F. R. WERNER
CASH DRAWER MECHANISM

FIG. 1

Inventor
FRANK R. WERNER

By
Earl Bent
His Attorneys
CASH DRAWER MECHANISM

Frank R. Werner, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Original application August 25, 1948, Serial No. 46,165. Divided and this application December 22, 1949, Serial No. 134,553

4 Claims. (Cl. 235—22)

When operated to release all the drawers simultaneously. This slide is under lock and key and is normally locked against operation. To release the slide for operation, the proprietor, having possession of a key, can unlock the manually operable slide for operation.

Detailed description

The machine as illustrated herein is provided with four cash drawers which are selected for release by a clerk’s lever 117 (Fig. 1), which lever is settable into four selecting positions, one position corresponding to each clerk. The lever 117 is pivotally mounted on a shaft 31, carried by the frames 30 and 31 of the machine.

The cash drawer cabinet 33 (Fig. 1) houses the four cash drawers 395, 396, 397, and 398. One cash drawer is allotted for each of the four clerks; that is, one for each of the four positions of the clerk’s selecting lever 117. The cash drawers are suitably mounted on tracks on which rollers carried by the cash drawers run for each operation of the drawers when the drawers are released to move out of the cabinet 33. Each cash drawer is impelled outwardly by a spring 399 when released. Normally, latches 390, 391, 392, and 393 maintain the respective drawers in their inaccessible position. The latches 390, 391, 392, and 393 are selectively operated under control of the clerk’s selecting lever 117.

The latch 390 for the upper cash drawer is pivoted on a shaft 394 (see also Fig. 2) carried by a bracket 395, supported in the top of the drawer cabinet 33. The latch 390 is provided with an upwardly-extending arm 396, which lies in the path of a rod 397 carried between the two arms of a yoke 399 when the clerk’s selecting lever 117 is in its upper position. The yoke 399 is pivotally mounted on a shaft 400, carried by arms 401 and 402 of a yoke 403. The yoke 403 is pivotally mounted on a shaft 404, supported in the side frames 30 and 31. The arm 402 is provided with a roller 405, which lies in the path of movement of a cam 396 secured to a cam shaft 185.

When the machine is operated with the clerk’s selecting lever 117 in its uppermost position, the rod 397 moves into engagement with the arm 396 of the latch 390, to rock the latch 390 counterclockwise to release the upper cash drawer. The rod 397 is moved into engagement with the latch 390 when the cam 406 is rotated and engages a roller 405 to rock the yoke 403 clockwise. Clockwise movement of the yoke 403 moves the yoke 399, together with the rod 397, to the left (Fig. 1) to engage the arm 396 of the latch 390.
to rock the latch counter-clockwise to release the upper cash drawer. The latch 391 for the second cash drawer is pivoted on a stud 407 carried by a bracket 408, supported on the back panel 409 of the cabinet 33. The latch 391 is normally engaged with a spring 410, carried by the bracket 408, by a spring 411. The latch 391 is provided with a stud 412, projecting into a slot 413 of a link 414, resiliently held on the lower end of a rod 415 by a sprung wound around the latter. The rod 415 is threaded to screw into an angle piece 416 pivotally connected to a bell crank 417 by a stud 418. The bell crank 417 (see also Fig. 2) is pivoted on the beforesaid mentioned shaft 394. The bell crank 417 extends upwardly and is provided with a face 419, which lies in the path of the rod 397 when the clerk's selecting lever 117 is moved to its second position. The clerk's selecting lever 117 has pivoted thereto a link 420, the lower end of which is pivoted to the rod 397, by means of which the rod 397 is positioned.

When the clerk's selecting lever 117 is moved counter-clockwise into its second position (Fig. 1), the link 420 lifts the rod 397 into the path of the face 419. Thereafter, during the machine operation, when the cam 405 rotates to rock the yoke 403 clockwise, the yoke 399, pulling on the rod 397, rocks the bell crank 417 counter-clockwise to raise the rod 415 and the latch 391 to release the second cash drawer.

The third and fourth cash drawers 307 and 308 are provided with similar mechanisms for lifting the latches 392 and 393. The latch 392 is connected to a bell crank having a surface 421, and the latch 393 is connected to a bell crank having a surface 422, and a stud 340 mounted on the top 33 of the drawer cabinet. The right end 34 of the slide 338 is normally obstructed by a flange 342 mounted on a link 303, described later. The slide 338 has formed thereon two cam surfaces 423 and 424, which lie adjacent the bell cranks normally operated by the rod 391 during machine operations. When the operator operates a control lock (Garter described) to remove the flange 342 from the right end 34 of the slide 338, the slide 338 is free to be moved rightwardly (Fig. 2). When the flange 342 is out of the path of the slide 338, the operator grasps a finger piece 425, formed on the left end of the slide 338, and shifts the slide 338 to the right. Movement of the slide 338 to the right causes the cam surfaces 423 and 424 to wipe against the rear ends of the drawer-releasing bell cranks, rocking them counter-clockwise to lift all of the latches 390, 391, 392, and 393, thus releasing the cash drawers without operating the machine.

**Control lock**

The machine of the instant invention is provided with a control lock 290 (Fig. 3), which controls the operations of the machine; that is, the operations of reading of the totalizer wheels, locking of the machine, and release of the cash drawers. The lock has three positions of adjustment. When the lock is in intermediate position, the machine can be operated 293 removes items. When the lock is turned ninety degrees in a clockwise direction from the intermediate position, the machine release mechanism is locked against operation, and the manual drawer release mechanism is unlocked. When the lock is turned counter-clockwise ninety degrees from the intermediate position into the position shown in Fig. 3, the machine is locked against any operation.

The control lock 290 (Fig. 3) is mounted in a bracket 281 on the right side frame 30. An insertable key 292 controls the various functions of the machine described above. When the key 292 is either in its vertical position, or in its counter-clockwise horizontal position, the flange 293 obstructs shifting movement of the slide 338. However, when the key 292 is rotated into its extreme clockwise position, a pin 293 on the lock 290, engaging the cam slot 300, rocks a bell crank 301 on the stud 302 clockwise to shift a link 303 to the left (Fig. 1). The left-hand end of the link 303 is pivoted to an arm 306 on the shaft 305. Leftward movement of the link 303 removes the flange 342 from the right end 34 of the slide 338, thus permitting the proprietor to shift the slide 338 to the right (Fig. 3) to release all the cash drawers.

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

What is claimed is:

1. A machine of the class described, a plurality of cash drawers, a separately controlled latching means, including a pivoted member, for each cash drawer, means to select the latching means for operation, power-operated means to actuate the selected latching means during a machine operation whereby the cash drawers may be selectively rendered accessible in combination with a unitary slide, cam means on the slide adjacent the pivoted members of the latching means, and a finger piece on the slide whereby the slide may be actuated to manually cause the cam means to actuate all of said pivoted members and thereby operate all of said latching means to simultaneously render the plurality of cash drawers accessible while the machine is at rest.

2. In a machine of the class described, a plurality of cash drawers, a manipulative device settable to a plurality of positions, a separate latching means, including a pivoted lever, for each cash drawer, means differentially settable by the manipulative device to select the latching means for operation, power-operated means to actuate the selected latching means during a machine operation to selectively render the cash drawers accessible, in combination with a unitary slide, cam means on the slide adjacent the pivoted
levers of the latching means, a finger piece on said slide to facilitate operating the slide to manually cause the cam means to actuate all the pivoted pawls and thereby operate all of the latching means simultaneously to render all the cash drawers accessible while the machine is at rest, a locking means to normally prevent operating the slide, and a manipulative device to render the locking means ineffective.

3. In a machine of the class described, the combination of a plurality of cash drawers; a latch normally latching each cash drawer in inaccessible position; a plurality of latch-operating means, one of said latch-operating means connected to each latch, each operating means including a pivoted lever, said levers extending different lengths from their pivoted points; a differentially positionable operating member; a manipulative device connected to the operating member and movable to position the operating member adjacent a selected one of said levers; a power-operated means to move the operating member into contact with and thereafter operate the selected one of the levers whereby a selected drawer latch is actuated to release the selected drawer to render the drawer accessible; a manually-operable member adjacent all the levers; and cam means on the member to actuate all the levers upon manual operation of the member to actuate all said latches simultaneously open all the cash drawers while the power-operated means is at rest.

4. In a machine of the class described, the combination of a plurality of cash drawers; a latch normally latching each cash drawer in inaccessible position; a plurality of latch-operating means, one of said latch-operating means connected to each latch, each operating means including a pivoted lever, said levers extending different lengths from their pivoted points; a differentially positionable operating member; a manipulative device; a link connecting the manipulative device to the operating member, whereby the operating member is differentially set according to the differential setting of the manipulative device to position the operating member adjacent a selected one of said levers; a power-operated means, said operating member being pivotally connected to the power-operated means so that the operating member may receive said differential setting, while being adjusted in one direction by the manipulative device, and said operating member being movable by the power-operated means in another direction to operate the selected one of the said levers whereby a selected drawer latch is actuated to release the selected drawer to render the drawer accessible; a manually-operable member adjacent all the levers; and cam means on the member to actuate all the levers upon manual operation of the member to actuate all said latches simultaneously open all the cash drawers while the power-operated means is at rest.

FRANK R. WERNER.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>540,289</td>
<td>Yoho</td>
<td>June 4, 1895</td>
</tr>
<tr>
<td>861,639</td>
<td>Heinitz</td>
<td>July 30, 1907</td>
</tr>
<tr>
<td>1,520,727</td>
<td>Sippert</td>
<td>Dec. 30, 1924</td>
</tr>
<tr>
<td>1,533,053</td>
<td>Neth</td>
<td>May 11, 1926</td>
</tr>
<tr>
<td>1,930,434</td>
<td>Sherman et al.</td>
<td>Oct. 10, 1933</td>
</tr>
<tr>
<td>1,951,628</td>
<td>Prost</td>
<td>Mar. 20, 1934</td>
</tr>
<tr>
<td>1,984,185</td>
<td>Gustavson</td>
<td>Dec. 11, 1934</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>287,431</td>
<td>Germany</td>
<td>Mar. 7, 1913</td>
</tr>
</tbody>
</table>