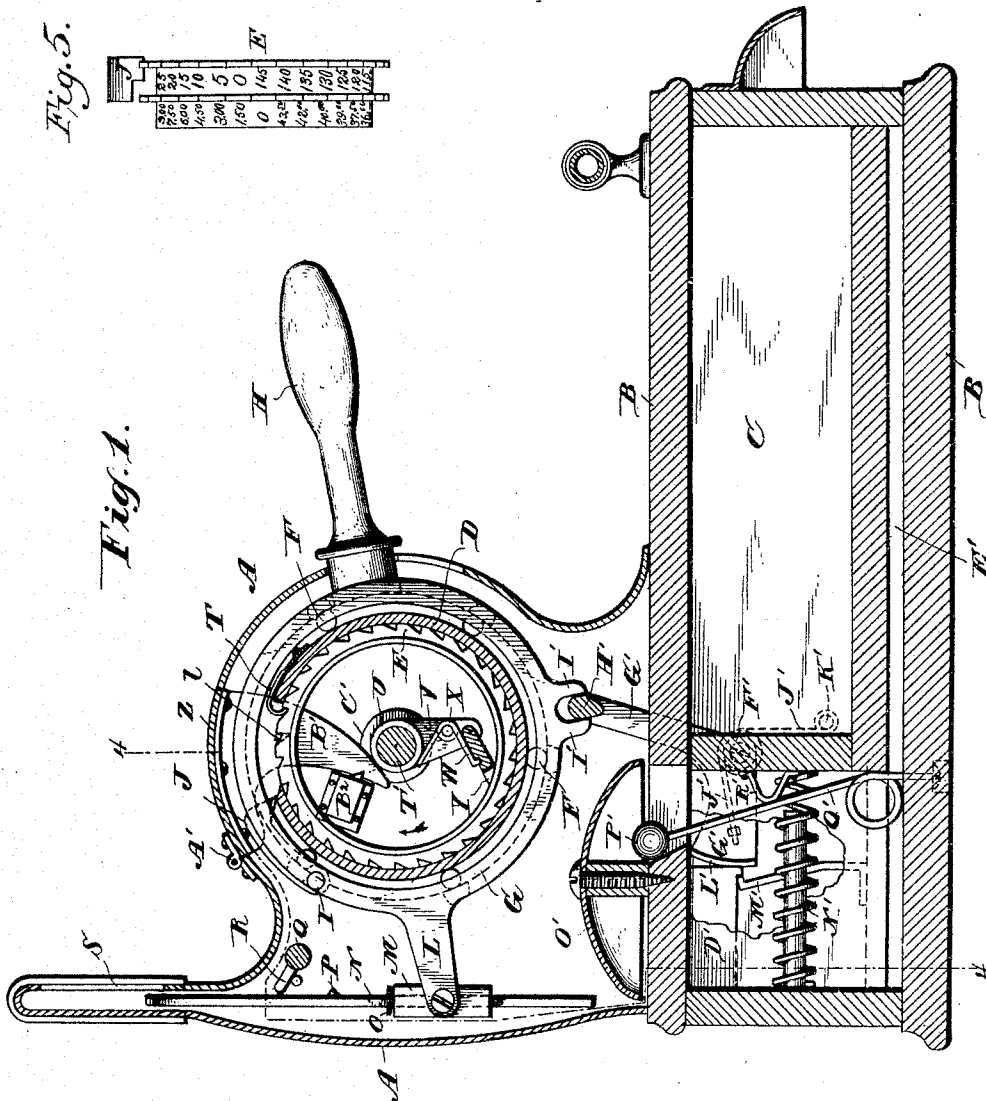


H. J. GILBERT.
CASH REGISTER AND INDICATOR.

No. 491,546.

Patented Feb. 14, 1893.



Witnesses.

Chas. L. Goss.
E. C. Somers

Inventor.

Henry J. Gilbert,
per Wendell H. Brown, Smith, Patton & Coles
Attorneys.

(No Model.)

4 Sheets—Sheet 2.

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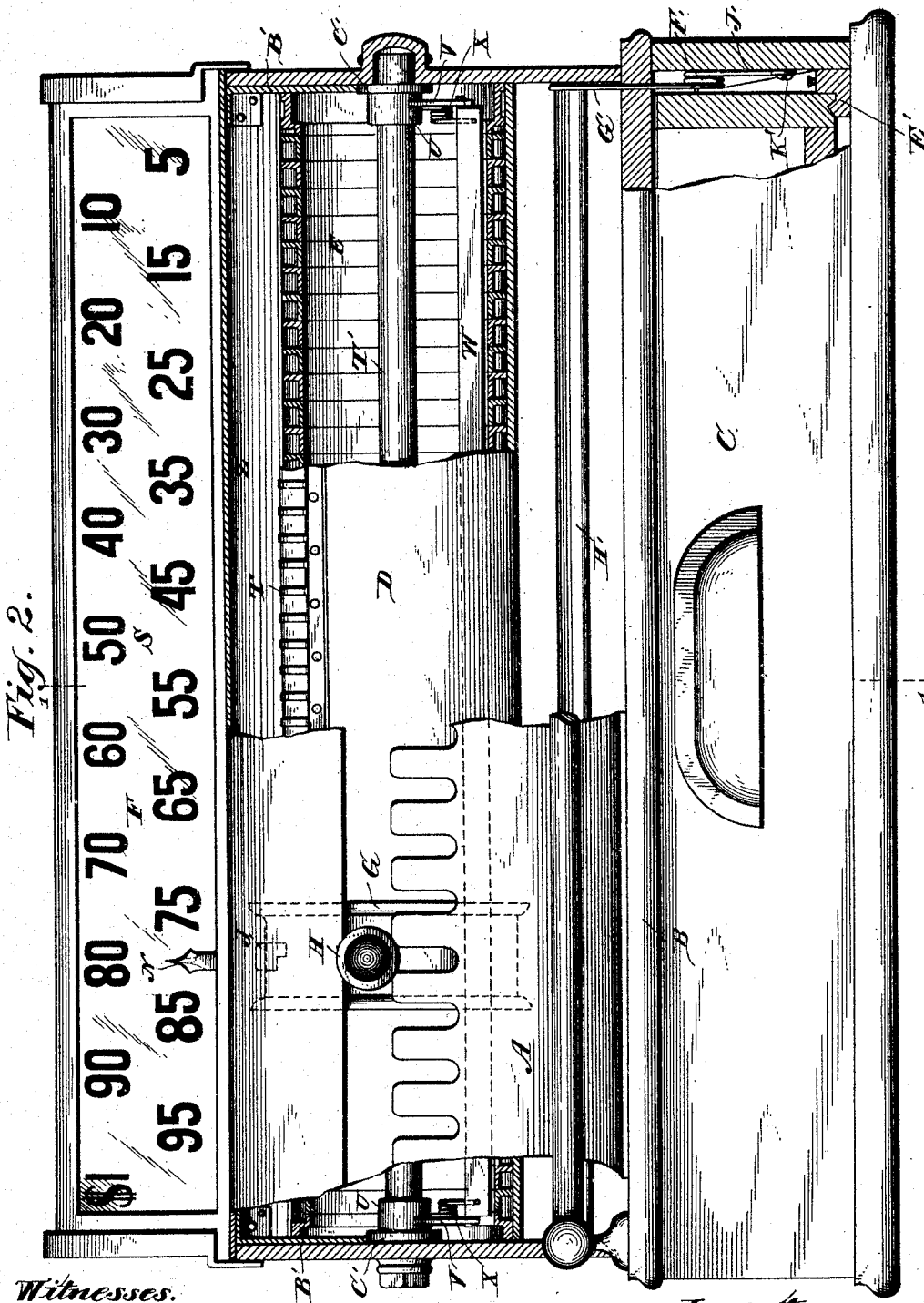


Fig. 2.

Witnesses.

Chas. L. Goar.
E. C. Loring

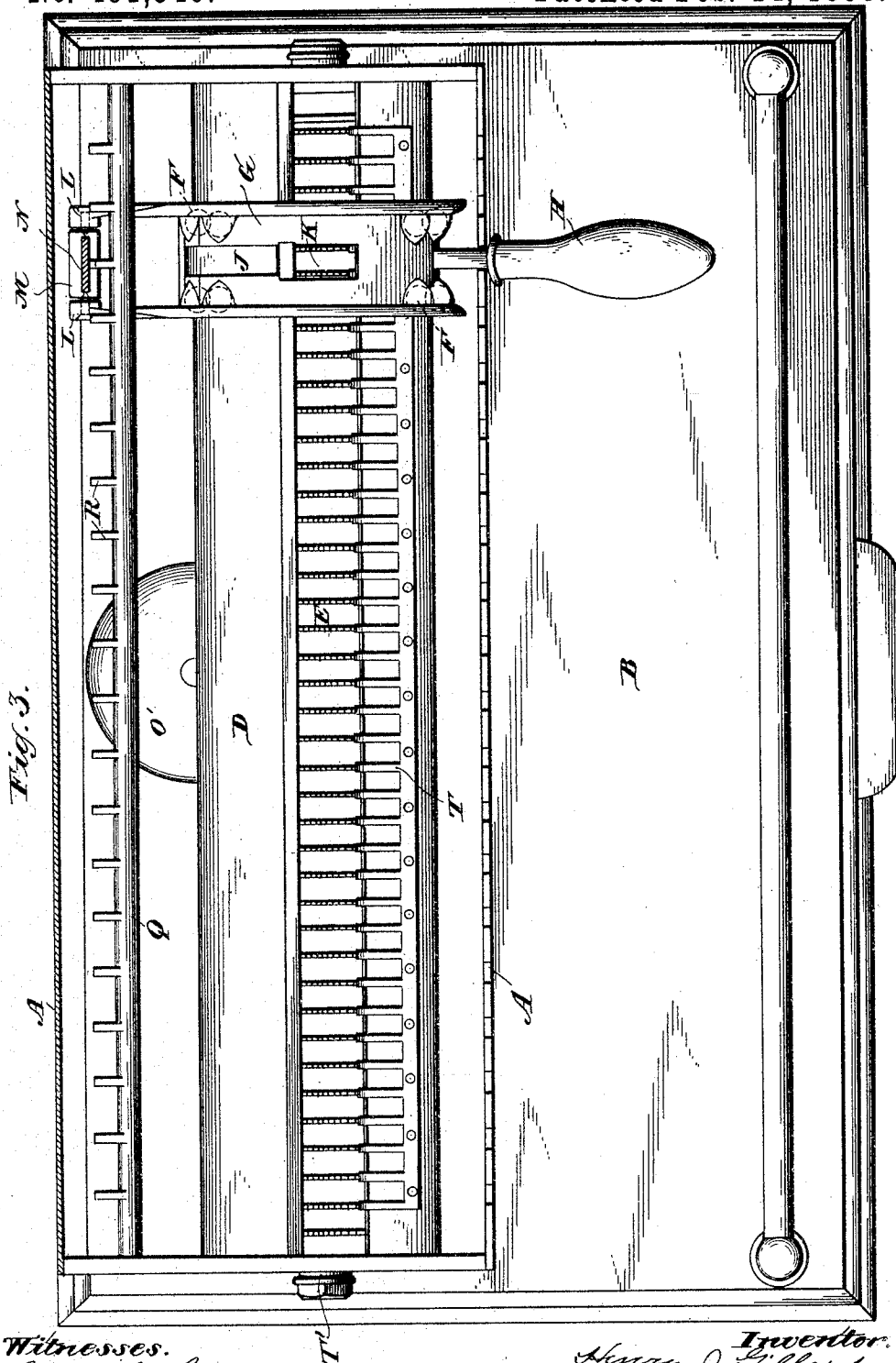
Inventor:

Henry J. Gilbert
per ~~Wm~~ Wm. Flanders Smith Bottom & Niles
Attorneys.

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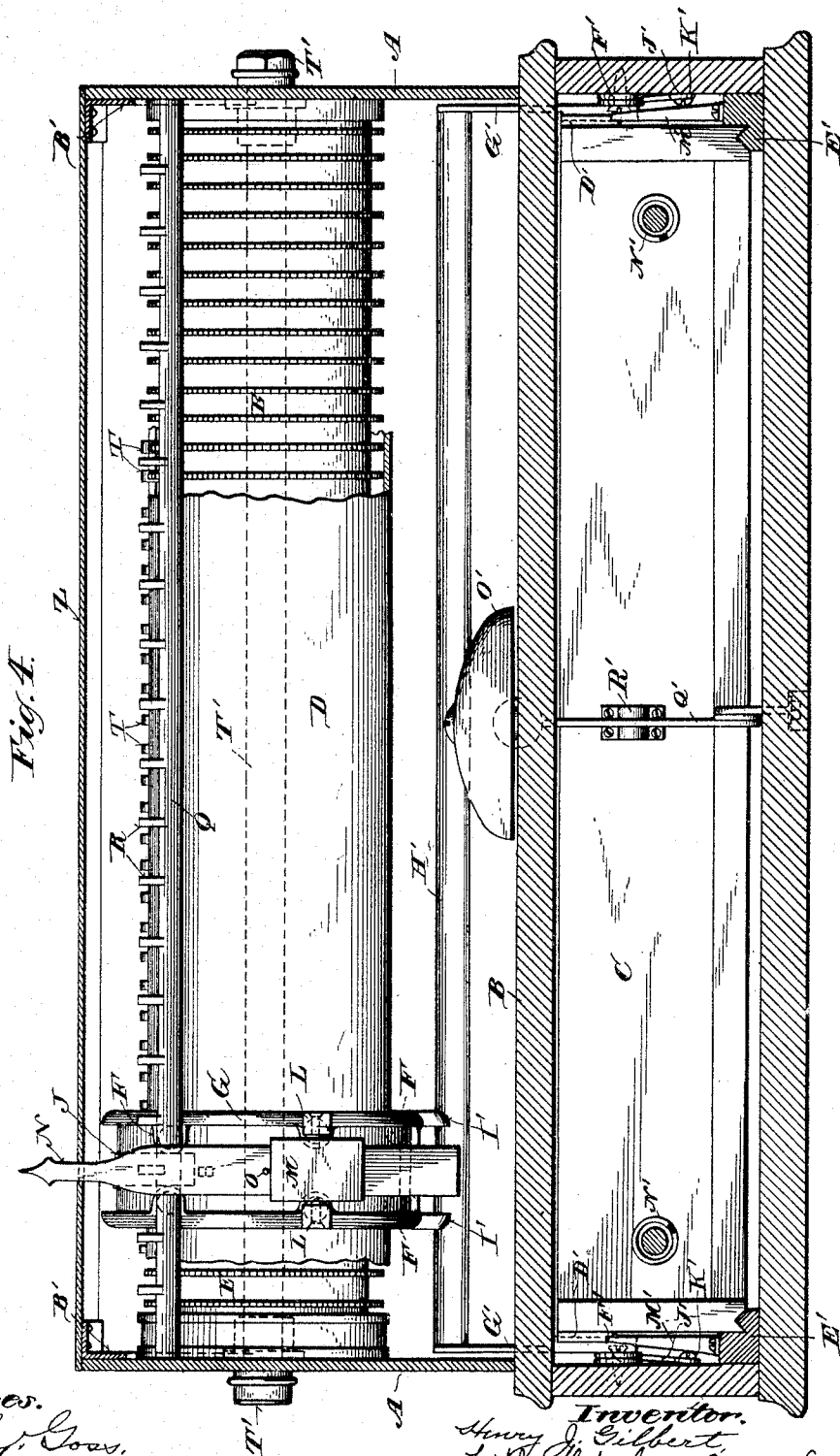
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Chas. L. Goss.
E. A. Somers

Inventor.
Henry J. Gilbert
per Wm. H. Smith, Portman & Co.,
Attorneys.

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Witnesses.
Chas. L. Goos.
E. C. Forman

Inventor.
Henry J. Gilbert.
per Charles W. Smith & Co. Attorneys.

UNITED STATES PATENT OFFICE.

HENRY J. GILBERT, OF SAGINAW, MICHIGAN, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON, OHIO.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 491,546, dated February 14, 1893.

Application filed January 5, 1891. Renewed December 31, 1892. Serial No. 456,946. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. GILBERT, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented new and useful Improvements in Cash Registers and Indicators, of which the following is a specification.

My invention relates to that class of machines which are employed in stores, restaurants, bar rooms, and at soda fountains, cigar stands, and like places, for the purpose of keeping an accurate record or account of all sales made and all money received.

My improved machine, like all of its class, embodies as essential elements an indicating mechanism and a registering or recording mechanism, the former to indicate to the customer and bystanders whether the clerk or attendant properly operates the machine, (and to thereby compel him to properly operate it,) and the latter to preserve an accurate record or account of all amounts so indicated and charge the clerk with the gross sum of them.

In addition, as is usual in this class of machines, my machine contains an alarm which is sounded at each operation of the machine, to call the attention of the customer and others present to it, so that they will notice whether the clerk makes the proper indication, (and hence, of course, the proper registration;) and a money drawer which is unlocked and automatically thrown open at each operation, to receive the money paid by the customer, and to furnish change if necessary.

As elemental parts, my improved machine embodies an operating handle laterally movable across the machine; an indicator moving with the handle; and a registering mechanism actuated by movements of the handle in a plane substantially at right angles to that of its lateral movement. The operating handle therefore has essentially two kinds of movement, viz: a lateral movement across the machine, carrying the indicator with it, to indicate different amounts according to the point to which it is moved, and which may be said to constitute its indicating movement; and another movement transverse to its indicating movement, which actuates the registering mechanism, and may be called its registering movement. The indicator moves over a lat-

eral row of numbers and when stopped at any one of them a registering movement given to the handle at that point will effect a registry of the amount indicated by such number, unlock the cash drawer and permit a spring to throw it open, and sound the alarm to call attention to the indication which the operator has made. After the handle has been given a registering movement and the cash drawer thereby unlocked and thrown open, the handle is locked from further operation until the drawer is again closed, thus insuring the closing of the drawer after each operation of the machine.

A machine illustrating one form of embodiment of these several features of my invention, as well as various novel features of construction and arrangement of some of the parts, is shown in the accompanying drawings, in which

Figure 1 represents a sectional side elevation of the machine on the line 1—1 of Fig. 2, Fig. 2 is a front elevation of the machine, partly in section, and with parts of the machine broken away; Fig. 3 is a top plan view with the upper part of the casing cut away; Fig. 4 is a rear elevation, with the rear side of the casing and base cut away, on the line 4, 4, Fig. 1, and a part of the cylinder inclosing the registering wheels broken away to expose the latter; and Fig. 5 is a front elevation of a primary registering wheel and its associated secondary registering wheel and their actuating pawl.

The same letters of reference are used to indicate identical parts in all the figures.

The registering and indicating mechanisms of the machine are inclosed within and supported by a suitable casing A, Fig. 1, this casing being secured upon a base B, beneath which is the drawer compartment containing the sliding money drawer C. The front, rear and upper portions of the casing I prefer to make of sheet metal, and the sides of cast metal plates.

Extending entirely across the casing and supported at its ends by the side plates is a hollow cylinder D, having a longitudinal opening in its upper side from end to end, as seen in Fig. 3. This cylinder contains the registering wheels E, which consist of flanged rings

stamped from cross sections of metal tubing. The flanges of these wheels snugly fit the inner surface of the cylinder, and the latter affords the only support and bearing for the wheels. They turn freely in the cylinder and their flanges are provided with equidistant notches adapted to be engaged by a pawl actuated by the operating handle to turn them to effect the registry, in the manner hereinafter described.

The present machine is designed to indicate and register amounts in multiples of five, from five cents to one dollar, inclusive. There are accordingly twenty primary registering wheels, one for each amount which the machine is capable of indicating and registering, and twenty supplemental or secondary registering wheels, one for each primary wheel, and each arranged to be turned one notch at each complete revolution of its associate primary wheel. Each primary wheel bears upon its face a series of equidistant numbers in multiples of the amount which the wheel is designed to register each operation of it, and each supplemental wheel bears upon its face a series of numbers in multiples of the amount registered by a complete revolution of its associate primary wheel. In the present instance the flanges of the wheels have thirty notches in them and the faces of the wheels bear thirty equidistant numbers. A complete revolution of the primary five cent wheel will therefore register \$1.50, and its associate secondary wheel will therefore bear a series of numbers in multiples of 1.50. The numbers on the primary wheel run from 0 to 1.45, and those on the secondary wheel from 0 to 43.50. When the primary wheel has reached 1.45 the next operation of the wheel, in the manner and by the means hereinafter described, will bring its 0 to the starting point and will at the same time cause the secondary wheel to be turned one notch to bring its 1.50 into line with the 0 on the primary wheel. The sum of the two numbers appearing upon the two wheels at the reading point therefore always exhibits the total operations of the two wheels.

All the primary wheels throughout the series, and their associate secondary wheels, are relatively arranged and co-operate with each other in the same manner as do the primary and secondary five cent wheels above described.

Mounted upon the cylinder D, with interposed ball bearings F, is a flanged ring G which is capable of turning freely upon and traveling longitudinally of the cylinder. To the forward side of this ring is secured the operating handle H which projects through a longitudinal slot in the front side of the casing A, said slot extending the entire width of the machine; while immediately beneath this longitudinal slot is a series of vertical slots, Fig. 2, one substantially in line with each of the indicating numbers and each set of wheels, and into which vertical slots the

handle H may be depressed to effect the registry, as hereinafter described.

Pivoted between the flanges upon the upper rear side of the ring G, at I, Fig. 1, is the actuating pawl J for the registering wheels. As seen in Fig. 3 the upper side of the ring G has in it a central opening K of about the same width as the pawl J and of about the same length as the width of the subjacent longitudinal opening in the cylinder D, with which opening it coincides. The pawl J extends forwardly from its pivotal point I and its downwardly pointed forward end normally rests upon the upper side of the cylinder D just behind the rear edge of the opening in the latter. When the operating handle is depressed and the ring G thereby turned forward the toothed end of the pawl drops upon the flange of a primary wheel and engages a notch therein and turns the wheel forward one number. The forward end of the pawl has two teeth, a long and a short one, as seen in Figs. 1 2 and 5. When the operating handle is in position for a registering operation, immediately above one of the vertical slots in the front side of the casing A, the long tooth of the pawl is always in line with the flange of a primary wheel and the short tooth in line with the flange of a secondary wheel, as seen in Fig. 5. The engagement of the long tooth with the flange of the primary wheel ordinarily holds the short tooth above and out of engagement with the flange of the secondary wheel; but the flange of the primary wheel has in it one extra deep notch; see dotted lines at 1, Fig. 1. When the wheel is brought into position for the long tooth of the pawl to engage this notch it permits the pawl to drop far enough for its short tooth to engage a notch in the flange of the secondary wheel, so that the forward movement of the pawl at such time turns each wheel one number. The primary wheel is brought into this position for the pawl to engage its deep notch just before it has completed a revolution, so that the next forward movement brings its 0 to the reading point, while the turning forward of the secondary wheel at the same time registers upon it the complete revolution of the primary wheel.

Projecting rearwardly from the rear side of the ring G are two arms or ears L L, Figs. 1 and 3. Between the rear ends of these arms is pivotally hung, upon the points of screws passed through the arms, a guide-piece M which guides and supports the indicator N. The latter, in this instance, consists of a narrow vertical plate or bar passed through the guide-way in the piece M and supported thereon by a pin or projection O, Fig. 1, resting upon the top of the guide-piece. The indicator will therefore be lifted by the guide-piece when the handle H is depressed, but may be held up after the guide-piece and handle return to normal position.

A short distance above the top of the guide-piece M the indicator N has upon its forward side, at the middle thereof, a projection P.

Journalled at its ends in the side plates of the casing and extending across the machine a short distance in front of the indicator, Figs. 1 and 3, is a rod Q. This rod has upon it a series of upwardly and rearwardly inclined projections R, one in line with each of the slots beneath the handle H in the front side of the casing A, so that when the handle is immediately above any one of said slots one of the projections R is above and in line with the projection P on the forward side of the indicator. This rod is yieldingly held in the position shown in Fig. 1 by a spring or by gravity, so that its projections may be moved slightly upward and forward for a purpose to be presently explained.

The front side of the extreme upper portion of the casing into which the upper end of the indicator N extends, has in it a longitudinal reading opening or window S, extending entirely across the machine and preferably covered with glass. Immediately behind this window, upon the forward face of the rear side of the casing, are the indicating numbers, preferably arranged in two lateral rows, as seen in Fig. 2, to enable the numbers to be made larger than if arranged in a single row. As before stated, the ball bearings interposed between the ring G and cylinder C permit the ring to freely travel longitudinally thereof as well as to turn axially thereon.

The operation of so much of the machine as has been thus far described is as follows: The operator moves the handle H sidewise through its slot in the front side of the casing A until it reaches the proper point to indicate and register the amount of the sale. Such point may be determined by numbers upon the forward side of the casing A either immediately above or immediately below the vertical slots in which the handle plays, as seen in Fig. 2; or the indicator N may be made long enough for its narrow pointed upper end to extend above the lower edge of the window S even when the indicator is in its lowest position, so that the operator can by the indicator determine the point to which he must move the operating handle. When he has moved the handle laterally to the proper point, he depresses it, turning the ring G forward on the cylinder C and causing the pawl J to engage a notch in the proper primary wheel and turn the wheel forward one number, to effect the registration. The depression of the handle lifts the guide-piece M, and with it the indicator N, the upper end of the latter pointing to the proper number to indicate the amount of the sale through the window S, and the projection P on its front side striking, lifting and passing above the corresponding projection R on the bar Q. When the handle H is restored to its normal position the projection P on the indicator will catch upon the projection R and support the indicator in elevated position. As soon, however, as the handle and indicator are moved laterally, preparatory to another indication and regis-

tration, the projection P will be moved off the projection R which supported it and the indicator will drop back to normal position, with its pin O resting upon the upper side of the guide-piece M. When the handle reaches the position for the new indication and registration, and is depressed, the indicator is thrown up and caught by one of the projections R, as before, and held pointing at the proper number until the handle is moved preparatory to a third operation. It will thus be seen that the indicator is always left pointing at the number indicating the last sale made and remains there until another sale is made and the operating handle moved laterally to indicate and register the new sale, whereupon it drops back and re-appears at the new number when the handle is depressed to effect the registration. The registering wheels are held at the points to which they are turned by the pawl J by spring catches T, Figs. 1, 2 and 3, engaging the notches in their flanges. These catches are all cut from a single strip of metal which is fastened to the forward side of the cylinder below the longitudinal opening therein, the rear ends of the catches being bent down into the opening to engage the notches in the flanges of the wheels.

Extending across the machine, in the center of the cylinder C and journalled at its ends in the side plates of the casing, is a revolvable shaft T', Figs. 1, 2 and 4. The left hand end of this shaft projects through the casing and is squared, or has tight upon it a flat-sided nut, to receive a wrench by which the shaft may be turned.

Tight upon the shaft at each end, just within the side plates of the casing, is a sleeve U carrying a radial arm V. Pivoted between the outer ends of the arms V and extending entirely across the machine, within the registering wheels, is a bar W. Reversely bent springs X, secured to the arms V and bearing at one end against the sleeves U, yieldingly press the free edge of the bar W against the inner surfaces of the wheels E. Each of these wheels has upon its inner surface a lug or other projection Y. The projections are all in the same positions on the wheels relatively to the numbers on the wheels, so that when the projections are all in line the zeros on all the wheels are in line with each other. Assuming all the wheels to be at zero in Fig. 1, as they are revolved in the direction of the arrow by the operations of the machine and any of them complete a full revolution their projections Y will press the edge of the bar W upward against the tension of the spring X and pass under it. If at the end of the day's business, or at such other time as it is desired to re-set the wheels to zero, all of the wheels have been operated more or less, their projections Y will be scattered around the circle of the inner sides of the wheels, in various positions. Upon then turning the shaft T' and bar W one complete

revolution, by means of a handle or wrench applied to the outer end of the shaft, the bar will pick up all the projections Y and bring them all back into line in the position shown in Fig. 1, and consequently restore all the wheels to zero, ready for another day's operation of the machine.

The upper part of the casing is provided with a lid Z, hinged at A' and extending entirely across the machine. This lid is opened to obtain access to the registering wheels, to take the readings therefrom. At each end of the lid there is secured to its under side a pendent curved pointed plate B', Figs. 1 and 2. Each of the sleeves U tight on the shaft T' has upon its outer end an integral flange C' in the same vertical planes as the plates B'. One side of each of these flanges is cut away to fit the forward curved edge of the plate B' when the lid is closed.

The bolt of a spring latch B², controlled by a key from the outside of the casing on the right side of the machine, engages a notch in the plate B' on that side of the machine, to lock the lid Z. When the lid is closed and locked it will be seen that the engagement of the forward edges of the plates B' with the cut away portions of the flanges C', as shown in Fig. 1, prevents the shaft T' being turned, so that the wheels cannot be re-set to zero until the lid is unlocked and opened. When the lid has been opened and the readings taken from the wheel the handle or wrench is applied to the shaft T' and the latter is turned a short distance before the lid is released and permitted to drop back toward its closed position. The turning of the shaft T' has brought the full edges of the flanges C' into the path of the plates B', however, and the lid cannot completely close until the shaft T' has been turned a complete revolution. Just as it completes the revolution and the registering wheels have all been brought to zero the cut away portions of the flanges come into position to permit the plates B' to resume the position in Fig. 1, which the weight of the lid causes them to do, the one on the right pushing in the bolt of the spring latch as it passes it until the bolt snaps into the notch in the plate and locks the lid closed. It will thus be seen that the automatic closing and locking of the lid arrests the shaft T' just as the latter has restored the registering wheels to zero and prevents it from turning them beyond that point. The re-setting of the registering wheels to zero is thus kept under the control of the proprietor by his possession of the key which unlocks the lid.

The next part of the machine to be described is the locking device for the money drawer and the device for automatically locking the operating handle while the drawer is open. The side walls of the drawer extend rearwardly of the drawer C proper, to the extreme end of the drawer compartment. Upon the upper rear outer sides of each of these extensions is secured a plate D', as shown in

dotted lines in Fig. 1 and in section in Fig. 4. As seen in the latter figure the thickness of these plates is less than half the width of the space between the outer sides of the drawer and the inner sides of the drawer compartment, the lower grooved edges of the drawer resting on guides E' E', Fig. 4.

Pivoted upon screws at F' F' to the inner sides of the drawer compartment are two bell crank plates G' G', one at each side of the drawer, shown in dotted line in Fig. 1 and full lines in Figs. 2 and 4. Supported between and by the upper ends of these plates is a rod H' extending entirely across the machine. Two lugs I' I' on each of the flanges of the ring G embrace this rod, as seen in Figs. 1 and 2, so that when the handle H is depressed and the lower side of the ring G thereby thrown rearwardly it carries the rod H' and upper ends of the bell crank plates with it, and throws the rear ends of the bell crank plates downward. Springs J' J', bent around the pivots F' F' and secured at one end to the inner faces of the drawer compartment at K' K' and at their other end to the horizontal portions of the bell crank plates, constantly press the upper ends of said plates and the rod H' forward and yieldingly hold the handle H and ring G in the position shown in Fig. 1. The rear ends of the horizontal portions of the bell crank plates have inturned flanges L' L' which when the drawer is closed are immediately in front of the plates D' D' secured upon the outer sides of the drawer, hold the drawer closed. Vertical sheet metal springs M' M' secured at their lower ends to the guide pieces E' E', Fig. 4, one at each side of the drawer, have upper hooked ends engaging shoulders on the under sides of the plates D' D' near the front ends of the latter. When the drawer is completely closed these springs are bent slightly backward and put under tension, as shown in Fig. 1. Expandible coiled springs N' N' supported on rods projecting forwardly from the rear side of the drawer compartment are engaged by the rear side of the drawer and put under tension when the drawer is closed.

The operation of the parts thus described is as follows: When the handle H is depressed, to effect a registration and indication, the rod H' is thrown rearwardly and the rear ends of the bell crank plates downward until the flanges L' L' pass below the plates D' D' and thereby release the drawer, whereupon the springs N' N' throw it open. As the drawer opens and the plates D' D' move away from the spring latches M' M', the latter spring forward and their upper hooked ends take over the upper edges of the flanges L' L' and lock the bell cranks down, with their upper ends and the bar H' thrown rearward. This holds the handle H down in the slot into which it was depressed to make the registration, so that it cannot move upward or sideways until the drawer is again closed, whereupon the shoulders on the under sides of the plates D'

D' strike the upper ends of the springs M' M' and disengage their hooks from the bell crank plates, and the springs J' J' restore the latter, and consequently the ring G and handle H, to normal position. A gong O' secured to the upper side of the base B is struck by a hammer P' every time the handle H' is depressed and the drawer C opened, the hammer being carried by a spring Q' secured to the bottom of the drawer compartment and extending up through an opening in the base B, said spring being put under tension by a bracket R' on the rear side of the drawer when the latter is closed.

As before stated, the machine above described illustrates merely one form of embodiment of the principal features of my invention, which features are in no way restricted to such machine. Thus, so far as I am aware, I am the first to combine an indicator of any sort and a register of any sort with an operating handle which may be moved laterally across the machine and carry the indicator with it, to indicate different amounts and may be given a motion in a plane transverse to the line of its lateral movement, to effect the registration of the indicated value, and I desire to claim such combination as broadly as may be done. It is not at all essential to such broad combination that the indicator be capable of vertical as well as lateral movement; nor is it essential that the registering movement of the handle in a plane transverse to the line of its lateral indicating movement shall be a rocking movement upon an axis, for I contemplate building machines in which the registering movement of the handle is a reciprocating one at right angles to its lateral indicating movement. Even where the registering movement of the handle is a rocking one, the handle need not be fulcrumed upon a cylinder inclosing the registering wheels, for this method of supporting the wheels forms a novel and independent feature of my machine, and may be utilized in other machines widely different from my own. Again, in regard to the mechanism for unlocking the money drawer, and for locking the operating handle from movement while the drawer is open, my invention is not restricted to the construction and arrangement of the parts shown. So far as I know, I am the first to combine, with an operating handle which has both the lateral indicating movement and the transverse registering movement, a locking device of any sort which unlocks the drawer when the handle is given a registering movement at any one point or another of its lateral movement, or to combine such handle with a device of any sort which automatically locks said handle when the money drawer is opened and holds it from movement until the drawer is closed. I therefore desire to claim such combinations broadly.

There are various other novel and valuable combinations and subcombinations embodied in the machine illustrated in the drawings,

which will be set forth in the claims. Many of them are in no way restricted to details of construction and arrangement of the parts and I desire to claim such combinations as broadly as the terms of my respective claims imply.

Having thus fully described my invention, I claim

1. In a cash register and indicator, the combination of a laterally movable operating handle, an indicator movable therewith to indicate different numbers according to the position to which the handle is moved, and a register actuated by movements of the handle transverse to the line of its lateral movement, substantially as described.

2. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator movable laterally with the handle, to indicate different numbers according to the position to which the handle is moved, and a register actuated by the rocking movements of the handle, substantially as described.

3. In a cash register and indicator, the combination of a laterally movable operating handle, an indicator movable therewith to indicate different numbers according to the position to which the handle is moved, a series of independent registering wheels, one for each amount to be indicated by the lateral movements of the handle, and an actuating pawl movable with the operating handle and arranged to engage and turn the registering wheels upon moving the handle transversely to the line of its lateral indicating movement, substantially as described.

4. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator movable laterally with the handle, a series of independent registering wheels, and a pawl movable with the operating handle and arranged to engage and turn the registering wheels upon rocking said handle on its fulcrum, substantially as described.

5. In a cash register and indicator, the combination of a laterally movable operating handle, an indicator movable therewith, a series of independent registering wheels arranged in sets of two each, and an actuating pawl carried by the operating handle and co-operating with the primary and secondary wheels of each set in the manner and for the purpose described.

6. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator movable laterally with the handle, a series of independent registering wheels arranged in sets of two each, and a pawl carried by the operating handle and arranged to actuate both the primary and the secondary wheels in the manner described.

7. In a cash register the combination of a hollow cylinder having a longitudinal open-

ing, a series of registering wheels inclosed therein and bearing against its inner surface, and an actuating device movable lengthwise of said cylinder and arranged to engage with the several registering wheels and to turn the same by definite intervals, substantially as and for the purposes set forth.

8. The combination of the hollow cylinder an actuating pawl and the registering wheels inclosed therein, and having their bearings against its inner surface said wheels consisting of rings having notched flanges on their outer faces, and the cylinder having an opening to permit the actuating pawl to engage said flanges, substantially as described.

9. The combination of the hollow cylinder, the registering wheels inclosed therein and having their bearings against its inner surface, the operating handle fulcrumed on said cylinder and movable longitudinally thereof, and an actuating pawl carried by said handle and arranged to engage the registering wheels through an opening in the cylinder, substantially as described.

10. The combination of the hollow cylinder, the registering wheels inclosed therein, and having their bearings against its inner surface said wheels being in the form of rings, each provided with a projection on its inner surface, and a revoluble bar within and extending longitudinally of the series of rings near their inner surfaces, and adapted, when revolved, to engage the projections on the inner surfaces of the wheels and turn the latter with it until their projections are all brought into line, substantially as described.

11. The combination of the hollow cylinder, the registering wheels inclosed therein, and having their bearings against its inner surface said wheels being in the form of rings, each provided with a projection on its inner surface, and a revoluble bar within and extending longitudinally of the series of rings and spring-pressed toward their inner surfaces, said bar being adapted to yield to permit the projections on the wheels to pass it during the registering movements of the latter, but to engage said projections and turn the wheels until the projections are all brought into line when it is itself revolved, substantially as described.

12. In a cash register and indicator, the combination of a vertically and laterally movable indicator rod provided with a projection on one of its sides, and a supporting bar having a projection co-operating with the projection on the indicator rod in the manner described.

13. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator carried in a guide upon the rear end of said handle and provided with a supporting projection, and a supporting bar having projections arranged to co-operate with the projection on the indicator in the manner and for the purpose described.

14. In a cash register and indicator, the combination of a laterally movable operating handle, an indicator movable therewith, a register actuated by movements of the handle transverse to the line of its lateral movement, a money drawer, and a latch therefor released by the registering movements of the operating handle.

15. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator movable laterally with the handle, a register actuated by the rocking movement of the handle, a money drawer, and a latch therefor released by the registering movements of the operating handle.

16. In a cash register and indicator, the combination of a laterally movable operating handle, an indicator movable therewith, a register actuated by movements of the handle transverse to the line of its lateral movement, a money drawer, a latch therefor released by the registering movements of the operating handle, and a latch for automatically locking the operating handle upon the opening of the money drawer and holding it from movement until the drawer is closed.

17. In a cash register and indicator, the combination of an operating handle mounted to slide laterally and rock axially upon a fulcrum, an indicator movable laterally with the handle, a register actuated by the rocking movements of the handle, a money drawer, a spring for throwing it open, a latch for holding it closed released by the registering movements of the operating handle, and a latch acting automatically upon the opening of the drawer to lock said handle and prevent movement of it until the drawer is closed.

18. The combination of the hollow cylinder D, the toothed registering wheels E' inclosed therein, the operating handle H fulcrumed on said cylinder and movable longitudinally thereof, and the pawl J carried by said handle, substantially as described.

19. The combination of the hollow cylinder D, toothed wheels E inclosed therein, operating handle H fulcrumed thereon and movable longitudinally thereof, pawl J carried by the handle, and the indicator N movable laterally therewith, substantially as described.

20. The combination of the hollow cylinder D, the registering wheels E inclosed therein, the ring G surrounding the cylinder D with interposed ball bearings, and the handle H and pawl J carried by said ring, substantially as described.

21. The combination of the hollow cylinder D, the registering wheels inclosed therein, the ring G surrounding the cylinder D with interposed ball bearings, and the handle H, pawl J, and indicator N carried by said ring, substantially as described.

22. The combination of the hollow cylinder D, the ring-shaped registering wheels E inclosed therein and provided with projections Y on their inner surfaces, and the bar W revo-

luble within the registering wheels near their inner surfaces, substantially as and for the purpose described.

23. The combination of the hollow cylinder D, the ring-shaped registering wheels E inclosed therein and provided with the projections Y, the revoluble shaft T' extending longitudinally through the center of the rings, and the bar W supported by said shaft and yieldingly pressed toward the inner surfaces of the wheels, substantially as and for the purpose described.

24. The combination of the hollow cylinder D, the ring-shaped registering wheels inclosed therein and provided with the projections Y, the revoluble shaft T' extending longitudinally through the center of the rings, the arms V tight on the shaft T' at each end thereof, and the bar W hung between said arms and spring-pressed toward the inner surfaces of the wheels E, substantially as and for the purpose described.

25. The combination of the hollow cylinder D, the ring-shaped registering wheels E inclosed therein and provided with projections Y on their inner surfaces, the bar W extending longitudinally through the series of wheels and revoluble in proximity to their inner surfaces, a revoluble support for said bar, and the lid Z of the casing provided with an inwardly extending plate B' co-operating with the revoluble support for the bar W to lock the same when the lid is closed, substantially as described.

26. The combination of the vertically and laterally movable indicator N provided with a supporting projection P, and the supporting rod Q provided with projections R co-operating with the projection P in the manner described.

27. In a cash register and indicator, the combination of the money drawer C, the bell-crank plates G' G' engaging projections on its sides to hold it closed, the cross rod H' connecting their upper ends, and the laterally and vertically movable operating handle H co-operating with the rod H' to rock the bell crank plates and release the drawer when said handle is depressed, substantially as described.

28. In a cash register and indicator, the combination of the money drawer C, the bell-crank plates G' G' engaging projections on its sides to hold it closed, the cross rod H' connecting their upper ends, the ring G mounted on the cylinder D containing the registering wheels and provided with projections embracing the rod H', and the operating handle H secured to the ring G, substantially as described.

29. In a cash register and indicator, the combination of the money drawer C, the bell-crank plates G' G' engaging projections on the sides of the drawer to hold it closed, the cross rod H' connecting the upper ends of the plates G' G', the cylinder D containing the registering wheels E, the ring G mounted on the cylinder D and provided with projections embracing the rod H', the operating handle H secured to the ring G, and the latches M' co-operating with the projections on the sides of the drawer and with the bell-crank plates G' G' in the manner and for the purpose described.

HENRY J. GILBERT.

Witnesses:

N. S. WOOD,
E. O. EASTMAN.