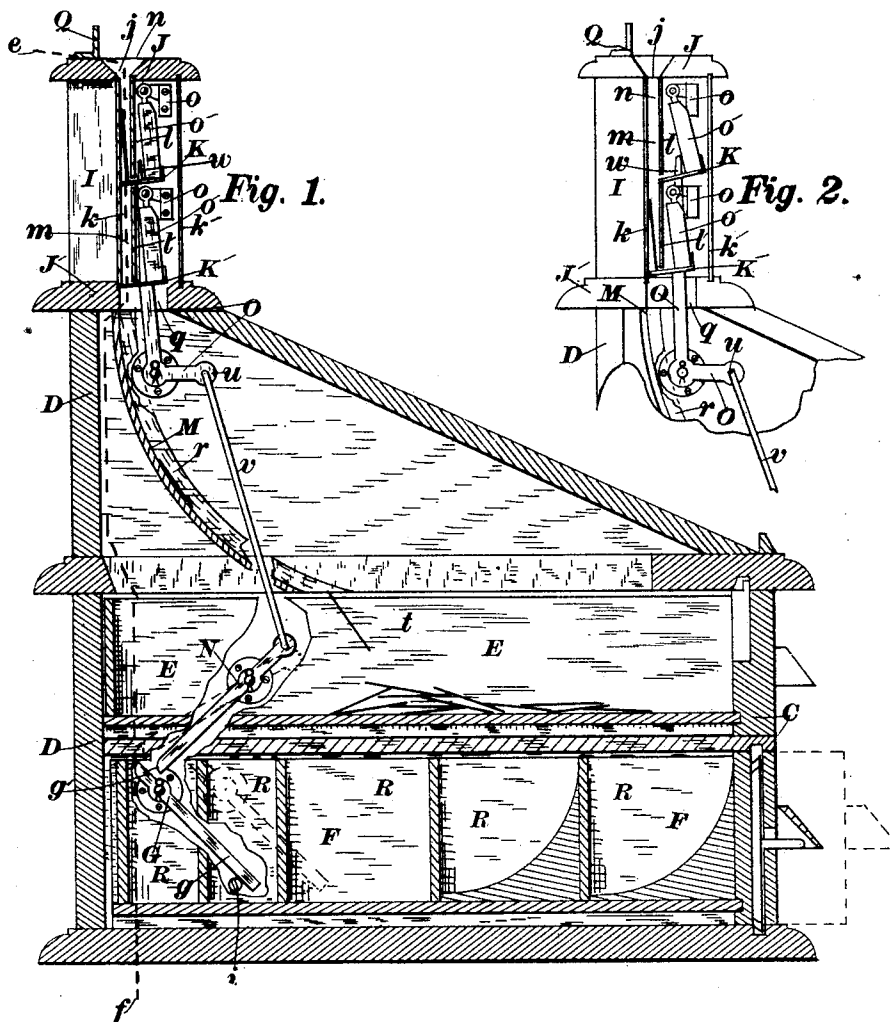
(No Model.)

5 Sheets—Sheet 1.

J. F. SCHNARRENBERGER.
CASH REGISTER.

No. 476,900.

Patented June 14, 1892.



WITNESSES:

H. S. Brown.

W. S. Strouger.

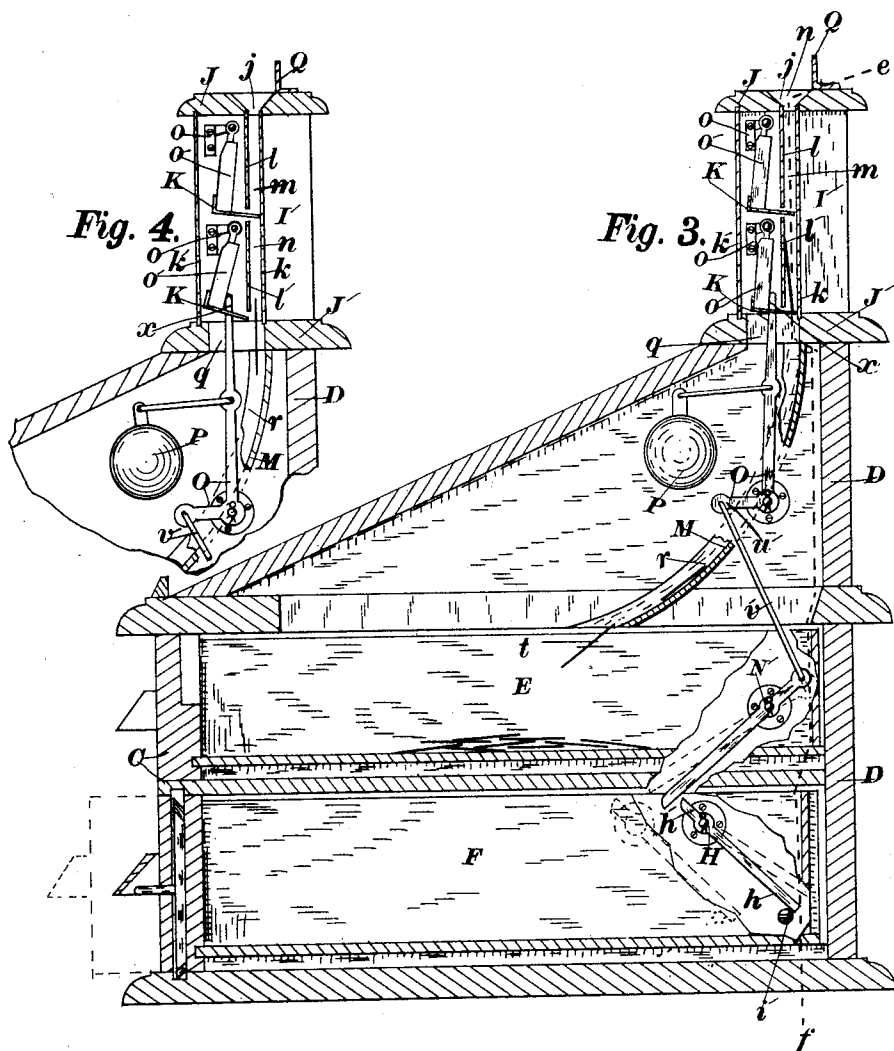
INVENTOR:

INVENTOR
John F. Schnarrenberger
By his atty. Oscar Smeel.

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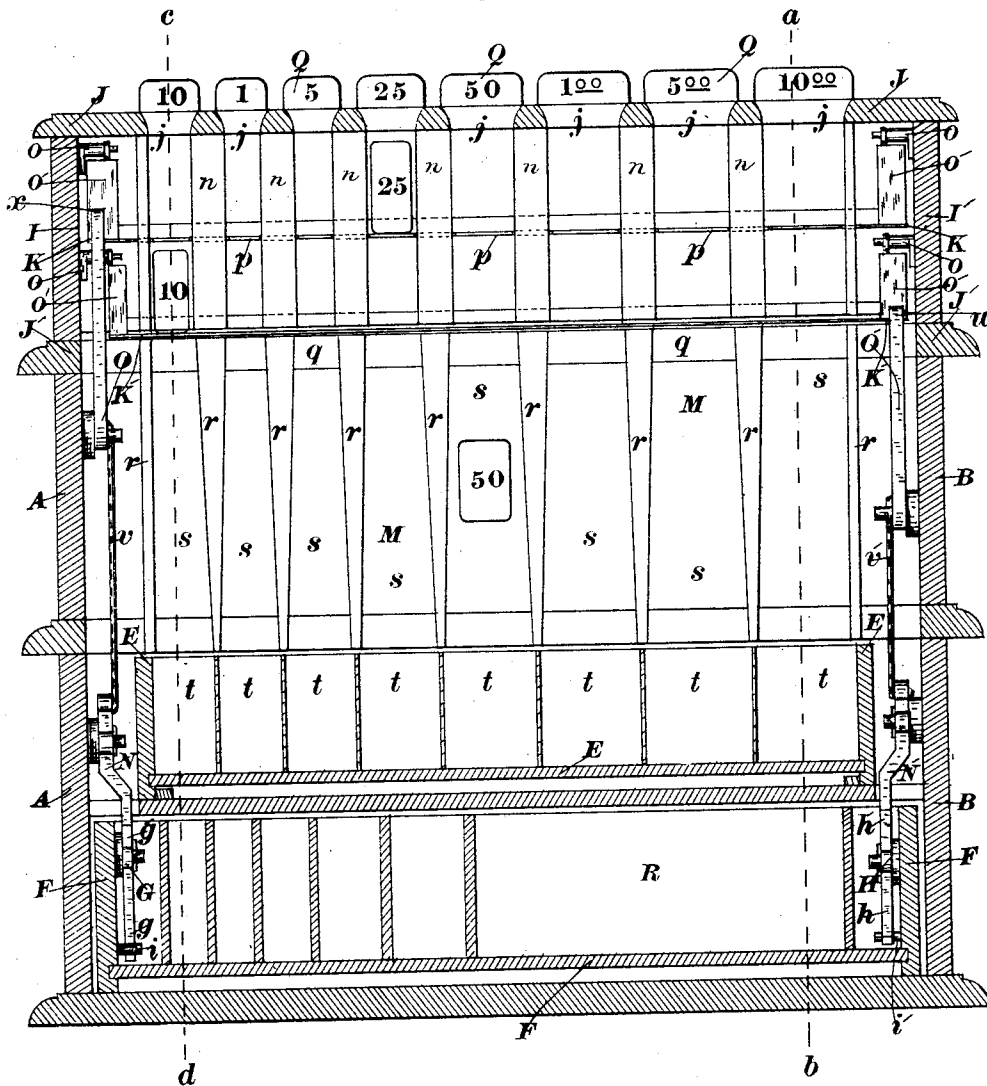
John F. Schnarrenberger
By his atty. *Oscar Inell*

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Fig. 5.



WITNESSES:
H. S. Brown.
W. S. Stronger

INVENTOR:
John F. Schnarrenberger
By his Atty. Oscar Inell

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Fig. 6. Patented June 14, 1892.

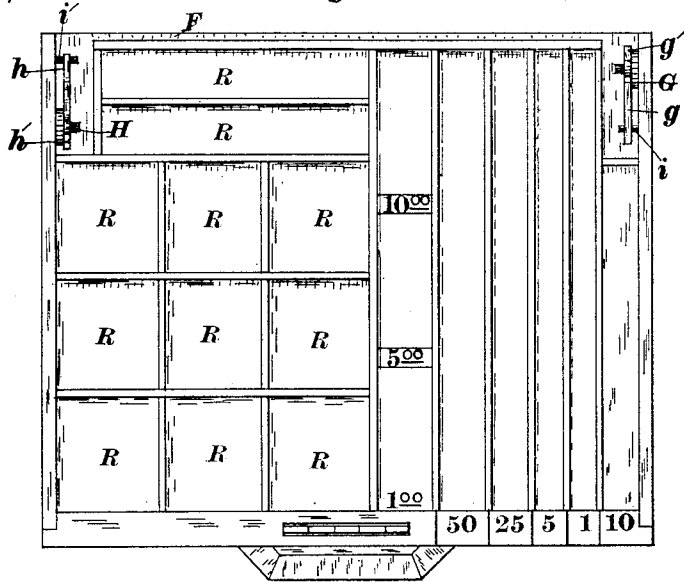
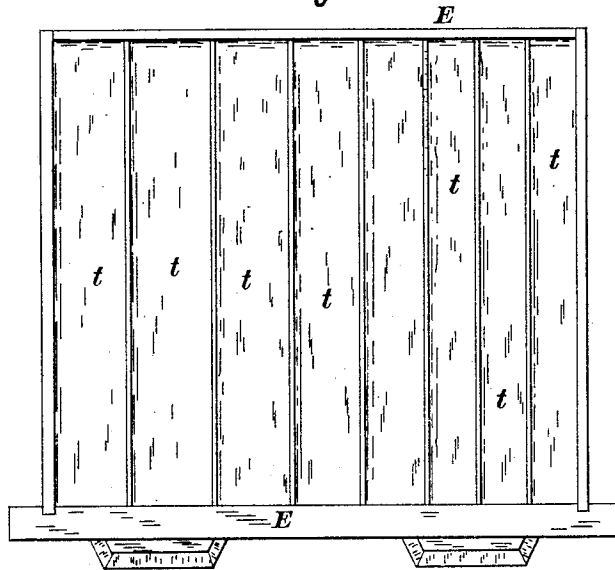


Fig. 7.



WITNESSES:

H. S. Brown
W. S. Stronger

INVENTOR:

John F. Schnarrenberger
By his Atty. *Oscar Inell*

(No Model.)

5 Sheets—Sheet 5.

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Fig. 9.

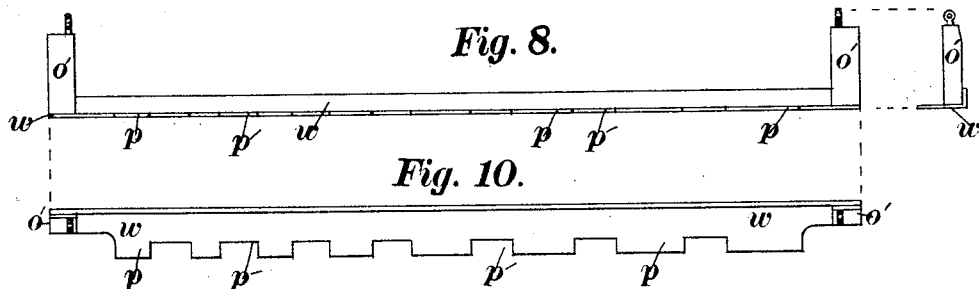


Fig. 11.

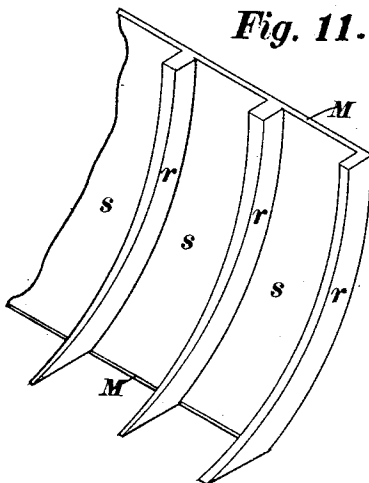


Fig. 12.



Fig. 13.



WITNESSES:

H. S. Brown

W. S. Strouger

INVENTOR:

John F. Schnarrenburger
By his atty. *Oscar Inell*

UNITED STATES PATENT OFFICE.

JOHN F. SCHNARRENBERGER, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHARLES E. FUNK, OF SAME PLACE.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 476,900, dated June 14, 1892.

Application filed November 12, 1891. Serial No. 411,678. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SCHNARRENBERGER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Cash-Registers, of which the following is a specification.

My invention relates to cash-registers which indicate to the purchaser the amount paid at each purchase or the total of several purchases at one time; and it consists in the construction and combination of parts of the same, as will be hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a vertical transverse section on line *a b*, Fig. 5, with parts of the interior broken away to show operative mechanism of the inside of end A, Fig. 5. Fig. 2 is a portion of the section of the top of Fig. 1 to show part of operative parts in different position. Fig. 3 is a vertical transverse section on line *c d*, Fig. 5, with parts of the interior broken away to show operative mechanism of the inside of end B, Fig. 5. Fig. 4 is a portion of the section of the top of Fig. 3, showing operative parts in changed position from that shown in Fig. 3; Fig. 5, a vertical longitudinal section on line *e f* of Figs. 1 and 3; Fig. 6, money and card drawer; Fig. 7, card-drawer; Figs. 8, 9, and 10, respectively, side and end elevation and plan of one of the card-stops; Fig. 11, detached perspective view of one end of the card-slide. Figs. 12 and 13 show two forms of figures for cards.

Similar letters indicate corresponding parts throughout the several views.

A and B are the ends and C and D, respectively, the front and back of the cabinet, which contains all the operative mechanism.

E is an upper drawer for receiving the cards, and F the lower drawer, from which the cards are drawn for indicating the purchases. Plan views of both drawers are shown in Figs. 6 and 7.

Fig. 5 shows drawer F almost as wide and drawer E much less in width than the inside length of the cabinet. At the sides, inside, near the rear of drawer F, are pivoted levers G and H, and each of these levers has its lower arms, respectively, *g* and *h* longer than its upper arms, respectively, *g'* and *h'*, so

that the lower arms will preponderate in weight and hold the lever's lower arms against stop-pins *i* or *i'*. With this construction levers G and H are carried in and out with the movement of drawer F.

In Figs. 8, 9, and 10 are shown different views of one of the card-stops, end views of which are shown in Figs. 1, 2, 3, and 4, and their relative parts will now be explained. The cabinet proper is surmounted by a top, which is composed of solid ends I and I' and a top J, which is perforated with as many slots *j* as there are different kinds of cards. Underneath top J and between ends I and I' and above the top J' of the cabinet proper are four strips of glass *k k'* and *l l'*, which are secured in place and run lengthwise of the cabinet, as plainly shown. Glass strips *k* and *k'* fill up the entire space between sides I and I' and tops J and J' and serve as windows and to exclude dust from the working mechanism. Glass strips *l* and *l'* are separated at their center of width by a slot, which extends their entire length. Glass strips *l* and *l'* are separated from glass *k'* by a space *m*, which is the downward continuation of slots *j*. In Fig. 5 is shown the divisions *n*, which form the ends of slots formed out of space *m*. Secured to the sides I and I' are hangers *o*, to which are pivoted the ends of the card-stops. The card-stops consist of a strip of metal K, which has a nearly horizontal position, and its rear edge is bent up at a right angle, forming an L-shaped strip in cross-section. The ends of this strip are secured to blocks *o'*, which have eyes at the top to receive the pivot-pins of hangers *o*. The horizontal part K of the stop is provided with projections *p*, which have spaces *p'* between them. When the upper stop is hung in place, the projections *p* pass through into the space *m* between glass strips *l l'*. The lower stop is hung on pivots similar to the upper stop, and its horizontal strip *k'*, when acting as a stop, passes under lower glass strip *l'* and into space *m*.

It will be understood that the horizontal strips K or K' of either upper or lower stops can either be provided with spaces *p'* to straddle the divisions *n* in space *m* or be made with a straight edge, with divisions *n* cut

away to admit the stop strip. It will be noticed that both the upper and lower stops are so hung out of the vertical that their tendency is to swing in toward glass *k* in the closed position shown in Figs. 1 and 3.

Under the glass strips which form space *m* the top *J'* of the cabinet is slotted at *q* throughout its length between the insides of sides *I* and *I'*, and just under this slot *q* and throughout its length is a curved plate *M* (detail Fig. 11) which has ribs *r*, which register with divisions *n* of space *m*, the ribs forming slideways *s*, and at the bottom of these slideways are the compartments *t* of the upper drawer *E*, which compartments also register with the slideways *s*.

Pivoted to the inside of the ends *A* and *B* of the cabinet are levers *N* and *N'*, whose lower ends project downward below the level of the top ends of levers *G* and *H* of the lower drawer *F*, and the upper ends of levers *N* and *N'* are connected to the short arm *u* and *u'* of elbow-levers *O* and *O'* by rods *v* and *v'*. The long arm of elbow-lever *O* passes up through slot *q* of cabinet-top *J'*, and the upper end *w* of the lever contacts with the rear side of upper stop-block *o'*, Figs. 1 and 2, while lever *O'* at the opposite end of the cabinet passes up through slot *q* and its upper end *x* contacts with the rear of lower stop-block *o'*. Near the center of length of the long arm of elbow-lever *O'*, Figs. 3 and 4, is pivoted a rod, which connects the lever to the lever of a bell *P*.

At the extreme top of the cabinet are upward projections *Q*, upon which are the figures to indicate the slot into which any particular card having the same figure is placed.

For convenience the lower drawer has the card-apartments marked to suit the denomination of the cards contained in them, as shown in Fig. 6. The upper drawer may also be marked in the same manner, if necessary. The cards may be marked with a single set of figures or with a double set of the same denomination arranged in the manner shown in Fig. 13, in which case either end of the card can be inserted in the slot *j*. The glass strips *k* *k'* and *l* *l'* being transparent, the cards can be seen resting upon both the upper and lower stops before they are dropped into the upper drawer of the cabinet.

In explaining the operation of this register it must be understood that the cards at the beginning are all in the compartments of the lower drawer; also, the money for making change is in the square compartments *R* of the same drawer, and the amount of this money is charged to the register. When a purchase has been made, the lower drawer is first pulled out and the amount of the purchase in money deposited in one of the compartments *R*. Should the amount of the purchase be, say, twenty-five cents, a "25" card is withdrawn from the drawer and dropped into slot 25 at the top of the cabinet, where the card first lodges upon one of the projections *p* of the upper

stop and can be plainly seen through the glass sides of the top of the cabinet from either the front or rear. After the card has been inserted in the slot the drawer is pushed into the closed position shown in solid lines, Figs. 1 and 3. It will be noticed that lever *G*, which is pivoted to the drawer and shown in Figs. 1 and 5, has its lower arm *g* resting upon a stop *i*, which prevents the lever from turning farther in the direction of the stop. When lower drawer *F* was pulled out, the top arm *g'* of lever *G* contacted with the lower end of the long arm of lever *N*, which caused lever *G* to turn on its pivot, the upper arm downward, and the lower arm *g* lifting from pin *i*, which permits lever *G* to pass the lower end of lever *N* while lever *G* is being carried outward by opening drawer *F*; but after the upper end of lever *G* has been carried past the lower end of lever *N* the arm *g* of lever *G*, being heavier than the upper arm *g'*, causes the lower arm to drop back to the stop-pin *i*, and when the drawer is pushed in the upper arm *g'* of lever *G* contacts with the lower arm of lever *N*, causing it to vibrate upward on its pivotal center to the dotted lines, which action, through the medium of rod *v*, causes the long arm of lever *O* to vibrate from left to right in Fig. 1, and the top end *w* of this arm to swing the upper stop out of space *m*, Fig. 2, and permit the card to drop and lodge against the lower stop, as shown by card 10 in Figs. 2 and 5, where it remains in plain view through the glass until more money is paid for a purchase and must be registered.

The registering takes place as follows: When the drawer is pulled out, the mechanism shown by Figs. 3 and 4 is operated. In Figs. 3 and 5 lever *H* is shown pivoted to the side of drawer *F* at the rear. Lever *H* also has a long arm, which rests upon a stop-pin *i'*; but this lever is so disposed that it vibrates in an opposite direction to that of lever *G* at the opposite side of the drawer and hereinbefore described. When drawer *F* is pushed in, its top end *h'* is pushed downward, lifting the long arm *h* from stop-pin *i'*; but when the drawer is pulled out stop-pin *i'* holds top end *h'* in position, so that when it contacts with the long arm of lever *N* this lever is thrown up to the dotted lines, causing short arm *u'*, through rod *v'*, to descend, and operating the top end *x* of lever *O* from right to left in Fig. 3, which end *x* contacts with the lower stop and swings it outward from glass *k*, Fig. 4, when the card resting upon the stop, (card 10,) Fig. 5, falls down through slot *q* in top *J'*, thence down one of the slides *s* and into its designated compartment *t* in upper drawer *E*, as shown by card 50 in Fig. 5. During the time the mechanism shown in Figs. 3 and 4 is operated the movement of lever *O* to drop the card from the lower stop causes the bell *P* to sound an alarm by its lever being connected to lever *O*, as shown. The method of operation, in short, is by pull-

ing out lower drawer F a card is deposited in upper drawer E, and by closing the lower drawer a card is dropped from the top to the lower stop, where it remains in plain view to indicate the amount of the last purchase. At the close of business the sum of money in the lower drawer less the amount deposited in the drawer for change at the beginning should exactly equal the sum of the numbers on the tickets which have been deposited in the upper drawer.

I claim as my invention—

1. In a cash-register, the combination, with a cabinet provided with a slot leading into the top, of two stops in the slot, a drawer within the cabinet, and means for connecting the stops with the drawer, whereby the movement of the drawer in one direction operates one of the stops and the movement of it in the opposite direction operates the other stop, substantially as set forth.

2. In a cash-register, the combination, with a cabinet provided with a slot leading from the top, of two stops in the slot, a drawer in the cabinet, and two systems of rods and levers, one of which is connected with one of the stops and is operated by pulling out the drawer and the other one is operated by pushing in the drawer, substantially as set forth.

3. In a cash-register, the combination, with a cabinet provided with a slot leading from its top, of two stops in said slot, a drawer in the cabinet, one side of which drawer is provided with a forwardly-swinging lever and the other side is provided with a rearwardly-swinging lever, and two systems of rods and levers, one of which is connected with one of the stops and is operated by the lever on one side of the drawer and the other system is connected with the other stop and is operated by the lever on the other side of the drawer, substantially as set forth.

4. In a cash-register, the combination, with

a cabinet provided with a slot leading from its top, of two stops in the slot and two drawers in the cabinet divided into compartments, said slot being also divided to correspond with the compartments of one of said boxes, the other drawer being adapted to receive the cash, and means for removing one of the stops from the slot when one of the drawers is pulled out and for removing the other stop when the drawer is pushed in, substantially as set forth.

5. In a cash-register, the combination, with the cabinet proper, of a top mounted thereon comprising slotted top and bottom pieces, solid end pieces, and transparent walls between the top and bottom pieces and the end pieces, two of said walls forming a vertical slot between them, which registers with the slots in the top and bottom pieces, one of said walls being provided with a horizontal slot, two stops secured to the end pieces, one of which stops is adapted to pass through the horizontal slot in one of the walls and the other one is adapted to pass under the bottom of said wall, and means for operating the stops, substantially as set forth.

6. In a cash-register the cabinet of which is provided with a receptacle and a vertical slotted top communicating therewith, the walls of which slot are transparent and one of them is provided with a horizontal slot, two stops pivotally secured to the end pieces, each stop comprising a bar and a plate secured to the lower end thereof, said plate projecting at an angle therefrom, one of which plates is adapted to pass through the horizontal slot and close the vertical slot and the other plate is adapted to pass under the bottom of said wall, and means for operating the stops, substantially as set forth.

JOHN F. SCHNARRENBERGER.

Witnesses:

F. F. BARNETT,

A. ERNEST KNIGHT.