

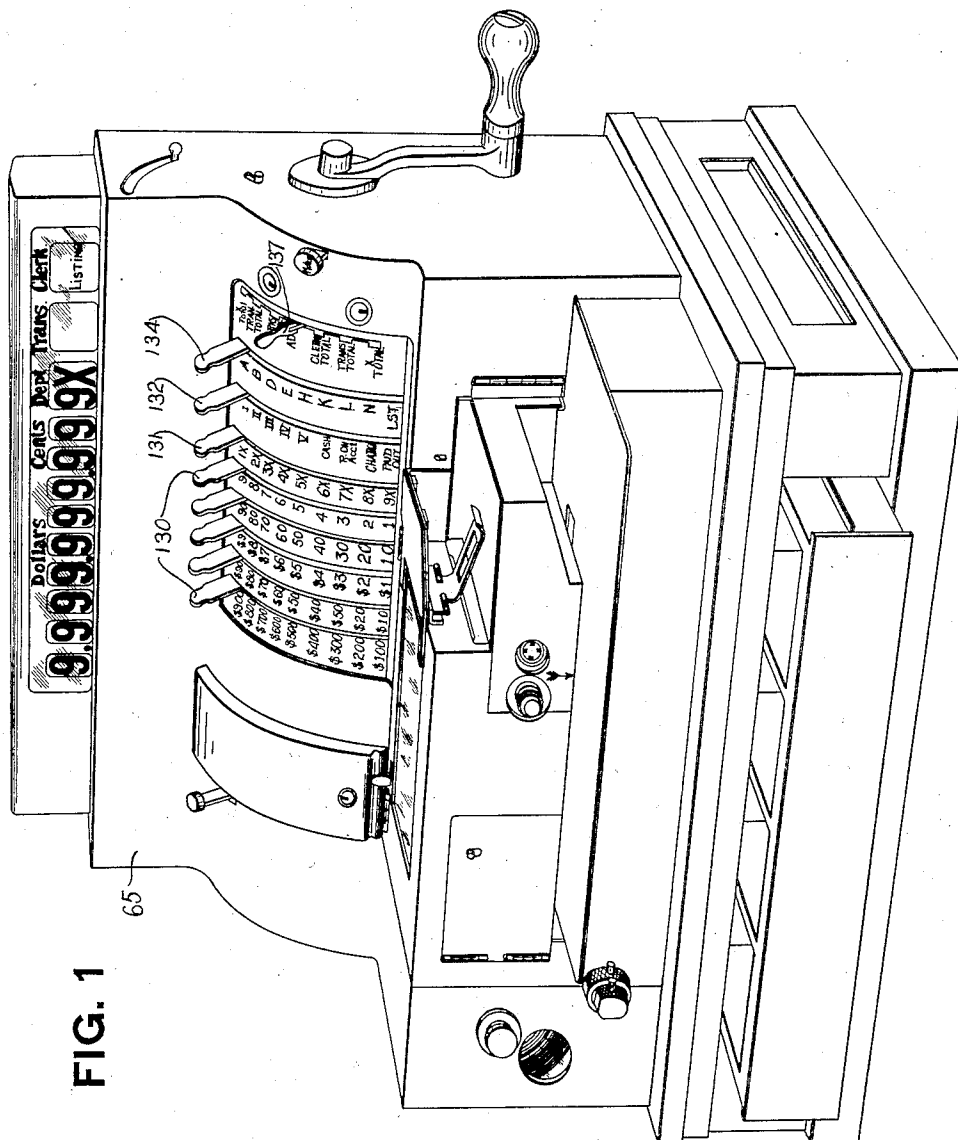
July 16, 1935.

B. M. SHIPLEY

2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Original Filed July 24, 1922 5 Sheets-Sheet 1



Inventor
Bernis M. Shipley
By *Karl Benoit*
His Attorney

July 16, 1935.

B. M. SHIPLEY

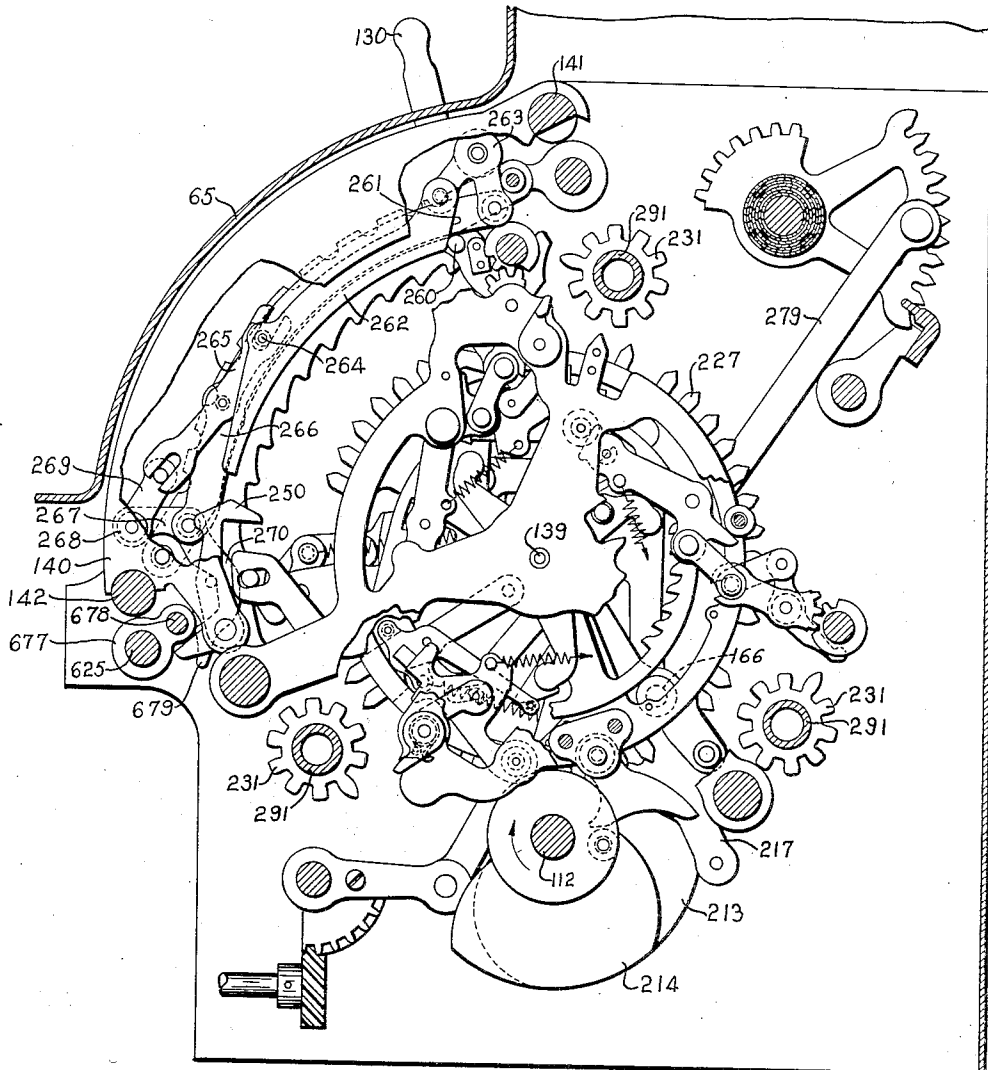
2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Original Filed July 24, 1922

5 Sheets-Sheet 2

FIG. 2



Inventor
Bernis M. Shipley

By

Earl Beust

His Attorney

July 16, 1935.

B. M. SHIPLEY

2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Original Filed July 24, 1922

5 Sheets-Sheet 3

FIG. 3

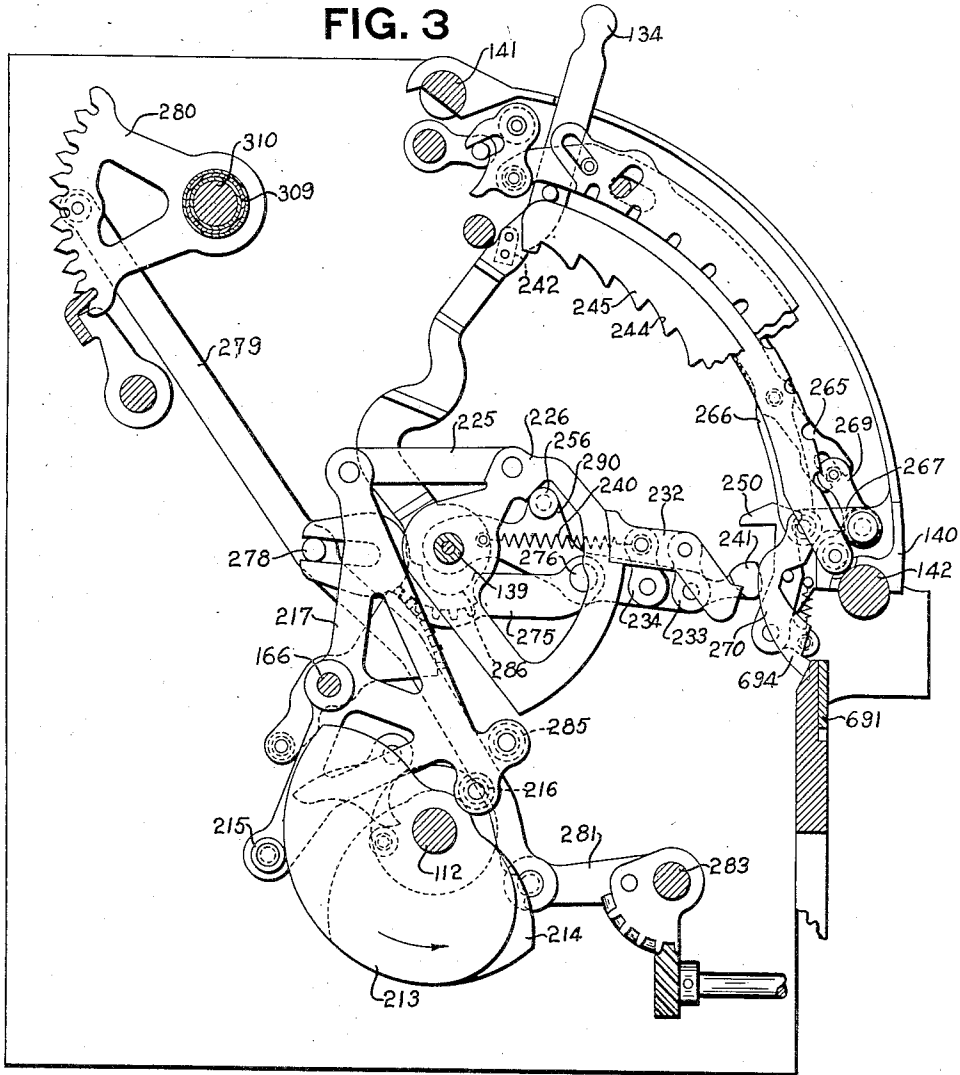


FIG. 4

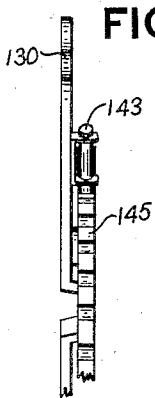
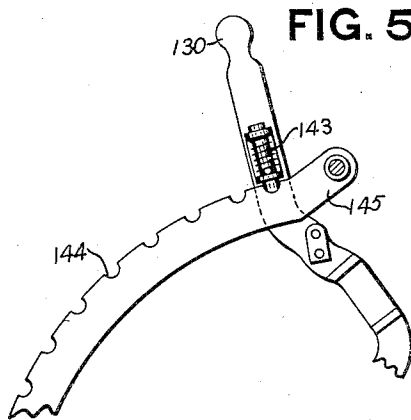


FIG. 5



Inventor
Bernis M. Shipley
By *Earl Berst*
His Attorney

July 16, 1935.

B. M. SHIPLEY

2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Original Filed July 24, 1922

5 Sheets-Sheet 4

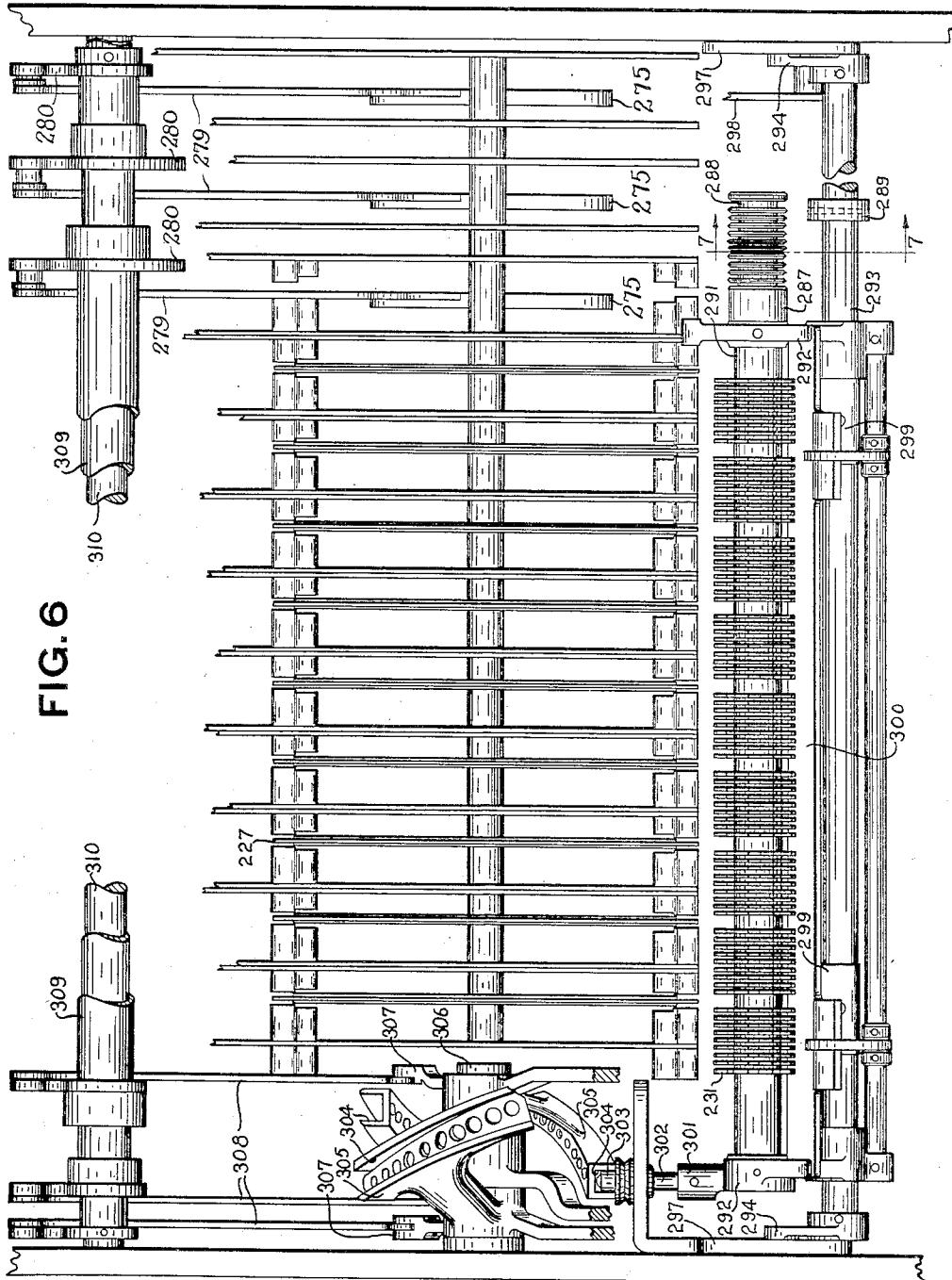


FIG. 6

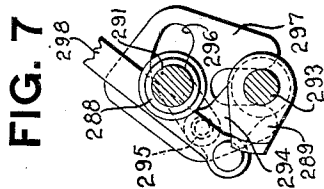


FIG. 7

Inventor
Bernis M. Shipley
By
Carl Burt
His Attorney

July 16, 1935.

B. M. SHIPLEY

2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Original Filed July 24, 1922 5 Sheets-Sheet 5

FIG. 8

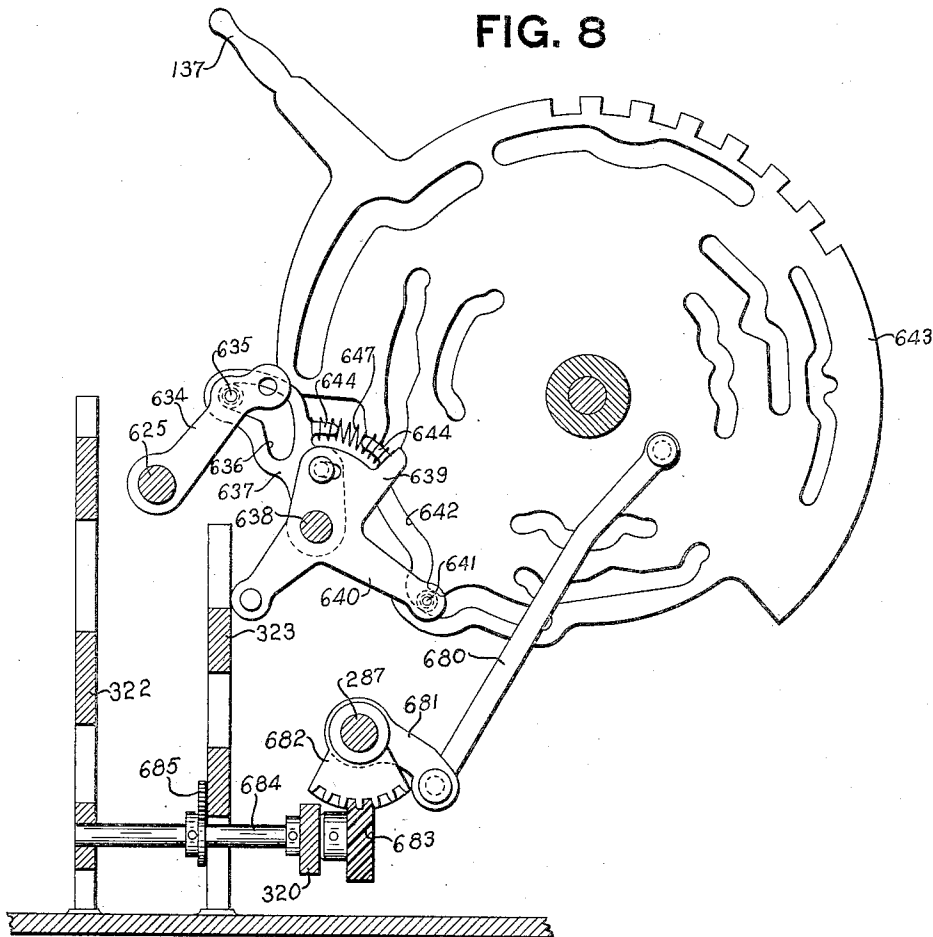
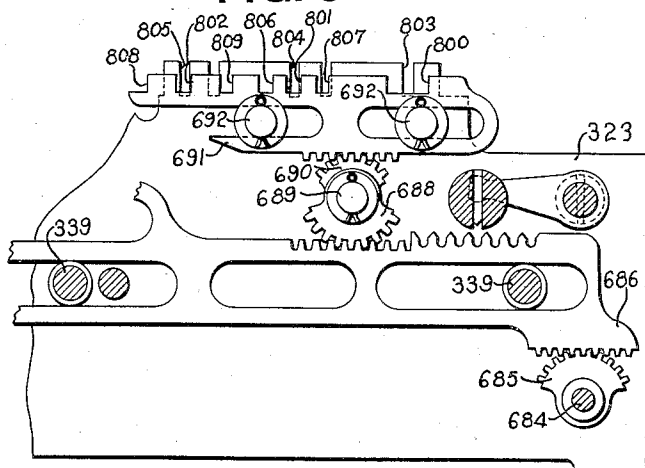


FIG. 9



Inventor
Bernis M. Shipley
By *Carl B. Best*
His Attorney

UNITED STATES PATENT OFFICE

2,008,159

LEVER INTERLOCK FOR CASH REGISTERS

Bernis M. Shipley, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Original application July 24, 1922, Serial No. 576,925. Divided and this application September 28, 1931, Serial No. 565,512

5 Claims. (Cl. 235—130)

This application is a division of an application numbered 576,925, filed July 24, 1922, for Letters Patent of the United States.

This invention relates to cash registers and the like and more particularly to machines of the type shown and described in Letters Patent of the United States, No. 1,230,864, issued to W. A. Chryst on June 26, 1917, and Letters Patent of the United States, Nos. 1,242,170 and 1,394,256, issued to F. L. Fuller on October 9, 1917 and October 18, 1921 respectively, and in Letters Patent of the United States, No. 1,619,796, issued to the present inventor on March 1, 1927.

One object of this invention is to provide a lever set cash register with interlocks between the total lever and the clerks', transaction, department and amount levers, so that mismanipulation of the machine is made impossible.

Other objects of the invention will be apparent from the following description of the present preferred form of the invention, taken in connection with the accompanying drawings, wherein—

Fig. 1 is a perspective view of the machine embodying the present invention;

Fig. 2 is a side sectional view of one of the amount banks showing parts of the interlock mechanism.

Fig. 3 is a side sectional view of the "clerks" bank and parts of the mechanism cooperating therewith.

Fig. 4 is a detail front view of one of the amount setting levers.

Fig. 5 is a detail side view of the mechanism shown in Fig. 4.

Fig. 6 is a view of one of the totalizer lines and the mechanism for sliding the totalizers thereon.

Fig. 7 is a detail sectional view taken on the line 7—7 of Fig. 6.

Fig. 8 is a view of the total lever and the plate for controlling the totalizers on total taking operations; and

Fig. 9 is a front elevation of parts of the interlocks moved by the total lever.

GENERAL DESCRIPTION

The machine in which the present invention is embodied is of the type known in the art as "lever-set". Instead of push-in keys such as are generally employed in a machine of the general class in which this machine belongs, there are provided a series of levers operating in vertical leverways in the front of the machine. There is one lever for each denomination of an amount to be set up, the machine being capable of entering \$999.99 at one operation. It is of course under-

stood that this registering capacity can be either increased or decreased without in any way departing from the spirit of the invention. One lever is provided to select the department totalizer to be operated and to control the setting up of the appropriate indicators and type wheels. Likewise, levers are provided for the clerks and transaction banks.

The usual total lever for controlling the machine in total and sub-total operations, which is common in machines of this type, is used herein.

At the extreme right of the machine is a single key which is used to release the machine for operation.

The entire machine is enclosed in a suitable cabinet of the usual design.

DETAILED DESCRIPTION

Operating mechanism

For a description of this mechanism, reference is made to the parent application, Serial No. 576,925, and to United States Letters Patent No. 1,144,413, granted to Charles F. Kettering and William A. Chryst on June 29, 1915.

Setting levers

For illustrative purposes let it be assumed that the machine described herein is being used in a department store wherein it is desirable to make a record of the amount of the sale, a record of the department in which the sale is made, a record of the particular kind of sale or transaction and a record of the clerk who registers said transaction.

The setting levers will now be described as being adapted for use in a store wherein the above system is in use. There are five amount levers **130**, one lever **131** to set up the proper department, **IX** to **9X**; one lever **132** which is adapted to set up various transactions, both regular and special; a lever **134** having eight positions for registering clerks and one position bearing the word "List", in which position this lever is placed when it is desired to enable the operator to add a plurality of unrelated items. There is also a total lever **137** of well known form for controlling the operation of the machine in total and sub-total taking operations.

The amount and transaction levers are loose on sleeves surrounding rod **139** (Figs. 2 and 3), secured to the machine frame. The levers project outward through the cabinet **65** and are guided by frames **140** supported at their upper and lower ends respectively by rods **141** and **142**. The levers are normally in their uppermost or blank posi-

tions and are moved down for the purpose of setting them.

A spring-pressed pin 143 (Figs. 4 and 5) carried by each lever is adapted to cooperate with a series of depressions 144 in a bar 145 carried by frames 140 to hold the levers flexibly in any one of their positions.

For a description of the mechanism for locking the levers against movement while the machine is in operation, and the mechanism for returning them to blank position, reference is made to the parent application, Serial No. 576,925, Patent No. 1,840,640, issued on January 12, 1932.

Motor key and machine release

For a description of this mechanism reference is made to the parent application, Serial No. 576,925.

Differential mechanism

The differential mechanism of the machine is employed to differentially operate the different totalizers and to select them for operation, and also to set type carriers in the printing mechanism as controlled by the banks of amount levers and the banks of control levers.

The differential mechanisms for the department lever 131 (Fig. 1), the transaction lever 132 and the clerks' lever 134 are practically identical. The clerks' bank will be used for explanation.

The differential mechanism is driven by a pair of cams 213, 214 (Fig. 3) fast on shaft 112. These cams cooperate with rollers 215 and 216 on a Y-shaped lever 217 pivoted on a stud 165. To the upper end of the lever 217 is pivoted a link 225, also pivoted to a driving segment 226 pivoted about the rod 130. Counter-clockwise movement of the cams 213 and 214 oscillates the lever 217 first counter-clockwise and then clockwise to normal position. This movement, through the link 225, rocks the driving segment 226 first counter-clockwise and then clockwise to normal position.

An arm 290 swings about the rod 130 and has pivoted to it a link 234 and a bell-crank 233. A latch 232 is carried by the upper end of link 234 and the vertical arm of bell-crank 233, so as to have parallel motion in relation to arm 290. A spring 240 tends to hold the inner end of the latch 232 into engagement with a shoulder on the segment 226. By this latch connection the arm 290 is rocked counter-clockwise until the horizontal arm 241 on the bell-crank 233 strikes a lug 242 on the side of the setting lever 134. When this occurs, the bell-crank 233 and link 234 are rotated clockwise, thereby disengaging the latch 232 from the segment 226. The latch 232 then rides against the periphery of the segment for the remainder of its counter-clockwise oscillation, and for the initial part of its return oscillation, until it has returned to the position where it became disengaged. When the latch thus becomes disengaged, its forward end engages one of a plurality of notches 244 in a stationary segmental locking plate 245, the notch engaged depending upon the position to which the lever 134 was previously set. Since there is just sufficient distance between the bottoms of the notches 244 and the high periphery of the segment 226 to accommodate the latch 232, the latter is locked against further movement until it again becomes engaged with the shoulder. This locking of latch 232 likewise holds arm 290 stationary for that portion of the operation.

On the return oscillation of segment 226, at the same time the latch 232 engages the shoulder, a

portion of the segment strikes a stud 256 on the arm 290. This causes the arm 290 and latch 232 to return with the segment to the home position shown in Fig. 3.

The lever 134 may be set to any one of nine totalizer selecting positions, or to a blank position situated above the totalizer selecting positions. When set in one of the nine selecting positions it will control the latch in the manner just explained, and when set in the blank position (as shown in Fig. 3) will control the stop pawl 250 so that the latter will cause the latch 232 to be disengaged in the position where no totalizer is selected. The position of the arm 290 and latch 232 where no totalizer is selected corresponds to the zero position in the above mentioned patents to Chryst, Fuller, and Shipley.

When the machine is operated with the lever 134 in this blank position, the pawl 250 lies in effective position as shown in Fig. 3, and engages the arm 241 just after the segment 226 begins its counter-clockwise oscillation. This stops the arm 290 in a position one step above that shown in Fig. 3.

When the lever 134 is moved out of the blank position, the pawl 250 is thereby moved to an inoperative position. This is accomplished by parts practically identical with those on the amount banks used for this purpose, to which reference will be made for explanation.

Referring to Fig. 2, the setting lever 130 carries a pin 260 which cooperates with a cam portion 261 of a curved link 262 pivoted to one arm of a bell-crank 263. The link 262 also carries a pin 264 projecting through a slot in one arm of a two-armed lever 265, pivoted on a curved bar 266 supported at its upper end by the other arm of the above-mentioned bell-crank 263, and at its lower end by an arm 267 fast on a sleeve 268 supported by a stud in the frame 140. Also fast on the sleeve 268 is an arm 269 which has a pin projecting through a slot in the downwardly extending arm of the two-armed lever 265. It can be seen that when the lever 130 is moved the pin 260 through cam surface 261 rocks the link 262 clockwise about the arm of bell-crank 263 to which it is attached. This movement rocks the two-armed lever 265 counter-clockwise, and through the slot and pin connection rocks arm 269, sleeve 268 and arm 267 clockwise. As arm 267 is pivoted to the lower end of the curved bar 266, this bar will be lowered, and the bell-crank 263 carrying the link 262 will be rocked clockwise, thereby moving the pivotal point of link 262 outwardly and giving to the link 262 a parallel movement when actuated by pin 260. The arm 267 has a depending tail 270 cooperating with a pin projecting from the zero stop pawl 250. When arm 267 is rocked clockwise, as above described, the tail 270 will engage the said pin and rock the zero stop pawl on its pivot far enough to permit the latch 232 (Fig. 3) to pass by on its upward movement.

Thus, when the setting lever 134 is moved out of blank position, the arm 241 is free to move upward until stopped by the lug 242 on the lever 134.

Associated with the differential mechanism is a beam 275 (Fig. 3) pivoted on a stud 276 carried by the arm 290. The beam has a slot in its opposite end surrounding a pin 278 on a link 279 pivoted to a segment 280. The link is connected at its lower end to an arm 281 pivoted on a rod 283.

It is apparent from the foregoing description that the end of the beam 275 which is pivoted on stud 276 is differentially positioned when the arm

290 is positioned under control of the lever 134. To secure the proper positioning of the beam 275 after the arm 290 has positioned its forward end, it is necessary that the surface 286 of the beam be in contact with the sleeve about rod 139. During certain operations it is obvious that the arm 290, on its upward excursion, will cause the beam to be so positioned.

For the other operations it is necessary to provide a roller 285 on lever 217, so that upon counter-clockwise movement of the lever the roller will engage the lower edge of the beam 275 near the center thereof, and rock said beam about the stud 276 until the surface 286 of said beam engages the periphery of the sleeve around rod 139. During this movement of the beam, the link 279 is moved, and thereby positions the segment 280 and the arm 281 to differentially position the totalizers in accordance with the positioning of the differentially movable arm 290, as controlled by the position of the setting lever 134. For a more complete description of the differential mechanism reference may be had to the parent Patent No. 1,840,640.

The amount differential mechanism is operated in the same manner as described in connection with the special control banks. Referring to Fig. 2, when the amount lever 130 is in its blank position as shown, the stop pawl 250 disengages the latch (corresponding to latch 232, Fig. 3) in zero position, but when it is moved to any other position, the stop pawl 250 is withdrawn, as already explained, and the latch is free to move up until disengaged by the lug 242 on the lever 130.

Movement of the latch out of its zero position also causes rotation of the toothed segments 227 so that an amount can be entered on whatever totalizers 231 are engaged therewith. The link 279 associated with an amount bank has the functions of setting printing and indicating mechanisms. For a more detailed description of the amount differential, reference is made to the parent application, Patent No. 1,840,640.

Totalizers

In the present machine three totalizer lines are provided and mechanism for shifting the totalizer lines to select various totalizers is also provided, as is well known in the art. In addition, a totalizer line selecting mechanism is provided with means for preventing or permitting, as desired, one, two or all three of the totalizer lines to be rocked into engagement with the differential mechanism simultaneously. Due to this construction totalizer controlling levers may be moved either singly or in combination, but only one totalizer on each line can be selected thereby to accumulate the amount. As an additional result, a plurality of totalizer selecting levers may be moved and their particular department or transaction indicated and printed while the amount will be accumulated on but one of the totalizers if such result is desired. Then again two totalizer controlling levers may be moved and the amount accumulated on one, two or three totalizer lines, this result being attained as before described by the totalizer line selecting mechanism which automatically determines which or how many of the totalizer lines are to be rocked into engagement with the differential mechanism.

A semi-diagrammatic view of one of the three totalizer lines, each carrying a plurality of totalizers is shown in Fig. 6, and their relation to the

remainder of the machine is well shown in Fig. 2. Only a general description of the totalizers will be given herein, as both a very full illustration and description of these devices is given in Letters Patent of the United States issued to W. A. Chryst, No. 1,230,864, dated June 26, 1917. In the present case it is believed to be sufficient to state that each totalizer line consists of a plurality of individual totalizers 231 loosely mounted on a tube 291 fixed in frames 292, one arranged at each end of the tube. These frames are secured to said tube and slide on a shaft 293 (Fig. 7) which has arms 294 carrying rollers 295 cooperating with slots 296 in cam plates 297 fast to the machine side frames. The arm 294 on shaft 293 is provided with a link 298 which is operated to rock the totalizer wheels 231 into and out of mesh with the differential mechanism. Rocking movement of the shaft 293 through a pair of cams 299 (Fig. 6) controls the operation of the alining device 300 for the totalizers, the same as the alining device illustrated and described in the before-mentioned Chryst patent.

Each totalizer of the individual totalizers consists of one pinion in each group of pinions, and therefore if the first pinion of each group is engaged with the differential actuators 227 (Fig. 2) a certain individual totalizer will be operated; if the second pinion of each group is engaged with the actuators, a different totalizer will be operated, etc. This construction is described in U. S. Letters Patent No. 1,109,763, granted September 8, 1914, to Charles F. Kettering, and is known in the art as "interspersed" totalizers.

To shift each movable totalizer line along shaft 293 so that any desired totalizer may be brought opposite the actuators, the totalizer frame is provided with a boss 301 (Fig. 6) in which is secured a rod 302 provided with a roller 303 loose on the rod which extends into a groove 304 in a spiral drum cam 305. There are three cams 305 illustrated in Fig. 6, each one of which cooperates with the respective roller 305 of its associated totalizer line. Each of the cams 305 is journaled on a rod 306 and has a rearwardly extending arm 307 to which is pivoted a link 308 connecting it with either a tube 309 or a shaft 310 which receives its movement from the beam 275 (Fig. 3) through link 279 set by either the department, transaction, or clerks' levers, as has been previously described. By this means, through the link 308 and cam 305 the totalizer line associated with each of the levers just mentioned is slid to bring the individual totalizer into a position corresponding with the position to which its appropriate transaction lever has been moved, so that it may be actuated by the differential mechanism when it is rocked into engagement therewith. It will be remembered that the links 298 (Figs. 6 and 7) are operated to engage the totalizers with the differential actuators. These links 298 are pivoted to arms 294 fast on a shaft 293, and therefore, when the totalizer elements are moved into engagement with the differential actuators, the shaft 293 will be rocked in a clockwise direction (Fig. 7). The tube 291 which carries the totalizer elements has mounted in its right-hand end (Fig. 6) an aliner 287 provided with eleven circumferential grooves 288. Fast on shaft 293 is an arm 289 having at its end two teeth which, when the shaft 293 is rotated on totalizer engaging movements, will engage with and project into the grooves 288 in the aliner 287 and thereby aline the totalizer elements in their engaged position and prevent any lateral move-

ment of the tube 291. When the totalizer elements are disengaged from the actuating segments the arm 289 is rocked counter-clockwise (Fig. 7) to disengage its teeth from the grooves 288.

A description of the mechanism for controlling the engagement of the totalizers will be found in U. S. Letters Patent No. 1,242,170, issued to F. L. Fuller, and also in No. 1,394,256, granted to the same inventor.

Total reading and resetting

The total lever 137 (Figs. 1 and 8) is shown in its "add" position, where it remains during all adding operations of the machine. When it is desired to read or reset any totalizer, the lever 137 is adjusted to a position above or below the "add" position. As shown in Fig. 1, when it is desired to read or reset the "clerks'" total, the lever 137 is moved up or down one step. This selects the proper totalizer line from which the total will be read or taken. The "clerks'" lever 134 is then adjusted to whatever position from which it is desired to secure the data. This latter adjustment determines which individual totalizer will be actuated on the ensuing operation, as previously explained.

If it is desired to read or reset any of the "transaction" totalizers, the total lever 137 is moved two steps above or below "Add". The "transaction" lever 132 is then adjusted to the desired position, and the machine is ready to be released.

Likewise, if it is desired to read or reset any of the "department" totalizers, the total lever is moved above or below "Add" three steps, and the lever 131 then adjusted.

For a complete description of the mechanism used in reading and resetting the totalizers, reference is made to the aforementioned Chryst, Fuller, and Shipley patents, and to the parent application, Serial No. 576,925.

Interlocks for total and setting levers

It is necessary, in order to prevent mismanipulation of the machine, that interlocks be provided between the total lever and the setting levers 130, 131, 132 and 134. These interlocks will now be described.

Fast on the shaft 625 (Fig. 8) is an arm 634 carrying a pin 635 projecting into a slot 636 in a lever 637 loosely mounted on a stud 638 in the machine frame. Also loose on the stud 638 is a lever 639 having an arm 640 carrying a roller 641 cooperating with a slot 642 in a disk 643 which is integral with the total lever 137.

The movement of the total lever 137 either up or down rocks the lever 639 counter-clockwise through the engagement of its pin 641 with slot 642. This movement is transmitted to lever 637 through a coil spring 647 supported by projections 644 on the levers 637 and 639, and moves said lever 637 counter-clockwise. This movement through pin 635 rocks arm 634 and shaft 625 clockwise. This shaft has secured thereto a pair of arms 677, one of which is shown in Fig. 2, carrying a universal rod 678. Clockwise movement (Fig. 2) of shaft 625 and arms 677 moves the rod 678 downward in front of a foot 679 integral with the arm 270, which it will be remembered is moved clockwise (Fig. 2) by the movement of its appropriate amount lever 130. With the rod 678 in front of the foot of arm 270 it is clear that said arm cannot be rocked, and therefore the corresponding lever cannot be moved.

Likewise, if an amount lever 130 is moved out

of blank position, the lower end of arm 270 is extended under shaft 678, making it impossible to move the total lever 137 out of "add" position.

Pivoted to the total lever disk 643 (Fig. 8) is a link 680 connected to an arm 681 loose on shaft 287. Rigid with the arm 681 is a spiral segment 682 meshing with a spiral pinion 683 fast on a shaft 684 mounted in the frame 322 and bracket 323. Also fast on the shaft 684 is a segment 685 (see also Fig. 9) meshing with a rack 686 slidably mounted on the shafts 339. The rack has teeth on its upper edge which mesh with a segment 688 loose on the stud 689. Integral with segment 688 is a segment 690 meshing with a plate 691 slidably mounted on studs 692 on the frame 323. The upper edge of the plate has notches cooperating with the lower ends 694 (Fig. 3) of the arms 270 associated with the transaction, clerks', and departmental levers. These arms 270 used in connection with the levers 131, 132 and 134, operate in a manner identical with those in the amount banks, and are connected to their associated mechanism in an identical manner.

When the setting levers 131, 132 and 134 are in their blank positions, the arms 270 lie behind the plate 691, as shown in Fig. 3, making it possible to shift the total lever 137 at will. Likewise, when the total lever 137 is in "add" position, the notches 690, 691 and 692 (Fig. 9) coincide with the notches 693, 694 and 695, making it possible to manipulate the setting levers at will.

When the total lever is moved to its first position above or below "Add", to select the clerks' totalizer line, the plate 691 is moved one step to the right or left, so that the high portions of the plate adjacent the notches 691 and 692 cover the slots 694 and 695 and prevent a movement of the setting levers 131 and 132 out of blank position. The slot 690, however, is sufficiently wide to still coincide with the slot 693, thus permitting movement of the clerks' setting lever 134.

When the total lever is moved to its second position above or below "Add" to select the transaction totalizer line, the plate 691 is moved two steps to the right or left, so that the high portions of the plate adjacent the notches 690 and 692 cover the slots 693 and 695 and prevent a movement of the setting levers 134 and 131 out of blank position. Such a two-step movement of the plate 691 causes either the slot 696 or the slot 697 to coincide with the slot 694 to allow adjustment of the transaction lever 132.

When the total lever is moved to its third position above or below "Add", to select the department totalizer line, the plate 691 is moved three steps to the right or left, so that the high portions of the plate adjacent the notches 690, 696 and 697 cover the slots 693 and 694, and prevent a movement of the setting levers 132 and 134 out of blank position. Such a three-step movement of the plate 691 causes either the end opening 698 or the slot 699 to coincide with the slot 695 to allow adjustment of the department lever 131.

It can be also seen that after any of the setting levers are moved out of the blank position, the end 694 of their corresponding arm 270 extends through both the slot in the frame and one of the slots in the plate 691. This prevents subsequent manipulation of the total lever to an improper position.

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 forms all coming within the scope of the claims which follow.

What is claimed, is

5 1. In a machine of the class described, having a plurality of individual number retaining devices, and mechanism for increasing the amounts thereon and for clearing the amounts therefrom, a lever adapted to be adjusted to a plurality of
10 positions to condition the machine to add or totalize another lever adapted to be adjusted to a plurality of positions to select the individual number retaining devices for actuation, means enabling the second lever to be moved into a blank
15 position where no individual number retaining device is selected, and means to block movement of the first lever when the second lever is in a selecting position.

2. In a machine of the class described, having
20 a plurality of individual number retaining devices, and mechanism for increasing the amounts thereon and for clearing the amounts therefrom, a lever adapted to be adjusted to a plurality of positions to control the machine so that it may
25 add, read, or reset, other levers adapted to be adjusted to a plurality of positions to select the individual number retaining devices for actuation, means enabling the second levers to be moved into blank positions where no individual number
30 retaining devices are selected, and means moved by manipulation of the first lever whereby when the first lever is adjusted to a read or reset position and one of the second levers is moved into a selecting position, another second lever cannot
35 be moved from its blank position until the other second lever is restored to blank position.

3. In a machine of the class described, having a totalizer and mechanism for increasing the amount thereon and for clearing the amount
40 therefrom, a lever adapted to be adjusted to a

plurality of positions to control the machine so that it may add, read, or reset, other levers adapted to be adjusted to a plurality of positions to determine the amount to be added to the totalizer, means enabling the second levers to be
5 moved into blank positions where no amount is added to the totalizer, and means moved by manipulation of any amount determining lever out of blank position, to block all movement of the
10 first named lever.

4. In a machine of the class described, a locking mechanism including a manually set lever having blank and operative positions, a locking member, connecting elements between the manually set lever and the locking member, suspension
15 elements pivoted to the connecting elements and adapted to rotate about fixed pivots, and a connection between the connecting elements whereby one is pivoted upon another, the parts being so
20 positioned that a movement of the manually set lever out of blank position causes a relatively longitudinal movement to be imparted to the connecting elements to adjust the locking member.

5. In a machine of the class described, having a plurality of individual number retaining devices, and mechanism for increasing the amounts
25 thereon and for clearing the amounts therefrom, a lever adapted to be adjusted to a plurality of positions to control the machine so that it may add or totalize, other levers adapted to be adjusted to a plurality of positions to select the individual number retaining devices for actuation, means enabling the second levers to be moved into
30 blank positions where no individual number retaining devices are selected, and means moved by manipulation of any of the said other levers out of blank position, to block movement of the first mentioned lever.

BERNIS M. SHIPLEY.