R. TREBER.

CASH REGISTER.

APPLICATION FILED NOV. 12, 1908.

954,363.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

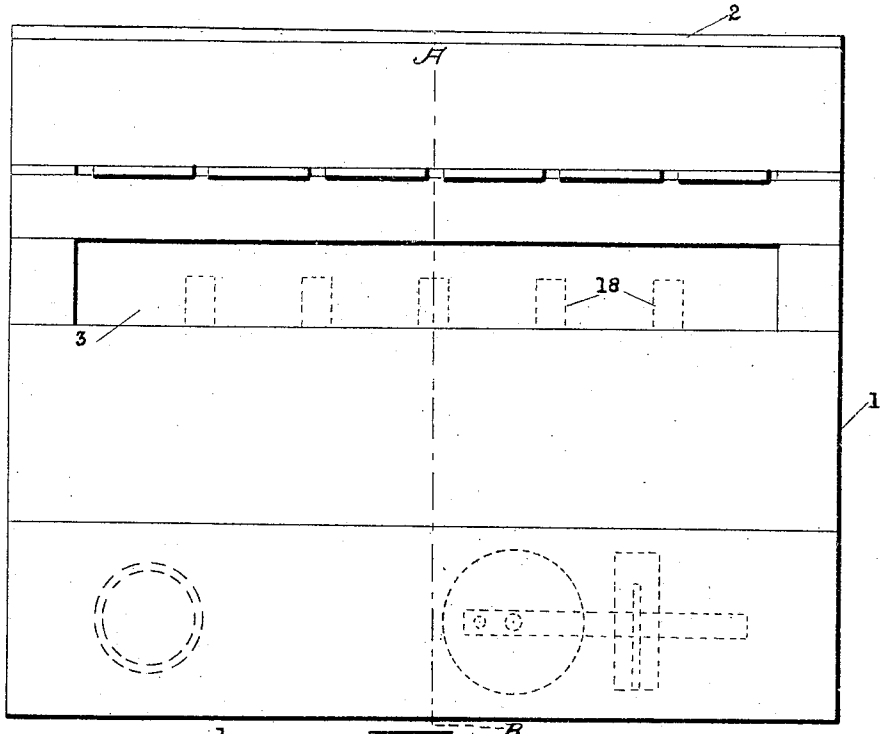

Fig. 1

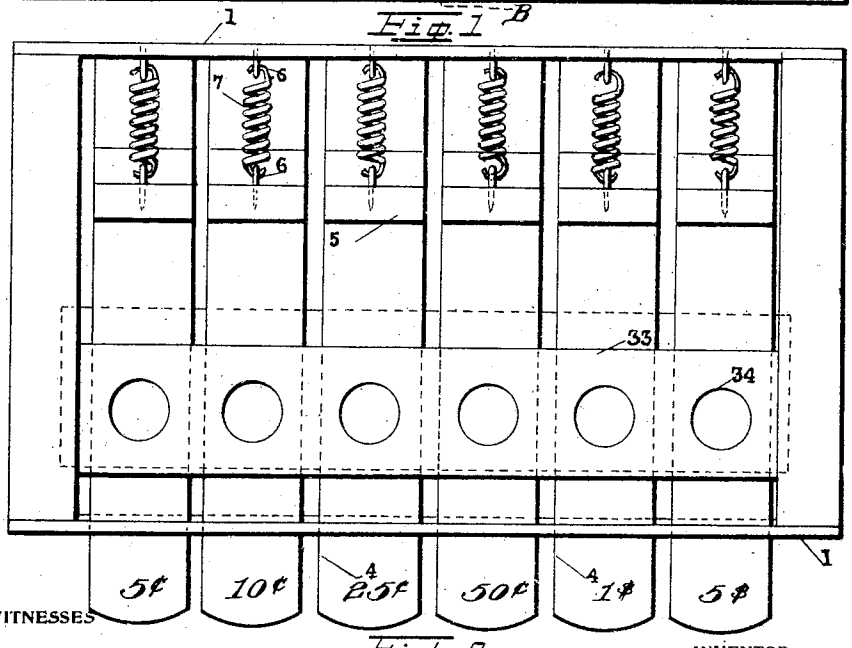

Fig. 2

WITNESSES

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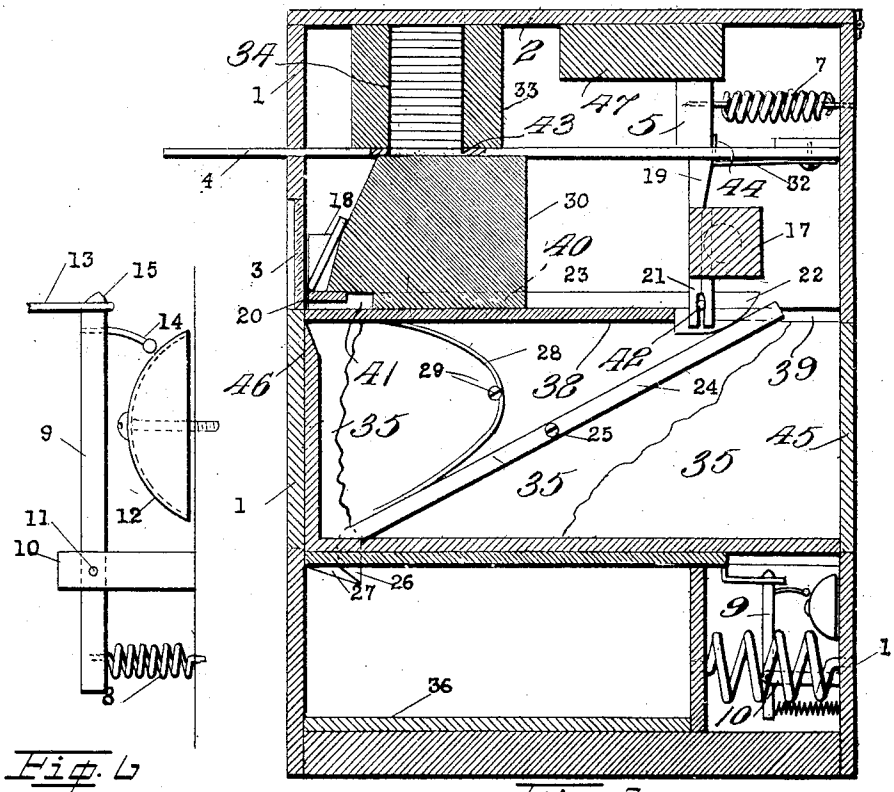

Fig. 6

Fig. 3

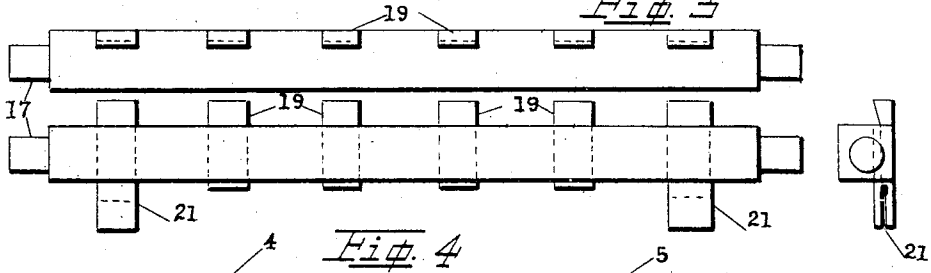

Fig. 4

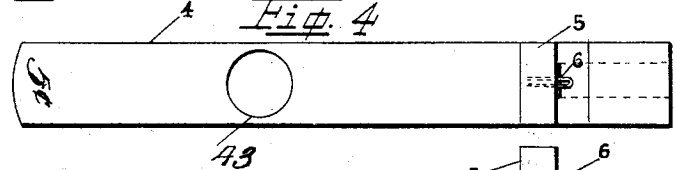

Fig. 5

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UNITED STATES PATENT OFFICE.

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CASH-REGISTER.

954,363. Specification of Letters Patent. **Patented Apr. 5, 1910.**

Application filed November 12, 1908. Serial No. 462,281.

To all whom it may concern:

Be it known that I, REUBEN TREBER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification.

The invention relates generally to cash registers and particularly to one employing indicating tablets marked to correspond with denominations of money.

One object of the invention is the provision of a register such as above indicated which is provided with means, operable in the movement of one or more pull rods, to display for inspection one or more tablets indicating the amount of money credited to the register by a present transaction and deposit in a tablet receptacle one or more tablets corresponding in denomination to the amount credited to the register in the immediately-preceding transaction.

Another object is to provide a register comprising means, operated in the movement of one or more pull rods, for forcing open a normally-locked cash drawer and sounding an alarm as said drawer is opened.

With these as the primary objects the invention will now be described in the accompanying drawings and then more particularly pointed out in the claims.

In the drawings, Figure 1 is a front elevation of the register. Fig. 2 is a top plan with the register cover removed. Fig. 3 is a vertical central section on line A—B of Fig. 1. Fig. 4 is a plan view of the pull rod. Fig. 5 is an edge view of the same. Fig. 6 is a broken side elevation of the alarm bell and connected parts.

Referring now to the drawings, wherein the preferred details of my invention are shown and wherein like reference numerals refer to like parts throughout the several views, 1 denotes the casing of the register approximately of rectangular form and provided with hinged cover 2. A series of fixed supporting strips 38 extend in spaced parallel relation from the front to the back of the register, those strips of the series nearest the sides of the casing being formed with a central rearwardly-extending slot 39 for a purpose to be later explained. A pair of cam-bars 23, provided with cams 22, rest upon these slotted strips and have rigidly connected to their forward ends a tablet ledge 20 extending approximately the width of the register and lying, when in normal position, closely continguous a sight glass 3 fixed at appropriate height in the front wall of the casing, as shown in Fig. 3. Cam-bars 23 are adapted for movement longitudinally of strips 38, cams 22, during such movement, traveling in slots 39 of said strips and extending below the lower face of the latter. A tablet-directing block 30, disposed laterally of the register, is rigidly attached to strips 38 and is provided with grooves 40 extending upwardly from the lower face of the block in which cam-bars 23 travel in their movement longitudinally of the supporting strips 38 the lower forward edge of said block normally overlying the rear edge of the tablet ledge 20, as shown in Fig. 3. Block 30 is provided with a cut-out portion 41 extending the full lateral dimension of said block and of sufficient width and depth to receive said ledge when it is in withdrawn position incident to the rearward movement of the cam-bars, the front face of said block being beveled, as shown in Fig. 3, the function of said beveled face being to guide the tablets to the tablet ledge 20, the lower forward edge of said block lying normally close enough to the sight glass to insure said tablets resting on said tablet ledge in an upright position, tablets of the same denomination being always, in their descent from the tablet holder, directed to and maintained in a particular section of the tablet ledge through the medium of partitions 18 extending from the sight glass to the beveled face of block 30.

Extending laterally of the register and pivotally connected to the side walls thereof is a rock-bar 17 provided with a series of appropriately-spaced upwardly-extending lugs 19 and near either end with down-extending yokes 21 adapted to engage pins 42 formed on cams 22. Each of a series of pull rods 4, in thickness equal to that of the tablets employed, is formed with a tablet aperture 43, in form and size corresponding to that of said tablets. Each of the pull rods 4 rests lightly upon block 30 and upon one of the lugs 19 of rock bar 17, said pull rods extending to the rear wall of the casing, as shown, and a sufficient distance beyond the front wall thereof, through suitable openings, to provide a finger grip and space for an indicating numeral. Pull rods 4 are adapted for movement from and toward the rear wall of the casing and are provided

with studs 5 to which, and to the rear wall of the casing, are attached the terminals of springs 7, designed to return the rods to normal position after having been moved against the tension of said springs in a forward direction, said studs bearing against guide blocks 47 attached to the cover. Pull rods 4 are disposed beneath a fixed tablet holder 33 disposed laterally of the register and formed with a series of tablet apertures 34 each aperture being positioned in alinement with that of the pull rod immediately beneath it and of similar diameter, each aperture of said series being designed to receive a plurality of tablets of like denomination, the tablets in the respective apertures being of different denominations, as many apertures in the tablet holder and, incidentally, coöperating pull rods being employed as would be consistent with the business in connection with which the register is being employed. Each pull rod is provided with a spring 32 formed with an upwardly-turned end 44 and yieldingly secured to the lower surface of the rear end of said rod, said upwardly-turned end bearing on the rear face of that one of lugs 19 on which the respective pull rod rests, and is adapted for vertical play through a suitable aperture in the pull rod.

35 denotes a series of vertical partitions extending the full depth and from the front to the rear wall of a tablet receptacle 45 and dividing the latter into a sufficient number of similar compartments to provide one for each denomination of tablet used, the upper end 46 of the forward wall of the receptacle being beveled, as shown. A pair of lock bars 24 (one only of which is shown) are pivotally connected to the side walls of the casing, the upper ends of said bars bearing against cams 22 and the lower latch ends 26 passing through apertures in the floor of the tablet receptacle and engaging notches 27 of money drawer 36, the ends of said lock bar being held to their respective operative positions by means of springs 28 secured to the side walls of the casing at 29, said lock bars thus normally holding the money drawer 36 locked against tension of spring 16, attached to the rear wall of said drawer and to the rear wall of the casing. An alarm bell 12 is secured to the rear wall of the casing to which is also attached a bar 10, pivotally supporting at 11 hammer lever 9 to the lower end of which and to the rear wall of the casing are connected the ends of spring 8. A yoke 13, rigidly attached to the rear wall of the money drawer, normally engages the upper end of hammer lever 9, the front face of which is slightly beveled to insure ready engagement of said yoke and hammer lever in the rearward movement of the money drawer.

The operation of the apparatus is as follows: The several apertures in the tablet holder 33 are filled with tablets, each aperture being supplied with tablets of a denomination to correspond with the indicating numeral on the pull rod immediately beneath said aperture, the lowermost tablet in each of the tablet columns thus formed dropping into the alined aperture in said pull rod, the several columns being supported by tablet directing block 30. When cash is to be deposited in the money drawer the pull rod marked with the indicating numeral corresponding with the amount to be credited to the register is given an outward pull, incidentally moving forward the tablet resting in its aperture until said aperture is sufficiently clear of the tablet-directing block 30 to allow said tablet to drop from said aperture and, guided by the beveled face of said block, and the appropriately-positioned pair of the series of partitions 18, rest in an upright position in its proper compartment on tablet ledge 20 where it is clearly visible from the front of the register through sight glass 3, thus indicating to the observer the amount credited to the register by the present deposit, the operation having forced open the money drawer and sounded the alarm, attention being thus called to the deposit. The forward pull of the pull rod has caused other parts of the register to be operated which operation will now be described in connection with the second deposit. When the second deposit is to be made the proper pull rod is drawn out causing the upturned end of spring 32 to force forward that lug 19 with which it is in engagement, thus rocking rock-bar 17 and, through the medium of yokes 21 and pins 42, forcing cam rods 23 in a rearward direction and depressing the upper end of lock rod 24 and raising the latch end 26 against tension of spring 28 out of engagement with notch 27 and permitting the money drawer to be forced outwardly by spring 16. The rearward movement of cam rods 23 will incidentally cause tablet ledge 20 to be moved in a rearward direction into cut-out portion 41 of tablet-directing block 30 a sufficient distance to permit the tablet resting thereon to drop onto the beveled upper end of the forward wall of the tablet receptacle, and, guided by partitions 35, drop into its proper compartment of said receptacle, the particular pull rod being drawn in a rearward direction to normal position by its spring 7. The parts are so proportioned that end 44 of spring 32, in the forward movement of the pull rod, will ride past that lug 19 with which it is in engagement during said forward movement of the pull rod, thus freeing rock-bar 17 and permitting cam-bars 23, under action of springs 28 on lock-bars 24, to be forced forward and return tablet ledge

20 to normal tablet-receiving position before the pull rod has been sufficiently advanced to release its contained tablet, the rearward movement of said ledge in the previously-described operation being sufficient only to permit descent of the tablet. The springs 32, being adapted for vertical play through their respective pull rods as before described, will, when the latter are released by the operator and returned to normal position by springs 7, operatively reengage with their respective lugs 19, as obvious, a tablet of the same denomination as that just displayed for inspection dropping into the aperture of the returned pull rod from the alined aperture of the tablet holder 33 and reëstablishing operative conditions for that particular pull rod.

As evident, when it is necessary to display several tablets to indicate the amount of the credit to the register, the corresponding pull rods may be simultaneously operated.

Having thus described the invention what is claimed as new, is:—

1. A cash register including a casing formed with a sight opening, a tablet holder secured therein and formed for the reception of a plurality of tablets, a guide block underlying the tablet holder, a pull rod operating between the holder and guide block and serving to deliver a tablet from the holder to a position in advance of the guide block, said pull rod being formed with an opening to receive and guide the tablets during operation of said rod, a tablet supporting display ledge visible through the sight opening and normally extended in advance of the guide block to directly receive and support the tablets delivered from the holder, and means arranged intermediate said pull rod and ledge whereby to withdraw the latter from its normal position in the initial movement of the pull rod.

2. A cash register including a casing, a tablet holder secured therein and formed for the reception of a plurality of tablets, a guide block underlying the tablet holder, a pull rod operating between the holder and guide block and serving to deliver a tablet from the holder to a position in advance of the guide block, a tablet supporting ledge normally extended in advance of the guide block to support the delivered tablets, means arranged intermediate said pull rod and ledge whereby to withdraw the latter from its normal position in the initial movement of the pull rod, and means for automatically returning the ledge to normal position prior to the complete delivery movement of the pull rod.

3. A cash register including a casing, a tablet holder arranged therein, a guide block arranged beneath the holder, a pull rod operating between said block and holder and formed with an opening normally registering with a tablet recess in the holder, a supporting ledge normally positioned in advance of the guide block to receive and support the delivered tablets, cam bars connected to said ledge and moving beneath the guide block, a rock bar mounted in the casing and connected with the cam bars, and means carried by the pull bar to engage and operate the rock bar in the forward movement of said pull bar.

4. A cash register including a casing, a tablet holder arranged therein, a guide block arranged beneath the holder, a pull rod operating between said block and holder and formed with an opening normally registering with a tablet recess in the holder, a supporting ledge normally positioned in advance of the guide block to receive and support the delivered tablets, cam bars connected to said ledge and moving beneath the guide block, a rock bar mounted in the casing and connected with the cam bars, and means carried by the pull bar to engage and operate the rock bar in the forward movement of said pull bar, said means automatically releasing the rock bar prior to the complete forward movement of the pull bar.

5. A cash register including a casing, a tablet holder arranged therein, a guide block arranged beneath the holder, a pull rod operating between said block and holder and formed with an opening normally registering with a tablet recess in the holder, a supporting ledge normally positioned in advance of the guide block to receive and support the delivered tablets, cam bars connected to said ledge and moving beneath the guide block, a rock bar mounted in the casing and connected with the cam bars, means carried by the pull bar to engage and operate the rock bar in the forward movement of said pull bar, a drawer movable in the casing, means for locking the drawer against movement, and means carried by the cam bars to release the drawer locking means in the movement of the rock bar.

6. A cash register including a casing formed with a sight opening, a guide block arranged within the casing in rear of the sight opening, a tablet secured within the casing above the guide block, said holder being formed with a series of tablet receiving openings, pull rods mounted for movement between the holder and guide block, each of said rods coöperating with one of the tablet receiving openings and being formed with an opening to register with the tablet receiving opening when the rod is in normal position, a tablet supporting ledge normally disposed in advance of the guide block and bridging the space between the forward face of said block and the casing adjacent the sight opening, and means actuated in the operation of any one of the pull bars to with-

draw the supporting ledge to a position to open the space between the guide block and casing.

7. A cash register including a casing formed with a sight opening, a guide block arranged within the casing in rear of the sight opening, a tablet holder secured within the casing above the guide block, said holder being formed with a series of tablet receiving openings, pull rods mounted for movement between the holder and guide block, each of said rods coöperating with one of the tablet receiving openings and being formed with an opening to register with the tablet receiving opening when the rod is in normal position, a tablet supporting ledge normally disposed in advance of the guide block and bridging the space between the forward face of said block and the casing adjacent the sight opening, means actuated in the operation of any one of the pull bars to withdraw the supporting ledge to a position to open the space between the guide block and casing, said means operating to completely actuate the ledge prior to the complete operative movement of the pull bar and being arranged to automatically release the ledge for return to normal position prior to the complete operative movement of the pull bar, and means for returning the ledge to normal position when released.

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

REUBEN TREBER.

Witnesses:
S. H. GRUBER,
L. E. SMITH.