

May 10, 1960

A. D. CLARK II, ET AL
PRICE TAG COLLECTOR CONTROLS

2,936,113

Filed March 31, 1958

5 Sheets-Sheet 1

FIG. 1

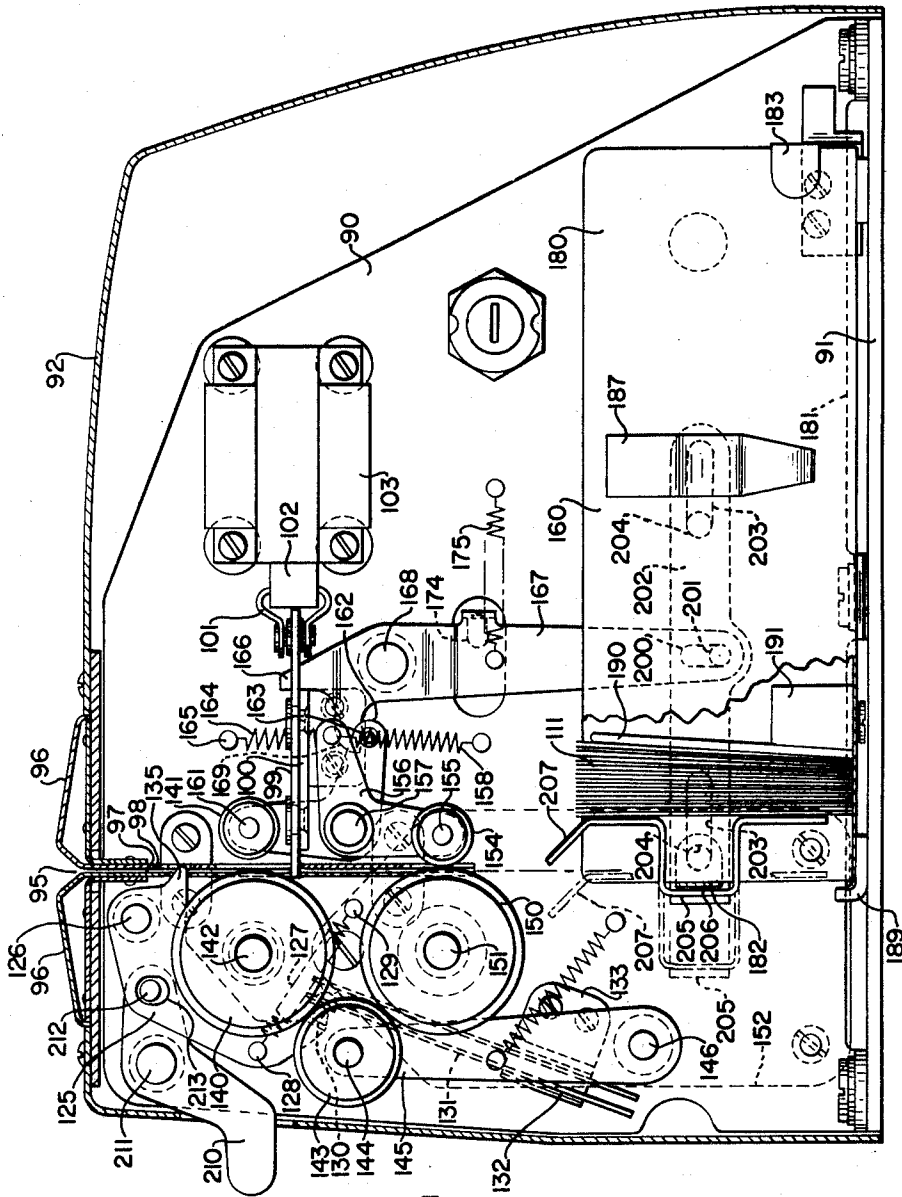
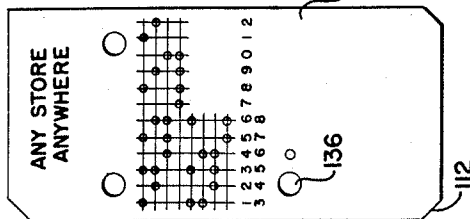


FIG. 2



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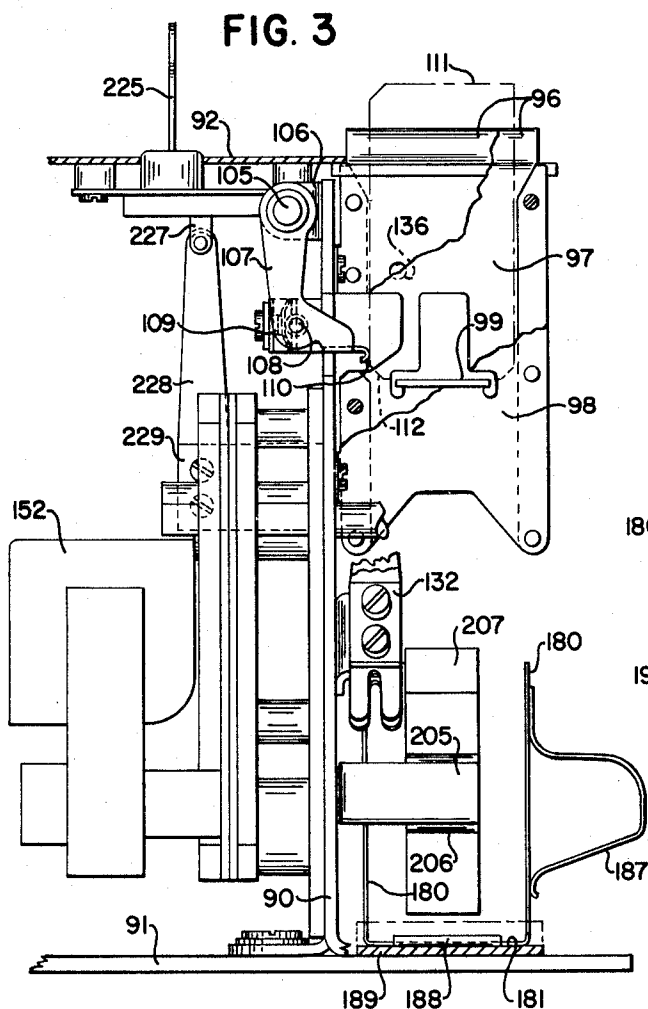
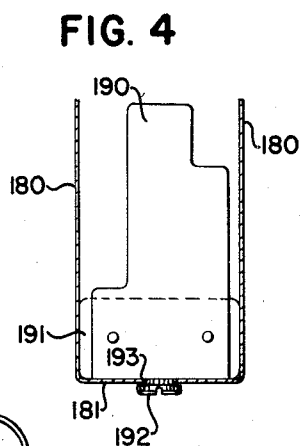
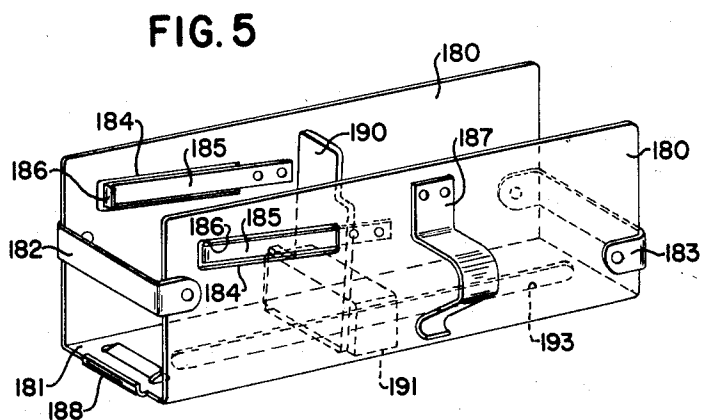
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5 Sheets-Sheet 3

FIG. 6

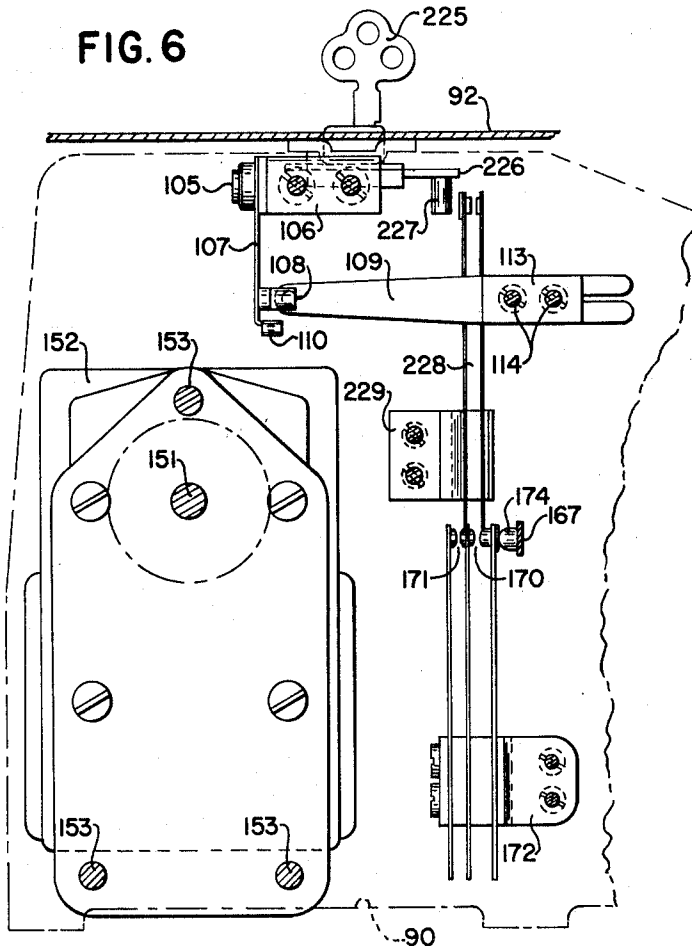


FIG. 7

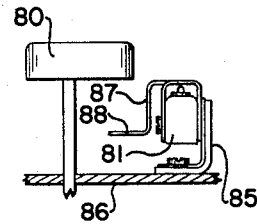


FIG. 8

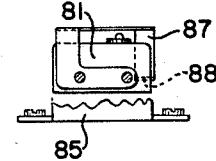
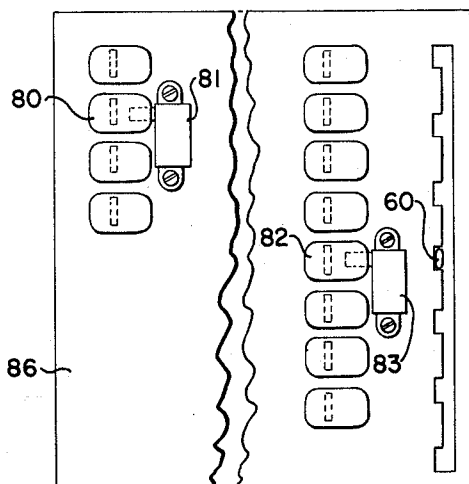


FIG. 9



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5 Sheets-Sheet 4

FIG. 10

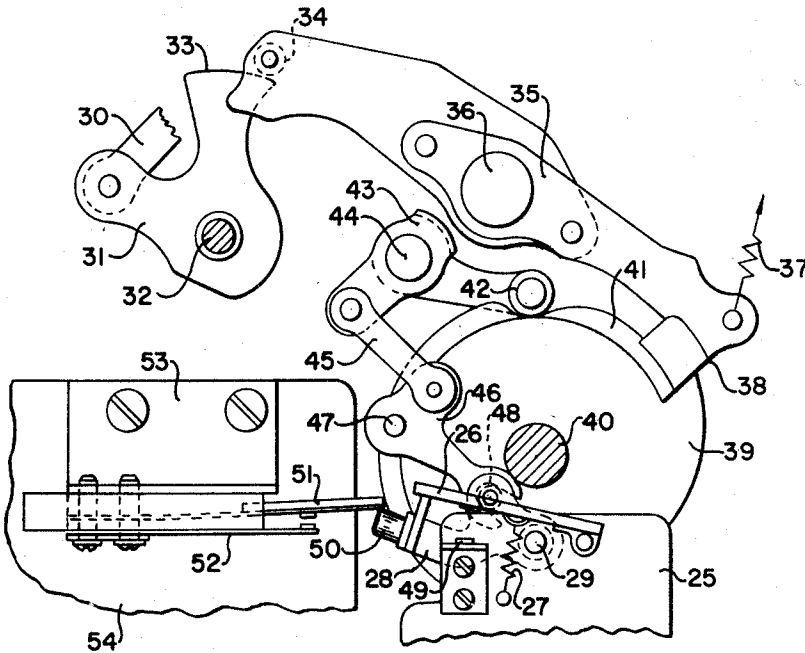
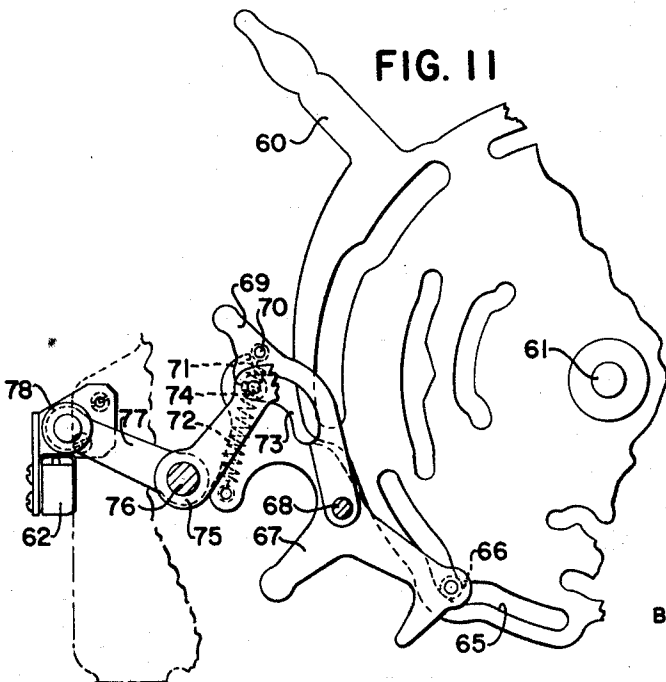


FIG. 11



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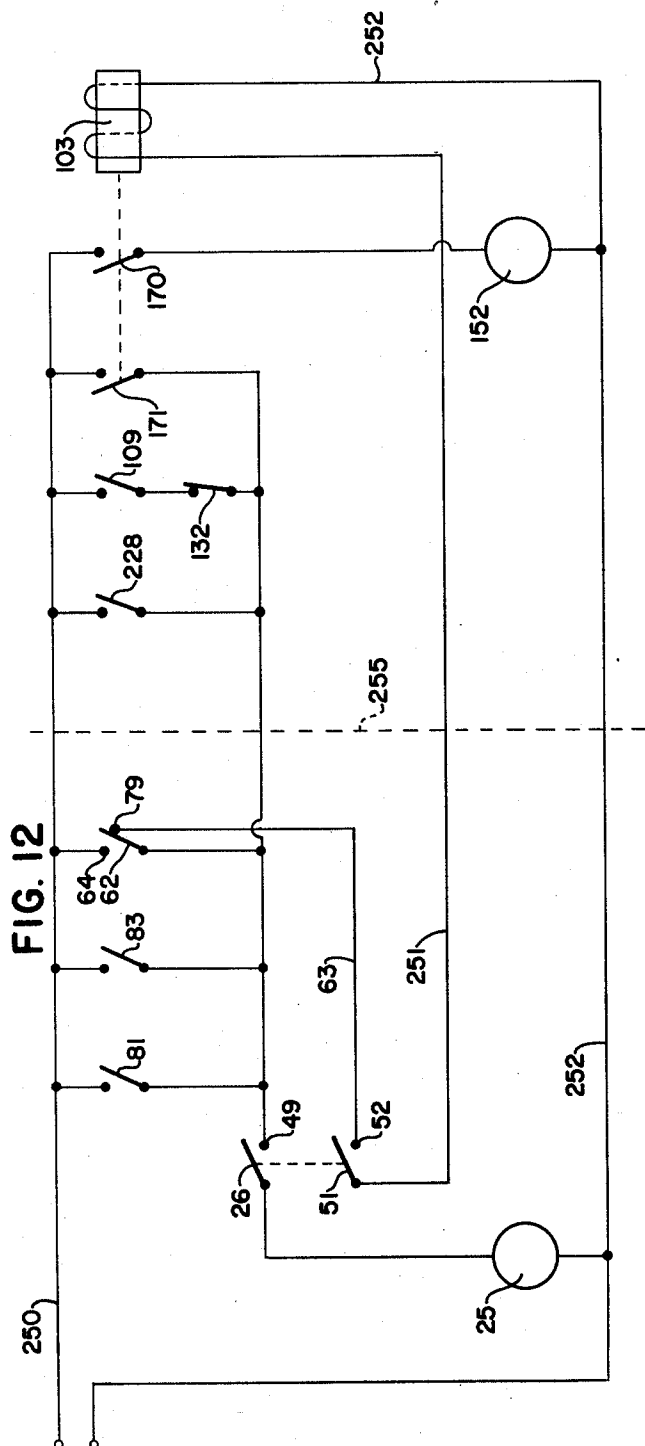
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2,936,113

PRICE TAG COLLECTOR CONTROLS

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Application March 31, 1958, Serial No. 725,429

8 Claims. (Cl. 235—61.11)

This invention relates to a novel filing mechanism for automatically filing price tickets.

The principal object of the invention is to provide a novel mechanism for automatically filing tickets in a certain position, together with control means for controlling the release and operation of a cash register, which control means is under control of the presence and the position of a ticket in the chute of the filing mechanism.

Another object of the invention is to provide control means for a ticket feeding mechanism whereby the ticket feeding mechanism may become effective only when a ticket is in the feeding chute in a predetermined position.

A specific object of the invention is to provide a receptacle for a ticket, said receptacle having a feeler mounted therein, for feeling for a control perforation to determine the effectiveness of the ticket-feeding mechanism, so that the ticket must be positioned in the chute in a predetermined position.

Another specific object of the invention is to provide a price ticket filing mechanism which is connected to a cash register into which data from the price ticket is to be entered, and controls between the filing mechanism and the cash register so that the cash register cannot be released for operation until a ticket is present in the chute of the filing mechanism and in a predetermined position.

Another object of the invention is to provide a feeding mechanism for feeding price tickets into a receptacle or tray, together with controls making it necessary to present the tickets all in the same direction, so that the tickets are filed in the tray all facing the same direction.

A specific object of the invention is to provide controls from the keyboard of the cash register to make it necessary to have certain keys of the keyboard depressed before the ticket feeding mechanism can be operated, and also to have a ticket in the proper position in the feeding chute of the ticket feeding mechanism.

Another object of the invention is to provide a control whereby a ticket feeding motor can be operated in certain operations in which there is no ticket in connection with a sale, and a lock is provided to prevent unauthorized persons from operating the ticket feeding mechanism, or to release the cash register when no ticket is in the feeding chute.

With these and incidental objects in view, the invention includes certain novel features of construction and combinations of parts, a preferred form or embodiment of which is hereinafter described with reference to the drawings which accompany and form a part of this specification.

Of said drawings:

Fig. 1 is a cross-sectional view of the machine taken just inside the cabinet of the machine.

Fig. 2 is a facsimile of a ticket which is to be filed by the machine.

Fig. 3 is a front elevational view of the mechanism shown with the cabinet removed.

Fig. 4 is a detail view taken through the filing tray, and shows the follower block.

2

Fig. 5 is a perspective view of the ticket filing tray.

Fig. 6 is a detail view showing an end elevation of the motor for operating the ticket feeding mechanism, together with certain switches for controlling the operation of the motor.

Fig. 7 is a detail view showing the connections for operating a switch from either the "Tax" key, or the "No Sale" key.

Fig. 8 is a side elevation of the switch shown in Fig. 7.

Fig. 9 is a top plan view of a part of the keyboard of the cash register.

Fig. 10 is a detail view showing the motor release mechanism for the cash register.

Fig. 11 is a detail view of a part of the total lever of the cash register, together with a switch for controlling the operation of the ticket feeding mechanism to permit release of the cash register when the total lever is out of "add" position, and in a "total-taking" position whereby totals can be printed from the totalizers in the cash register without the presence of a ticket in the feed chute.

Fig. 12 is a circuit diagram showing the controlling switches in the cash register and in the ticket feeding mechanism.

GENERAL DESCRIPTION

In retail stores price tickets are attached to the merchandise to be sold, and these price tags have data entered thereon, which form the basis of a stock control at the end of a business period. In the system now in use these tickets are detached from the merchandise and filed in a box or receptacle in a loose and disorderly manner. Also, the proprietor must depend upon the clerk, who is handling the sale, to file, or drop, the price tickets into the box or tray provided therefor. In actual handling of sales the clerk, either through carelessness or premeditation, does not always file the price ticket in the box provided therefor. Therefore, at the end of the day's business, the proprietor has no accurate control over the inventory of his store. In addition to the missing price tickets, the tickets being dropped into the box in a haphazard and disorderly manner, it also becomes necessary to sort and arrange the price tickets after the day's business, so that all of the tickets are faced in the same direction, and right side up, which, on a busy day is quite a task. The tickets must be filed in such an orderly manner before they are usable in an auditing machine, which automatically feeds and audits the tickets after the day's business.

The present invention contemplates providing a means to prevent making an entry of a sale in the cash register until a price ticket is properly positioned in the ticket filing machine. After the ticket is in the machine, and the proper control set up, the cash register can be released to enter the data taken from the ticket on the keyboard, and enter it into the totalizers of the cash register, and simultaneously, a feeding mechanism is released to feed the ticket into a tray in the machine. The tickets are all filed in a vertical position, one after the other, and all facing the same direction. When the tray of tickets is removed from the filing machine, the tickets are immediately available for use in an auditing machine, and the proprietor can be assured that all of the tickets representing the total number of sales for the period are present in the tray.

The trays are readily removable from the machine, so that if during a business day a tray should become filled with tickets, the filled tray can be lifted out of the machine and another tray positioned therein so that the tickets may be filed in as many trays as are necessary to take care of the particular day's business.

The invention is disclosed herein as being connected to and controlled by a machine of the type shown in

United States Patent No. 1,865,147, issued to Bernis M. Shipley on June 28, 1932, and to a machine illustrated in United States Patent No. 2,306,894, issued to G. Nelson, on December 29, 1942. The machines illustrated in these two patents are the type in which the data from the price ticket is entered, and include amount banks of keys and two rows of control keys for classifying the various data. It will be readily understood that these machines are used merely to illustrate the purpose of the invention and the invention can be applied to any other statistical machine.

DETAIL DESCRIPTION

The machine illustrated in the above mentioned Nelson patent is operated by a motor 25 (Figs. 10 and 12), which motor is released for operation by rocking a switch blade 26, which is spring tensioned by a spring 27 into engagement with a contact 49. The switch blade 26 is normally held out of contact with contact 49 by an arm 28, pivoted on a stud 29, carried by the frame of the motor 25. As illustrated and described in said Nelson patent, when the Machine Release key is depressed, a link 30 (Fig. 10) is lowered, to rock a bell crank 31, to which the link 30 is pivoted, and which bell crank is pivoted on a stud 32. The bell crank 31 is provided with a surface 33, normally engaged by a stud 34 of a clutch release arm 35, pivoted on a stud 36. A spring 37 normally tends to rock the release arm 35 to maintain the stud 34 in engagement with the surface 33 of the bell crank 31. The righthand end of the arm 35 is provided with a stop surface 38, engaging a shoulder of a clutch disk 39, pivoted on a stud 40, and also in engagement with a shoulder on a cam 41, mounted on the stud 40, adjacent the clutch disk 39. A roller 42, mounted on one arm of a yoke 43, normally engages the cam 41. The yoke 43 is pivoted on a stud 44 and has connected to one arm thereof a link 45 pivoted to a bell crank 46 pivoted on a stud 47. The free end of the bell crank 46 is bifurcated to engage a stud 48, mounted on the before-mentioned arm 28.

As mentioned before, the spring 27 tends to rock the switch blade 26 in a counter-clockwise direction (Fig. 10), thus tending to rock the bell crank 28 in a like direction.

As is well known in the art, and as illustrated in the above-mentioned patents, the clutch disk 39, and the cam 41, are under spring tension and tend to rock in a counter-clockwise direction (Fig. 10). When the arm 35 is rocked in a counter-clockwise direction (Fig. 10) to withdraw the stop surface 38 from the shoulders of the clutch disk 39, and the cam 41, the disk 39 and the cam 41 rock in a counter-clockwise direction (Fig. 10), thus camming the roller 42 upwardly and lowering the link 45 and bell crank 46, to thereby rock the arm 28 in a counter-clockwise direction to permit the switch blade 26 to engage the stationary contact 49 of the motor switch.

The release arm 35 is released for counter-clockwise rotation by the spring 37 when the link 30 is lowered upon release of the machine, and the bell crank 31 is rocked in a counter-clockwise direction (Fig. 10) to withdraw the surface 33 from under the stud 34, thus releasing the release arm 35 to the action of its spring 37.

The arm 28 is provided with a stud 50 normally holding a switch blade 51 out of engagement with the switch blade 52 carried by a bracket 53 on a machine frame 54. Thus, when the machine is released and the switch blade 26 is lowered, the stud 50 dropping, releases the switch blade 51 to contact the switch blade 52, thus closing this switch for a purpose hereinafter described.

Total lever

Machines of the type disclosed in the above-mentioned patents are provided with a total lever 60 (Figs. 9 and 11), rotatably mounted on a stud 61. As is well known in the art, in machines of the type shown in the above-

mentioned patents, the total lever, when in normal position, as shown in Fig. 11, conditions the machine for adding operations. When the ticket feeding mechanism is to be operated, it will be during an adding operation, or in other words, an entry operation, and therefore, the total lever must be in "add" position. However, when a total is to be printed, either a sub-total, or a grand total, from one of the classification totalizers, it is desired to operate the cash register without operating the ticket feeding mechanism, since during this type of operation no price ticket is involved in the transaction. For this reason the operation of the ticket feeding mechanism is also under control of the total lever 60.

The total lever controls the position of a micro switch 62 (Figs. 11 and 12) so that when the total lever 60 is in the "add" position, it closes a circuit 63 through the switch blades 51 and 52. However, when the total lever is moved into one of its "total" positions, the micro switch 62 is actuated to close a circuit through the contact 64 (Fig. 12) for a control which will be understood when considering the electrical circuits.

To control the position of the switch 62, the total lever 60 is provided with a cam slot 65 (Fig. 11), which is engaged by a stud 66, mounted on a multip-armed member 67, pivoted on a stud 68. Also pivoted on the stud 68 is a member 69, having a stud 70 engaging a shoulder 71 on the member 67. A spring 72 always holds the stud 70 in engagement with the shoulder 71, and the members 67 and 69 are formed to provide a cam slot 73, engaged by a stud 74 of an arm 75, secured on a shaft 76. Also secured to the shaft 76 is an arm 77, having a contact roller 78 for engaging the micro switch 62.

When the lever 60 is in its "add" position, the roller 66 is in the center of the cam slot 65, as illustrated in Fig. 11, and the contact roller 78 is in position to hold the switch in contact with a switch contact 79, as illustrated in Fig. 12. However, when the total lever is moved out of its "add" position, the cam slot 65 rocks the member 67 in a counter-clockwise direction (Fig. 11), thus rocking the arms 75 and 77 in a clockwise direction (Fig. 11) to move the contact 62 from engagement with the contact 79 and into engagement with the contact 64 (Fig. 12). As will be better understood when considering the circuits, this shifting of the contact 62 from the contact 79 to the contact 64 makes it possible to operate the cash register without operating the ticket feeding mechanism.

No sale and tax keys

As is well known in the art, there are occasions when the cash register must be operated without making an entry into the machine. Such an entry is controlled by a "No Sale" key. A "No Sale" key 80 (Fig. 9) is illustrated on the keyboard and this key, when depressed, actuates a micro switch 81. (See also Fig. 12.) The keyboard is also provided with a "Tax" key 82, which, when depressed, actuates a micro switch 83. It is to be understood that when the "Tax" is entered into the machine there will be no price ticket in the ticket feeding mechanism.

The micro switches 81 and 83 are identical in construction and are operated in the same manner, and therefore, only the "No Sale" key operation of the switch 81 will be described. The micro switch 81 is mounted on a bracket 85 on the keyboard cover 86. An operating member 87 is provided on the micro switch, having a flange 88 extending into the path of movement of the key tip of the "No Sale" key 81. Thus when the "No Sale" key is depressed, the under side of the key tip, engaging the flange 88, lowers the operating arm 87 to close the switch 81.

The "Tax" key 82 closes its micro switch 83 in the same way as the "No Sale" key closes its micro switch 81.

5

Ticket feeding mechanism

The ticket feeding mechanism is a separate unit and is connected to the cash register by an electric cable. The feeding mechanism includes a frame 90 supported on the base 91 (Figs. 1, 3 and 6). The mechanism is enclosed by a cabinet 92. The ticket chute 95 is formed near the front and opens at the top of the cabinet 92, and the mouth thereof is formed of two bent-over sections 96, which extend down into the machine and form the front and back walls of the ticket chute. The front wall 97 and the back wall 98 of the chute 95 extend into the machine below a pair of feeding rollers to be described hereinafter. When a ticket is inserted into the chute 95, it is arrested by a shelf 99, slidably mounted in a bracket 100 carried by the frame 90. Thus the shelf 99 limits the extent of manual movement of the ticket into the machine. The shelf 99 is connected to a bracket 101, secured to the armature 102 of a solenoid 103. (See also Fig. 12.) The solenoid 103 is supported on the before-mentioned frame 90.

Pivoted on a stud 105 (Figs. 3 and 6), carried on a bracket 106, supported by the frame 90, is a switch-operating arm 107. The arm 107 is provided with a stud 108, engageable with one blade of a switch 109. The free end of the switch-operating arm 107 is provided with a rounded flange 110, normally extending into the chute 95. When a ticket 111 (Fig. 2) is introduced into the chute 95 and lowered to rest on the ledge 99, the beveled edge 112 of the ticket 111 engages the rounded end of the flange 110, of the switch arm 107 and cams the switch arm in a clockwise direction (Fig. 3) to cause the stud 108 to engage and close the switch 109.

Thus it is seen that when a ticket 111 is in position resting on the ledge 99, the switch 109 (Fig. 12) is closed. The switch 109 is supported on a block 113, secured to the frame 90 by two screws 114.

Ticket feeler

A feeler 125 (Fig. 1) is pivotally mounted on a stud 126, carried by the frame 90. A spring 127, having one end attached to a stud 128 on the feeler 125 and the other end attached to a stud 129 on the frame 90 of the machine, normally holds the lower end 130 of the feeler 125 in contact with a switch blade 131 on a switch 132 carried on a bracket 133, supported by the frame 90 of the machine. The spring 127 tensions the arm 125 to normally maintain the switch 132 closed. (See also Fig. 12.)

The righthand end (Fig. 1) of the feeler 125 has a feeler finger 135, formed thereon, which finger extends into the ticket chute 95. Thus when the ticket is inserted into the chute 95 and lowered into engagement with the shelf 99, the ticket cams the feeler 125 clockwise (Fig. 1) and temporarily opens the switch 132. When a control perforation 136 in the ticket 111, comes into the path of movement of the finger 135, the feeler enters the perforation 136 and again closes the switch 132.

The control perforation 136 is so located in the ticket 111 that the ticket must be in the correct position in the chute before the machine can be released. For example, if the ticket is inserted upside down, the control perforation 136 will be too high, and therefore the switch 132 would be held open. If the ticket is inserted backward, that is, faced toward the back of the chute, and lowered, then the perforation 136 is off to the side of the finger 135 and the switch 132 is held open. It is only when the ticket faces forward and the bottom of the ticket is inserted into the chute first that the control perforation 136 comes into alignment with the feeling finger 135 to permit the feeling finger 135 to enter the perforation 136 and again close the switch 132.

As will be explained when considering the circuits when the feeler switch 132 is closed, the circuit can be closed through a motor for operating the ticket feeding mechanism.

6

Ticket feeding mechanism

When a ticket is resting on the shelf 99, and in proper position, as explained above, the ticket will lie between a pair of feed rollers 140 and 141. The feed roller 140 is rotatably mounted on a stud 142, carried by the framework of the machine. The feed roller 140 is engaged by an idler roller 143 carried on a stud 144, supported on the upper end of a spring tensioned arm 145. The spring tensioned arm 145 is supported on a stud 146 carried by the framework of the machine. The idler roller 143 is also held in engagement with a feed roller 150 secured to an armature shaft 151 of a motor 152. (See also Fig. 12.) The motor 152 is supported on the frame 90 of the machine by means of three studs 153 (Fig. 6).

In engagement with the feed roller 150 is a feed roller 154, rotatably mounted on a stud 155, carried by a bell crank 156, pivotally mounted on a stud 157 carried by the framework of the machine. A spring 158, attached to one arm of the bell crank 156 always maintains the roller 154 in engagement with the roller 150. Therefore, when the ticket is fed downwardly by the rollers 140 and 141 in the manner hereinafter described, the rollers 150 and 154 pick up the ticket and feed it into the ticket-receiving tray 160.

Before the ticket can be fed into the tray, it is necessary to withdraw the shelf 99 to free the ticket, and also to move the tension roller 141 into engagement with the ticket so as to impinge the ticket between the feed roller 140 and the tension roller 141.

The shelf 99 is withdrawn by the solenoid 103 when the cash register motor is released for operation. How this is accomplished will become apparent when considering the circuits in Fig. 12.

Simultaneously with withdrawing the shelf 99 from beneath the ticket in the chute 95, the tension roller 141 is released in the following manner.

The tension roller 141 is mounted on a stud 161, carried by a bell crank 162, mounted on the before-mentioned stud 157. The bell crank 162 is provided with a stud 163, to which is attached a spring 164, the upper end of which is attached to a stud 165, carried by the frame 90.

The shelf 99 is provided with a slot into which projects the upper end 166 of a lever 167, pivoted on a stud 168, carried by the frame 90. The lever 167 is provided with a projection 169 overlying the stud 163, and normally holds the bell crank 162 in the position shown in Fig. 1, where the tension roller 141 is held out of engagement with the feed roller 140. When the solenoid 103 is energized to withdraw the shelf 99, the shelf 99 rocks the arm 167 clockwise (Fig. 1) to withdraw the projection 169 from above the stud 163, thus permitting the spring 164 to rock the bell crank 162 in a counter-clockwise direction (Fig. 1) until the tension roller 141 contacts the ticket 111 in the chute 95, and impinges the ticket between the roller 141, and the feed roller 140.

Simultaneously with the withdrawal of the shelf 99 by the solenoid 103, and the moving of the tension roller 141 into feeding position, a switch 170 (Fig. 6) is closed to close the circuit through the motor 152.

Simultaneously with the closing of the circuit through the motor 152, by closing the switch 170, a holding circuit is closed by closing a switch 171 (Figs. 1, 6 and 12). The switches 170 and 171 are mounted on a bracket 172, carried by the framework 90 of the machine.

To close the switches 170 and 171, the lever 167 is provided with a stud 174 (Figs. 1 and 6), which first engages and closes the switch 170, and upon continued movement closes a switch 171.

A spring 175 (Fig. 1) restores the arm 167 to its home position, when the solenoid 103 is deenergized, and through end 166, restores the shelf 99 to home position. At the same time the projection 169 restores the bell crank 162 and the tension roller 141 to home position

7

and permits the switches 170 and 171 to be restored to their open positions at the end of a machine operation.

Ticket tray

The tray for receiving the tickets as they are fed through the machine by the feed rollers is illustrated in Fig. 5 in perspective. The tray comprises two side walls 180, formed at right angles from the bottom 181. Straps 182 and 183 extend across the front and back, respectively, of the tray, to form a support for the side walls. Each side wall is notched at 184 to receive a spring tensioned member 185, having short flanges 186 formed thereon, which flanges are at a slight angle toward the back of the tray. A handle 187 is fastened on the right-hand side of the tray to facilitate insertion and removal of the tray into and from the machine.

The bottom of the tray has a flange formation 188 formed thereon, which rests behind a flange 189 secured to the base 91 of the machine, to provide a means for properly locating the tray in the machine when the tray is inserted.

Supported on the bottom of the tray is a follower support 190 (Figs. 4 and 5) which is secured to a weighted bar 191, having secured thereto a shouldered screw 192, which projects through a slot 193 in the bottom 181 of the tray.

When the tray is in proper position, as shown in Fig. 1, the forward end of the tray is so aligned with the feeding chute that the ticket being fed into the tray will pass behind the band 182.

The ticket is moved from the position into which it is fed by the feed rollers, by a formed member which is connected to and operated by the arm 167.

The arm 167 is provided with a stud 201 (Fig. 1) which projects into a slot 200, carried by a slide 202, having two slots 203 adapted to slide on studs 204. The forward end of the slide 202 has a flange 205 formed thereon at right angles, to which is secured a U-shaped section 206 of a feeding member 207; the U-shaped member 206 is so formed that it will span the band 182 of the tray when in normal position, shown by full line in Fig. 1.

When the solenoid 103 is energized to rock the arm 167, the slide 202 is moved forwardly to move the member 207 into the dotted line position (Fig. 1). Thus, as long as the solenoid 103 remains energized, the member 207 will be in its dotted line position, and at this time the feed rollers are actuated by the motor 152 to feed the ticket out of the chute and into position in the tray, in which the ticket lies behind the bar 182. When the solenoid 103 is deenergized and the spring 175 restores the arm 167 to its normal position, the member 207 engages the ticket just fed into the tray, and forces it into position as shown in Fig. 1. When being moved into this position, the ticket is forced beyond the flanges 186 on the spring tensioned members 185. When the solenoid is operated for the next operation, and the member 207 is moved to the dotted line position, the flanges 186 maintain the last fed ticket in the fed position. As the stack of tickets 111 increases in size, the follower plate 190 gradually moves toward the rear of the tray until the tray is completely filled.

Manual release of feeler finger

After the operator inserts a ticket into the chute, she may wish to withdraw it, but at this time the ticket is held by the finger 135, which is in the perforation 136. In order to withdraw the ticket from the chute, it is necessary to withdraw the feeler finger 135 from the perforation 136, since the shape of the finger is such that the ticket is locked in the chute. To permit manual withdrawal of the feeler 135, a lever 210 (Fig. 1) is provided, which is pivoted on a stud 211, and is provided with a stud 212 projecting into an opening 213 of the feeler arm 125. Thus, when it is desired to withdraw the feeler

8

finger 135 from engagement with the perforation 136 in the ticket, the operator grasps the fingerpiece 210 and presses it downwardly, thus causing the stud 212 to lift the feeler arm 125 and withdraw the finger 135 from engagement with the control perforation 136 in the ticket. This will permit the removal of the ticket from the chute 95.

No tag operation

There may be occurrences when an authorized person may want to operate the machine to make entries without having a ticket in the chute 95. To accomplish this, the proprietor is provided with a key 225 (Fig. 6) which is inserted into a lock, and when the bolt 226 thereof is operated by turning the key, a stud 227 on the bolt engages a blade of a switch 228 to close the switch. The switch 228 is mounted on a block 229 carried by the frame 90 of the machine.

Thus, when the proprietor inserts his key 225 and turns the key to actuate the bolt, the switch 228 (see also Fig. 12) is closed to provide a circuit through the cash register motor 25 without actuating the ticket feed motor 152, in a manner described when considering the electrical circuits.

Electric circuits

In a normal operation of the machine, when the ticket is properly inserted into the chute 95, the switches 109 and 132 (Fig. 12) are closed. Thereafter when the cash register is released for operation, by the mechanism shown in Fig. 10, the switches 26—49 and 51—52 are closed. Thus, a circuit is established through the one side 250 of the power line, through the switches 109 and 132, through the switch 26, through motor 25, back to the other side 252 of the power line, thus causing the machine motor to operate. At the same time a circuit is established from one side of the power line 250, through the switches 109, 132, and switch 62, line 63, switch 51—52, line 251, the solenoid 103, to the other side of the power line 252, thus energizing the solenoid 103. When the solenoid 103 is energized, it closes the switches 170 and 171. When the switch 170 is closed, a circuit is established from one side of the power line 250 through the switch 170 and motor 152 to the other side 252 of the power line, thus causing the ticket feeding motor to operate. Simultaneously with closing the switch 171 by the solenoid 103, a holding circuit is established from one side 250 of the power line, through the switch 171, through switch 62, line 63, switch 51—52, line 251, and back to the solenoid 103 and the other side 252 of the power line. This circuit maintains the solenoid 103 energized until the machine has completed the cycle of operation and the switches 26—49 and 51—52 are again opened.

When the machine is to be operated without a ticket in the machine, thus causing the switch 109 to remain open, a circuit can be established from one side of the power line 250 through any one of the switches 81, 83, 62—64, or 228. One of these switches may be closed by the "No Sale" key, the "Tax" key, the "No Tag" lock, or by moving the total lever 60 into its total-taking position. When either one of the above operations takes place, a circuit is established through the switch 26—49, and the machine motor 25. However, since the switch blade 62 is moved out of contact with the contact 79, and into contact with the switch contact 64, no circuit is established through the solenoid 103, and therefore, the ticket feed motor 152 is not operated.

At the end of the operation of the cash register, the switches 26—49 and 51—52 are opened in the manner described by the mechanism shown in Fig. 10, thus opening the holding circuit through the solenoid 103, and permitting the circuit through the motor 152 to be opened, and that motor to come to a stop.

The circuit diagram (Fig. 12) is bisected by a dotted

line 255. This is a diagrammatic illustration indicating which of the control switches and circuits are in the cash register and which are in the ticket feeding machine. The switches and controls to the left of the line 255 are in the cash register, and those to the right are in the ticket feeding machine. The circuits are connected together by a cable at the point indicated by the dotted line 255.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form or embodiment herein disclosed, for it is susceptible of embodiment in various other forms.

What is claimed is:

1. The combination of an accounting machine and a ticket filing machine, a normally ineffective machine release means for the accounting machine, a chute in the ticket filing machine for receiving a ticket therein, means extending into the chute and actuated by a ticket when a ticket is inserted into the chute to render the accounting machine release means effective to release the accounting machine for operation, a normally inactive feeding means to feed the ticket out of the chute into a receptacle, and means activated by said accounting machine release means to render the feeding means active.

2. The combination of an accounting machine and a ticket filing machine, a normally ineffective machine release means for the accounting machine, an electric motor to operate the accounting machine, a chute in the ticket filing machine for receiving a ticket therein, a lever extending into the chute and actuated by a ticket when a ticket is inserted into the chute, a normally open switch in the motor circuit, said switch being closed by the lever when actuated by the ticket to render the accounting machine release means effective to release the accounting machine for operation by the motor, a normally inactive feeding means to feed the ticket out of the chute into a receptacle, and means activated by said accounting machine release means to render the feeding means active.

3. The combination of an accounting machine and a ticket filing machine, a normally ineffective machine release means for the accounting machine, power means for operating the accounting machine, a chute in the ticket filing machine for receiving a ticket therein, means extending into the chute and actuated by a ticket when a ticket is inserted into the chute to render the power means active to operate the accounting machine, a normally inactive feeding means to feed the ticket out of the chute into a receptacle, a motor to operate the feeding means, and means activated by said accounting machine release means to render the motor active.

4. The combination of an accounting machine and a ticket filing machine, a power means to operate the accounting machine, a normally ineffective means to operate the power means, a release means to release the accounting machine to be operated by the power means, a chute in the ticket filing machine for receiving a ticket therein, a device extending into the chute and actuated by a ticket when a ticket is inserted into the chute, means actuated by the device to render the normally ineffective means effective to operate the power means, a normally inactive feeding means, a second normally inactive power means to actuate the feeding means to feed the inserted ticket out of the chute and into a receptacle, and means activated by the accounting ma-

chine release means to render the second power means active.

5. The combination of an accounting machine and a ticket filing machine, a power means to operate the accounting machine, a normally open electric circuit to operate the power means, a release means to release the accounting machine to be operated by the power means, a chute in the ticket filing machine for receiving a ticket therein, a device extending into the chute and actuated by a ticket when a ticket is inserted into the chute, a switch in the circuit actuated by the device to render the normally open electric circuit effective to operate the power means, a normally inactive feeding means, a second normally inactive power means to actuate the feeding means to feed the inserted ticket out of the chute and into a receptacle, a solenoid activated by the accounting machine release means, and an electric switch closed by said solenoid to render the second power means active.

6. The combination of an accounting machine and a ticket filing machine, an electric motor to operate the accounting machine, a normally open circuit to operate the motor, a release means to release the accounting machine to be operated by the motor, a switch in the motor circuit closed by the release means, a chute in the ticket filing machine for receiving a ticket therein, a device extending into the chute and actuated by a ticket when a ticket is inserted into the chute, a second switch in said circuit, means on said device to close the switch when a ticket is inserted into the chute to close the circuit through said motor, a normally inactive feeding means, a second normally inactive electric motor to operate the feeding means to feed the inserted ticket out of the chute and into a receptacle, a switch in the circuit through said second motor, and means activated by the accounting machine release means to render the second motor active.

7. The combination of an accounting machine and a ticket filing machine, a normally ineffective machine release means for the accounting machine, a chute in the ticket filing machine for receiving a ticket therein, a first lever extending into the chute and actuated by a ticket when a ticket is inserted into the chute, a second lever extending into the chute for sensing perforations in the ticket, and means actuated by each of said levers when actuated by a ticket to render the accounting machine release means effective to release the accounting machine for operation.

8. The combination of an accounting machine and a ticket filing machine; an electric motor to operate the accounting machine, when released; a normally ineffective machine release means for the accounting machine; a normally open circuit through the motor; a chute in the ticket filing machine for receiving a ticket therein; a first lever extending into the chute and actuated by a ticket when a ticket is inserted into the chute; a second lever extending into the chute for sensing perforations in a ticket inserted in the chute in a predetermined position; and means actuated by both of said levers when a ticket is properly inserted into the chute to close the normally open circuit through the motor when the accounting machine is released for operation.

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