

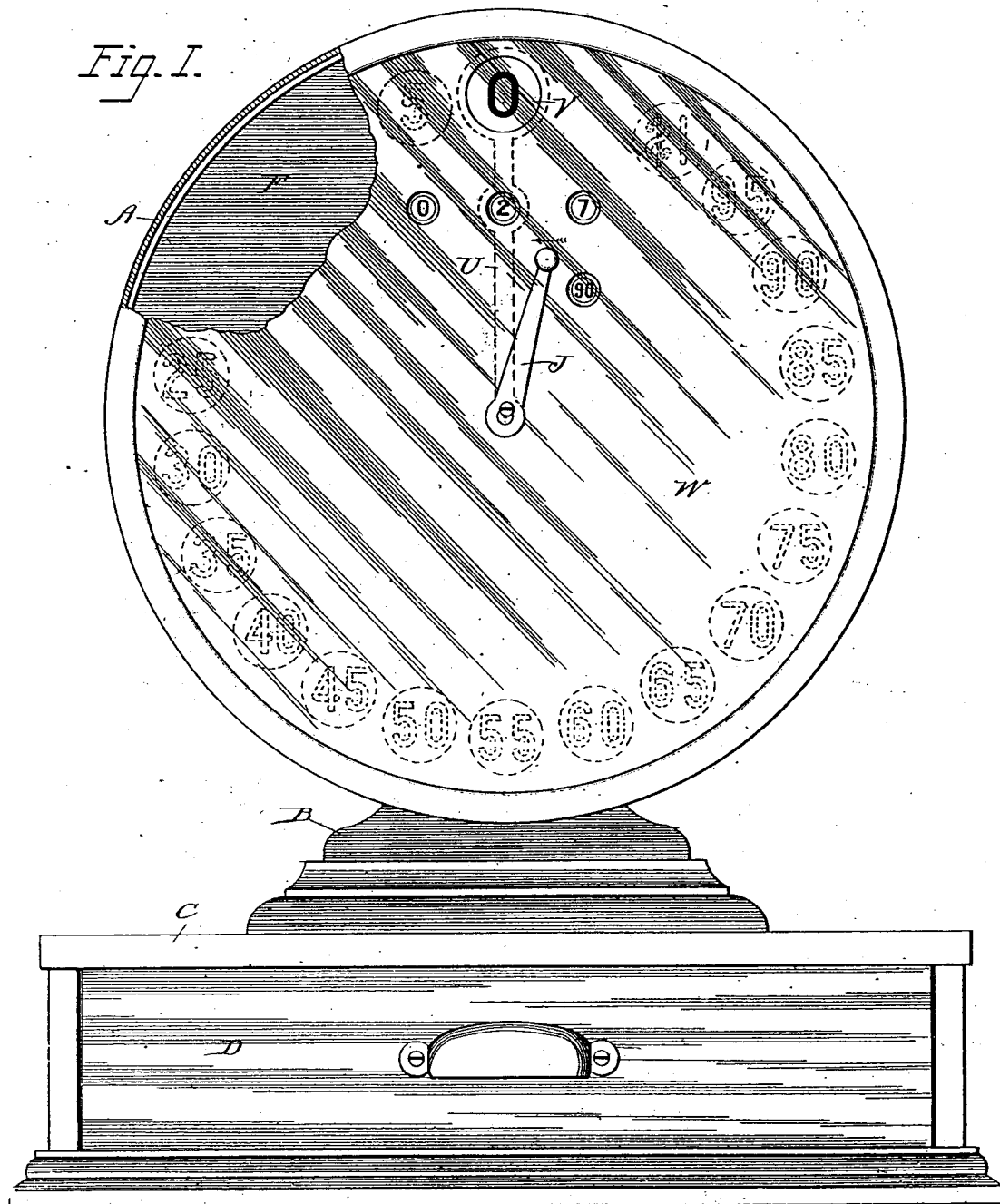
(No Model.)

6 Sheets—Sheet 1.

A. I. BLANCHARD.
CASH REGISTER AND INDICATOR.

No. 489,177.

Patented Jan. 3, 1893.



Witnesses
Martin A. Olson.
John L. Timison

Inventor
Allen J. Blanchard
by Edward Rector
his atty

(No Model.)

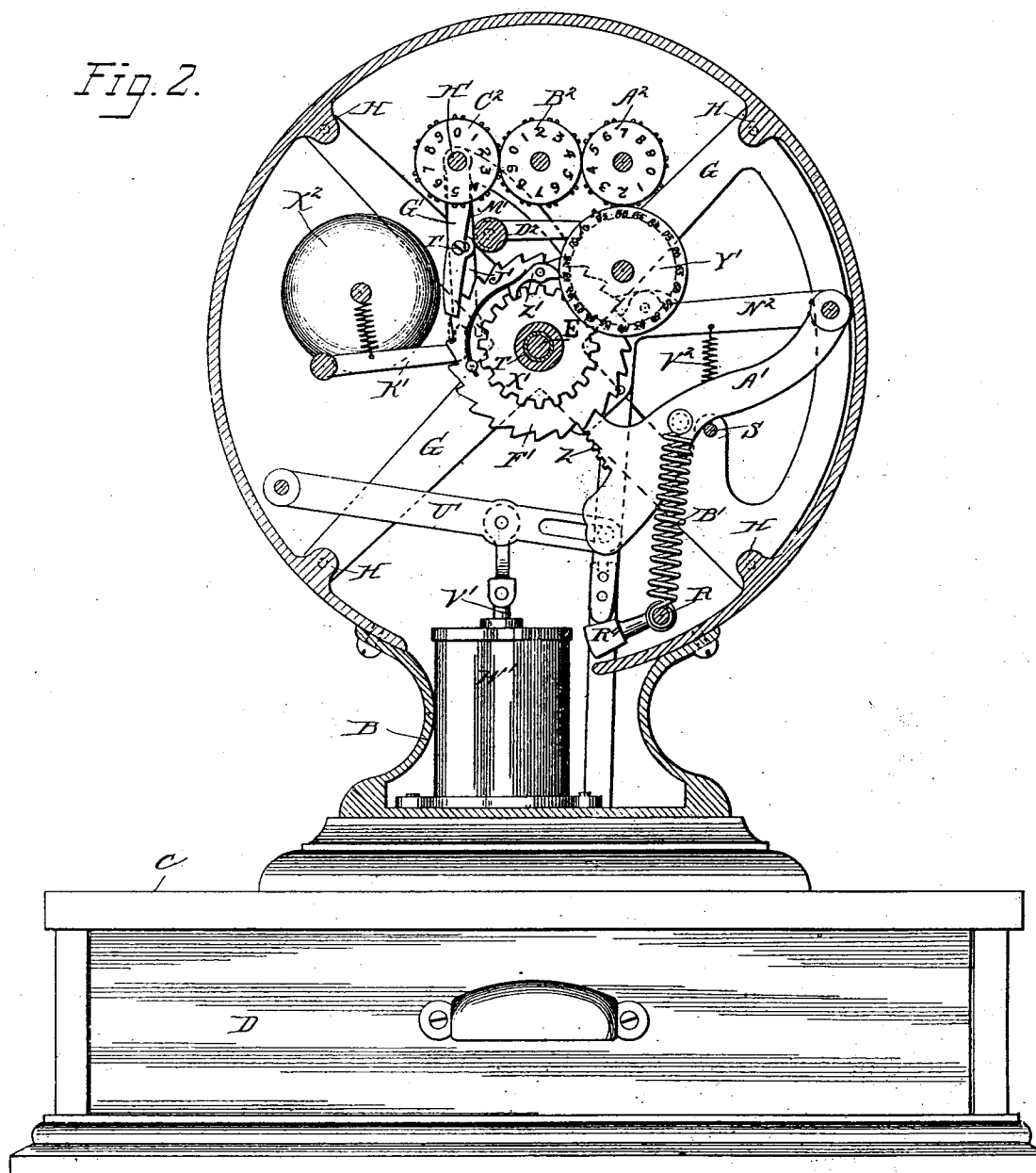
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Fig. 2.



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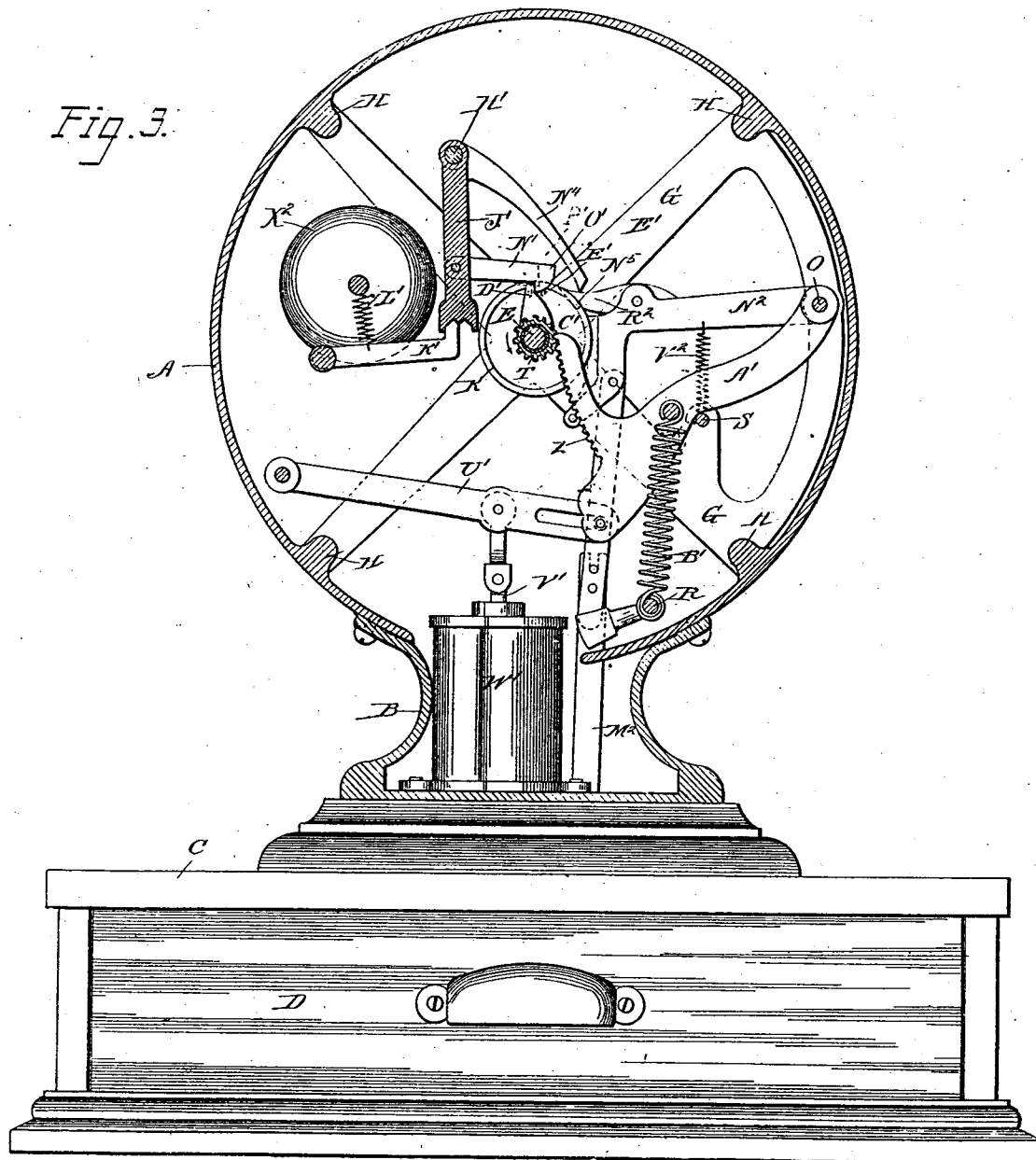
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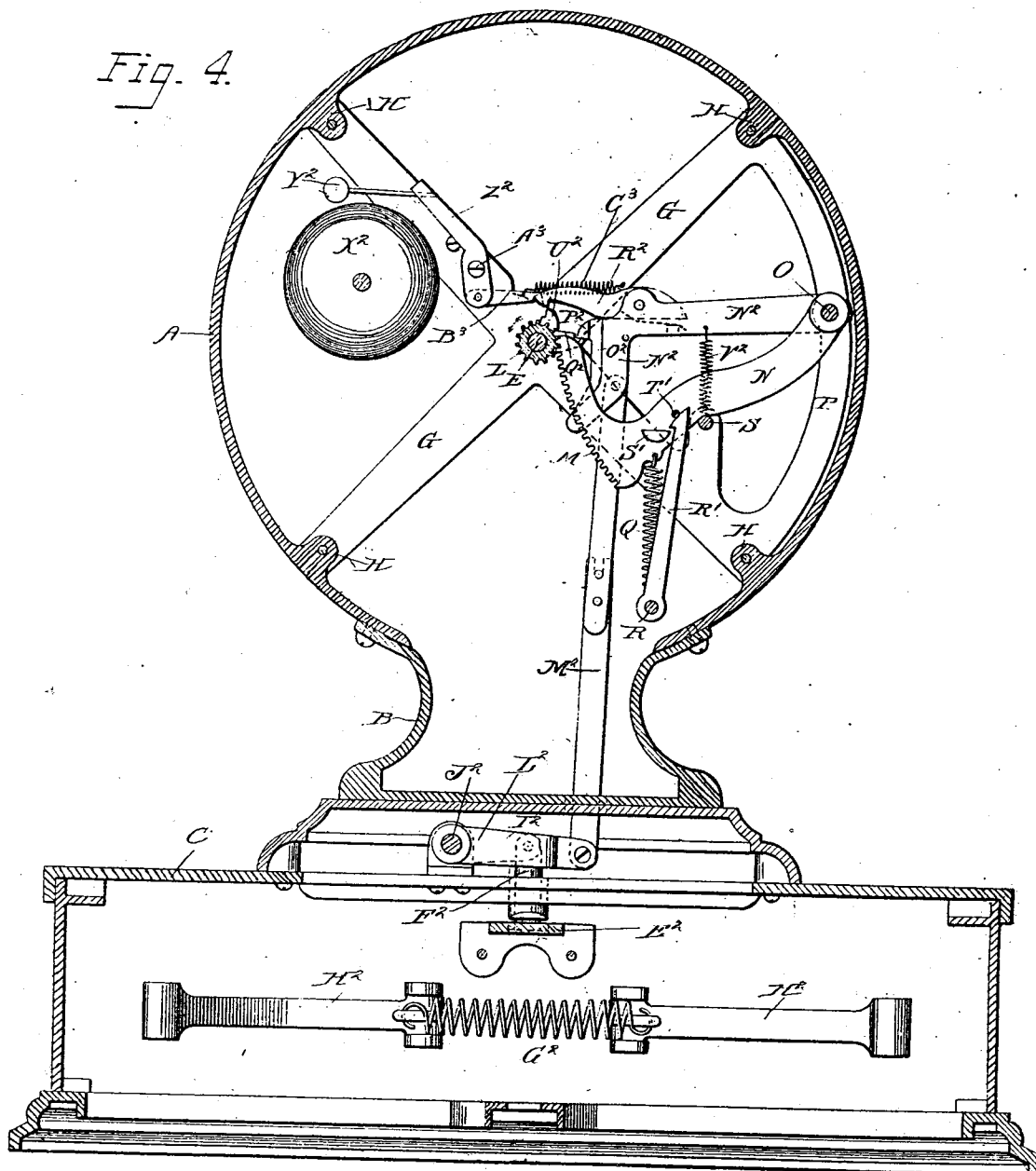
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Fig. 4.



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(No Model.)

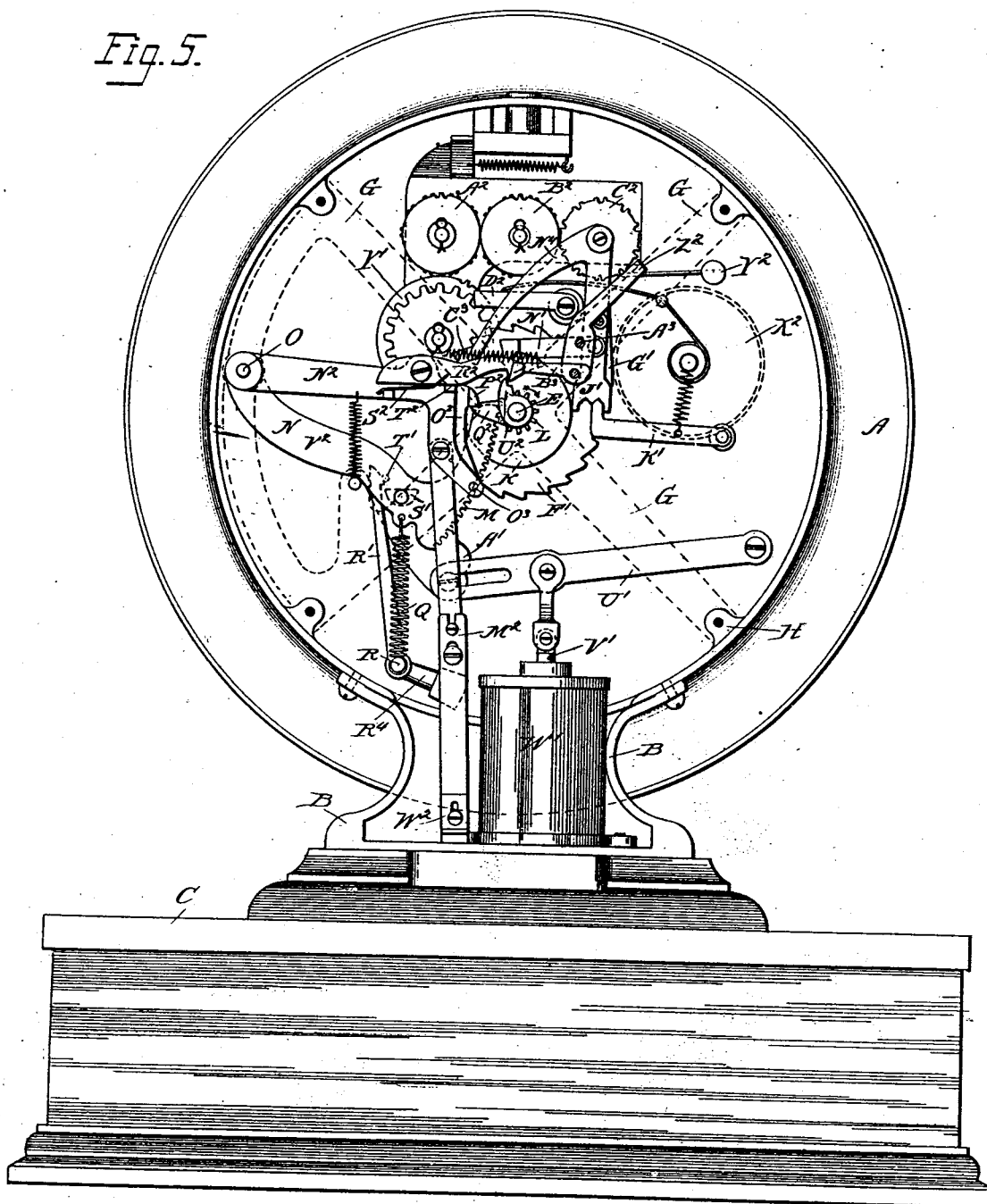
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Fig. 5.



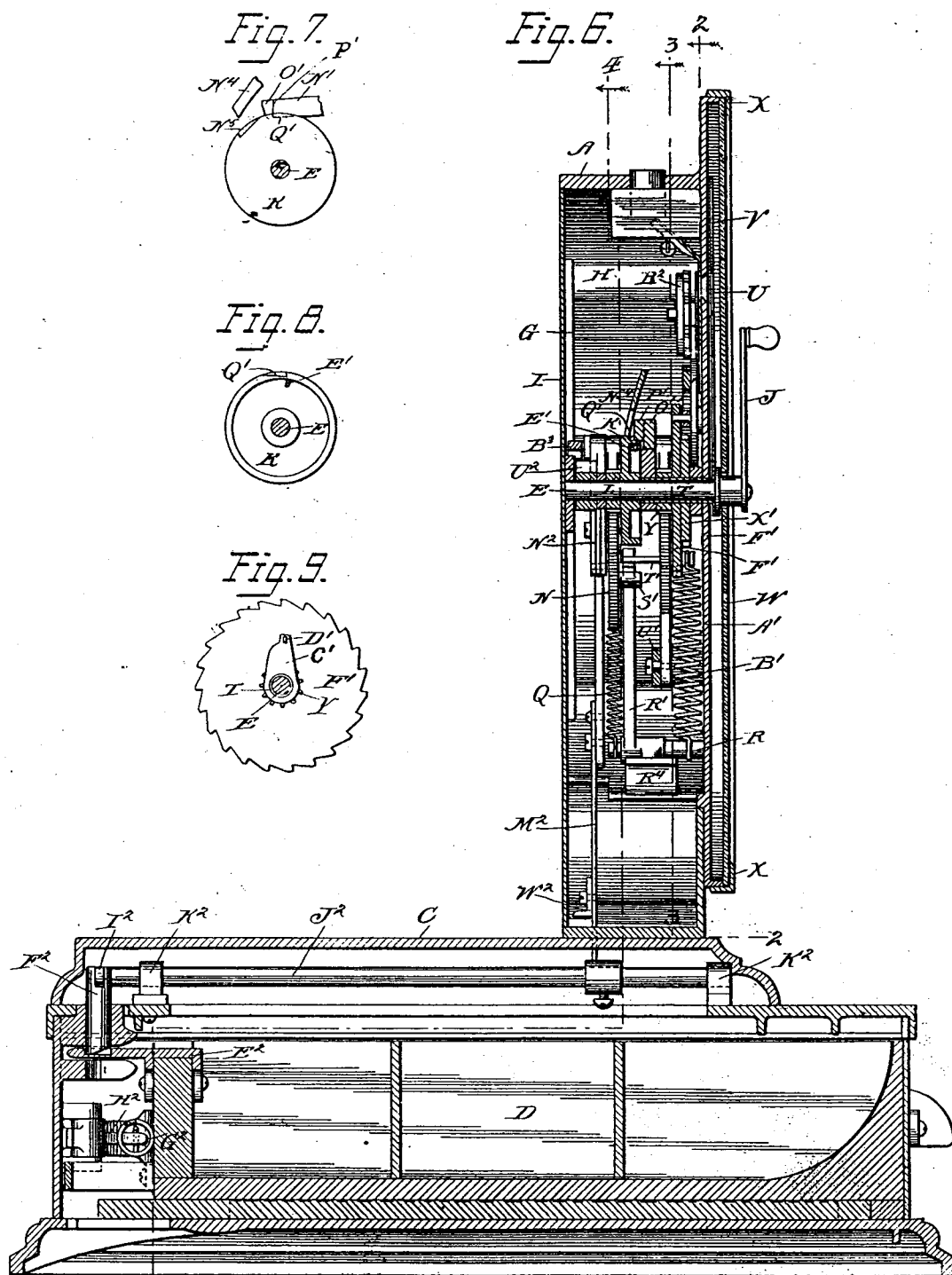
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UNITED STATES PATENT OFFICE.

ALLEN I. BLANCHARD, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON, OHIO.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 489,177, dated January 3, 1893.

Application filed September 1, 1892. Serial No. 444,783. (No model.)

To all whom it may concern:

Be it known that I, ALLEN I. BLANCHARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Cash Registers and Indicators, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements upon the machine illustrated and described in my prior patent No. 442,660, dated December 16, 1890; and consists chiefly in the application of novel devices to such machine to more effectually prevent fraudulent manipulation of it. Its novelty will be hereinafter set forth and specifically pointed out in the claims.

In the accompanying drawings Figure 1 represents a front elevation of the machine with a portion of the glass dial broken away, the numbers which are painted upon the dial being shown in dotted lines, since they are of substantially the same color as the background and in the actual machine are not clearly visible except when the indicator of contrasting color is moved behind them, as shown at the zero in Fig. 1; Fig. 2 a vertical section of the machine immediately in rear of the front plate of the framework, the base and drawer compartment being shown in elevation; Fig. 3 a vertical section corresponding to Fig. 2 but taken on a line a little to the rear, as indicated by the dotted line 3—3 in Fig. 6; Fig. 4 a vertical section of the machine approximately on the line 4—4 of Fig. 6; Fig. 5 a rear elevation of the machine, with the rear plate of the casing removed and the rear portion of the framework shown in dotted lines; Fig. 6 a vertical section through the middle of the machine, looking toward the right side thereof; Fig. 7 an enlarged detail view of the notched disk and some of the associated parts; Fig. 8 a detail view of the opposite side of the notched disk from that shown in Fig. 7; and Fig. 9 a detail view of the ratchet and the arm which turns with it.

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

The working parts of the machine are inclosed in a cylindrical casing A secured to a support B mounted upon a base C having a

drawer compartment containing a sliding money drawer D. The main actuating device of the machine consists of a central oscillatory shaft E which is journaled near its forward end in the front plate F of the casing A, and at its rear end in a four-armed cross plate G secured to lugs H upon the casing A just within the rear plate I of the casing, Fig. 6. The shaft E has fast upon its front end an operating handle J by which it may be turned in the direction of the arrow, Fig. 1. Fast upon the shaft E near its middle, Fig. 6, is a disk K, Figs. 3, 5 and 7. Immediately in rear of this disk, in this instance formed integral with the disk, Fig. 6, the shaft E has fast upon it a pinion L, Figs. 4, 5 and 7, with which meshes a curved rack M carried by an arm N pivoted at O to a curved plate P integral with and connecting two of the arms of the plate G. A coiled spring Q connected at its upper end to the arm N and at its lower end to a fixed rod R pulls the arm N and rack M downward and yieldingly holds the arm N against a stop pin S on the plate G and maintains the operating handle J in the position shown in Fig. 1. When the handle is moved to the left and the handle and shaft turned in the direction of the arrows in Figs. 4 and 5, the rack M will be lifted and the spring Q put under tension, and when the handle J is released the spring will draw the rack downward and re-set the parts.

Loose upon the shaft E and extending from the forward side of the disk K to a point beyond the front plate F of the casing is a sleeve T, Fig. 6. This sleeve has fast upon its forward end an arm U which carries at its outer end a disk V adapted to travel in a circle behind a row of indicating numbers upon a transparent glass dial W which is confined between a forwardly-projecting peripheral flange on the plate F of the casing and a flanged ring X fitting over the same, as seen in Fig. 6. The indicating numbers upon the glass dial W are the same in color as the face of the plate F which forms a background for them, while the disk V is of a contrasting color. The face of the plate F is preferably painted some dark color, and the number on the dial the same color, while the disk V is painted white or some light color. The re-

sult of this arrangement is that when looking at the front of the machine the numbers upon the dial W are not visible, or are at least quite indistinct, excepting the one behind which the disk V is standing, as in the case of the zero in Fig. 1. When the disk is turned forward to a position behind any one of the numbers that number is brought prominently into view, while the others remain indistinct, and thus the indication is made.

There is a connection between the shaft E and sleeve T, hereinafter described, by which the forward movement of the handle J and shaft E will carry the sleeve and disk V with them, but which permits the handle and disk to return to normal position independently of the sleeve and disk. The sleeve T has fast upon it near its rear end, Fig. 6, a pinion Y, Fig. 3, with which meshes a rack Z carried by an arm A' hung at O upon the same support as the arm N which carries the rack M. A coiled spring B' is secured at its upper end to the arm A' and at its lower end to the rod R, and when the disk V is moved forward from normal position, to the left in Fig. 1, and the sleeve T and pinion Y turned in the direction of the arrow in Fig. 3, the rack Z will be lifted and the spring B' put under tension, and when the parts are released the spring will reset them to normal position, the arm A' resting against the same rod S which supports the arm N on the rack M. Fast upon the extreme rear end of the sleeve T, Fig. 6, is an arm C'. Upon the rear side of this arm is a projecting lug D', Figs. 3 and 9, which travels within the peripheral flange formed upon the forward side of the disk K, Fig. 8. The flange of the disk K is provided with an inwardly projecting lug E', Fig. 8, which co-operates with the projection D' on the arm C'. Whenever the operating handle is moved forward, to the left in Fig. 1, and the shaft E and disk K turned in the direction of the arrow, Fig. 3, the engagement of the projection E' on the disk K with the projection D' upon the arm C' fast to the sleeve T will cause the sleeve, and consequently the arm U and disk V to turn forward with the operating handle and shaft E, and it will be seen that if the sleeve and parts carried by it be caught and held in the position to which they are moved by the operating handle, the latter, when released, will be returned to normal position without them. The sleeve T has fast upon it immediately in front of the pinion Y, in this instance integral with the pinion Fig. 6, a ratchet wheel F', Figs. 2 and 5, with which co-operate a pawl arm G', Fig. 2, loosely hung at its upper end upon a shaft H'. As the ratchet is turned forward its teeth slip under the lower end of this pawl and when the ratchet is released the pawl holds it, and all the parts carried by the sleeve T, including the indicating disk V, in the position to which they have been moved, while the operating handle, shaft E, and parts carried by the latter return to normal position. The ratchet

F' and parts moving with it will be retained in the position to which they have been moved until the pawl G' is disengaged from the ratchet, whereupon the spring B' will reset the rack Z and return the parts to initial position. The pawl arm G' is provided midway of its length with a slot through which passes a pin or screw I' secured in an arm J' hung from the same shaft H', Fig. 3, so that the pawl arm G' has limited movement upon the arm J'. The latter is recessed at its lower end and provided with two notches with which co-operate a detent arm K' yieldingly held in engagement with the notches by a spring L'. With the parts in the position shown in Figs. 2 and 3, if the lower end of the arm J' be swung to the left until the detent K' engages the right hand notch in its lower end the pin I' passing through the slot in the pawl arm G' will carry the lower end of the latter to the left and disengage it from the ratchet F', leaving the latter free to return to normal position. A flat spring M', Fig. 2, secured to the arm J' and connected to the pawl arm G' yieldingly presses the latter toward the right and holds it in engagement with the ratchet except when moved to the left by the arm J' in the manner above described. The arm J' has pivoted to its rear side an arm N' extending to the right over the disk K and provided with a hook O' extending downward beside the front edge of the disk in a position to co-operate with the upper end of the arm C' which is fast on the sleeve T. As seen in Fig. 7 the arm N' is of sufficient width both to rest upon the disk K and project forward beyond its edge, and in addition to the hook which projects downward opposite the disk it is provided with an abrupt end P' which is adapted to co-operate with the shoulder of a notch Q' in the periphery of the disk K at its forward edge, Fig. 8. When the parts are in their normal position of rest the engagement of the upper end of the arm C' with the hooked end O' of the arm N' pulls the arm J' to the right and holds its left hand notch in engagement with the detent K'. The arm C', engaging also the under side of the arm N', holds the latter slightly lifted, so that its end P' is above the surface of the disk K. In this position of the parts the operating handle and disk K are free to be turned forward, the disk carrying the arm C' with it, in the manner before explained, and the pawl G' engaging the ratchet F' and holding the latter and the parts moving with it in the position to which they are turned by the operating handle. When the latter is released and with the disk K returns to normal position the arm N' will rest directly upon the periphery of the disk, since the arm C' is not in position to hold it above the disk. Upon again turning the operating handle and disk K forward the shoulder of the notch Q' in the disk K will engage the end P' of the arm N' and move the latter to the left, carrying the arm J' with it and disengaging the pawl G' from the

ratchet F', whereupon the latter and the parts moving with it, including the indicating disk V, will be immediately reset to initial position by the action of the spring B'. The movement of the arms N' and J' to the left engages the detent K' with the right hand notch in the lower end of the arm J', and the detent maintains the arm J' in this left hand position, and the pawl G' out of engagement with the ratchet F', until the latter, in its return movement, reaches initial position, whereupon the upper end of the arm C' will engage the hooked end O' of the arm N' and force the latter to the right again, carrying the arm J' with it and reengaging the left hand notch with the detent K', and permitting the spring M' to re-engage the pawl G' with the ratchet. The engagement of the detent K' with the recessed lower end of the arm J' permits only limited movement of the latter, so that when the operating handle and disk K are turned forward and the shoulder of the notch Q' engages the end P' of the arm N' and forces the latter to the left the movement is arrested as soon as the right hand notch in the lower end of the arm J' is engaged with the detent K'. As an additional means for arresting the disk K and operating handle at the end of this forward releasing movement of them the arm J' has secured to or formed integral with it an arm N⁴ adapted to co-operate with a notch N⁵ in the disk K, Figs. 3 and 7. The arms J' and N⁴ form a sort of bell crank, so that when the lower end of the arm J' is moved to the left until the detent K' engages its right hand notch the lower end of the arm N⁴ is thrown into engagement with the notch N⁵, and when the arm J' is moved to the right again the arm N⁴ is lifted out of the notch N⁵. In this manner at the beginning of the forward movement of the operating handle, at each operation of the machine, the indicator is released and reset to initial position before it can be advanced again to make a new indication.

It will be noticed that in its normal position, Fig. 1, the operating handle J stands a short distance to the right of the arm U which carries the disk V. The projection E' on the disk K likewise stands a short distance to the right of the projection D' on the arm C', Fig. 3. The purpose of this arrangement is to permit the operating handle to be moved forward far enough to release the indicator and permit the latter to be returned to zero before the projection E' is brought into position to engage the projection D'. The releasing movement of the operating handle thus consists of its movement from the position shown in Fig. 1 to a vertical position, and it can not be moved beyond this vertical position until the indicator has been returned to zero and the arm C' in Fig. 3 has again lifted the arm N', as before described.

Locking devices for the purpose of preventing forward movement of the operating handle beyond the releasing point until the indi-

cator had been returned to initial position, were illustrated and described in my prior patent aforesaid, but under the construction there shown it was found that by exceedingly quick and violent manipulation of the operating handle the indicator could sometimes be released and the operating handle turned forward in time to arrest it in its return movement and cause it to indicate some less number than that previously indicated, or by vibrating the operating handle back and forth between its normal position and the releasing point, quickly and violently, the pawl which engaged the ratchet for holding the indicator in its different positions could be intermittently disengaged from and re-engaged with the ratchet, so that without moving the operating handle forward beyond the releasing point the indicator could be let back step by step and thus caused to make a second indication without having first returned to initial position. These difficulties have been overcome in my present machine by the provision of the arm J' and co-operating detent K', for when said arm has been once moved to the left by the forward releasing movement of the operating handle and the pawl G' carried with it and disengaged from the ratchet F', the detent K' by its engagement with the right hand notch in the arm J' securely holds the pawl G' out of engagement with the ratchet F', and the arms N' and N⁴ in engagement with the notches Q' and N⁵ in the disk K, until the ratchet and indicator have been returned to initial position and the upper end of the arm C' brought into contact with the hooked end O' of the arm N' to carry the arm J' to the right again and re-engage the pawl G' with the ratchet and lift the arms N' and N⁴ out of the notches Q' and N⁵ in the disk. For the purpose, however, of providing an additional safeguard against forward movement of the operating handle beyond the releasing point except when the indicator is at zero I provide another automatic lock which always locks the operating handle against such forward movement unless held out of locking position by the presence of the indicator and connected parts in initial position. This lock is illustrated in Figs. 4 5 and 6 where it will be seen that there is a hooked lever R' which is hung on the rod R before mentioned and has a laterally projecting weighted arm R⁴, Fig. 5, below said rod which tends to throw the upper end of the lever to the right in Fig. 5 and left in Fig. 4 and cause its hook to move over a lug S' upon the forward side of the rack arm N, and that a pin T' projecting rearward from the rack arm A' engages the upper rounded end of the lever R' when the rack arm A' is in its normal position of rest and holds the lever R' tilted to the left (in Fig. 5) with its hook out of the path of the lug S' on the arm N. In this position of the parts the operating handle is free to be turned and the rack arm N thereby lifted, but as soon as the rack arm A' is lifted by the con-

5 continued movement of the operating handle the
 pin T' is carried away from the lever R' and
 the lower weighted arm R' of the latter throws
 its upper end to the right in position to catch
 10 over the lug S' when the operating handle is
 returned to normal position and the arm N
 lowered again. As the arm N moves down-
 ward the rear rounded side of the lug S' en-
 15 engages the rounded end of the hook and pushes
 the upper end of the lever slightly to the left
 until it clears the hook and the latter then
 catches over it. It will be seen that there is
 a slight space between the upper surface of
 the lug S' and the hook on the lever R', so
 20 that the arm N can move upward a very short
 distance before the lug S' comes in contact
 with the hook. This is to permit the operat-
 ing handle to be moved forward far enough
 to effect the release of the indicator in the
 25 manner before explained; but it will be seen
 that it is impossible to move the handle be-
 yond this point and that the hooked lever
 positively locks it and the arm N until the
 indicator is completely returned to initial po-
 30 sition and the rack arm A' lowered far enough
 for its pin T' to move the hooked lever out of
 the path of the lug S'. In this manner, owing
 to the fact that the hook of the lever stands
 directly in the path of the lug S' at the end
 35 of each indicating operation the forward
 movement of the operating handle beyond
 the releasing point is absolutely prevented
 until the indicator and connected parts are
 returned to initial position.
 40 For the purpose of preventing too violent
 return of the indicator to initial position un-
 der the impulse of the spring B' I connect the
 rack arm A' to a lever U' which has con-
 nected to it the piston-rod V' of a piston
 45 which fits within a cylinder W' closed at both
 ends and approximately filled with a liquid,
 preferably oil. The piston is either perfo-
 rated or does not fit the cylinder snugly, so
 that it can move up and down therein slowly,
 50 the oil escaping from in front of it as it moves.
 When the operating handle and indicator are
 turned forward and the rack arm A' lifted
 the piston is lifted in the cylinder W' and
 the oil passes below it. When the indicator
 55 is released and the spring B' pulls the arm A'
 downward, to reset the parts, the connection
 of the arm with the piston in the cylinder
 will prevent the spring acting too quickly and
 jarring or breaking any of the parts.
 60 The registering mechanism of the machine
 is substantially the same as that shown and
 described in my prior patent aforesaid. There
 is loosely mounted upon the sleeve T' imme-
 diately in front of the ratchet F', Fig. 2, a
 65 gear wheel X' which meshes with a gear wheel
 upon the primary wheel Y' of a train of reg-
 istering wheels, and a pawl Z' pivoted to the
 ratchet F' and spring-pressed into engage-
 ment with the gear X' causes the ratchet to
 turn the gear wheel and primary registering
 wheel with it during its forward movement
 from zero to indicating position, but permit

them to remain at the point to which they
 have been moved while the ratchet wheel and
 indicator return to initial position. In this
 70 manner the amount of each indication is
 added upon the train of registering wheels,
 the wheel Y' adding its revolutions upon a
 secondary wheel A', the latter upon a third
 wheel B' and a latter upon a fourth wheel C'
 75 in the usual manner. A pawl arm D' engag-
 ing the gear of the primary registering wheel
 Y' prevents any backward movement of the
 registering wheels.

The sliding money drawer D is provided at
 80 its rear end with a locking-plate E' with which
 co-operates a vertically-guided locking bolt
 F' arranged to be lifted out of engagement
 with the locking plate E' at each operation of
 the machine, whereupon the drawer will be
 85 thrown open by the action of a coiled spring
 G', Fig. 4, which connects the short arms of
 a pair of bell crank levers H', and tends to
 throw their outer ends forward. The bolt F'
 is pivoted at its upper end to the outer end
 90 of a short arm I', Fig. 6 and dotted lines Fig.
 4, which is fast on the rear end of a rock-
 shaft J' journaled in brackets K' near its
 front and rear ends. Near its front end the
 shaft J' has fast upon it an arm L', Fig. 4, to
 95 the outer end of which is pivoted the lower
 end of a link M' whose upper end is pivoted
 to an arm N', Figs. 4 and 5, hung on the shaft
 O' before described. The arm N' has pivoted
 to it at O' a plate O' which has a shoulder P'
 100 adapted to co-operate with a lifter-arm Q'
 fast on the shaft E. When the shaft is turned
 in the direction of the arrow the arm Q' en-
 engages the lower abrupt side of the shoulder
 P' of the plate O' and lifts the arm N' and
 105 link M' and rocks the shaft J' and releases
 the drawer. During the return movement of
 the shaft E the arm Q' rides over the rounded
 upper surface of the shoulder P' and forces
 the plate O' aside as it passes, whereupon
 110 the plate is moved to the right again by the
 action of a suitable spring, not shown. In
 this manner at the beginning of each forward
 movement of the operating handle the drawer
 will be released and automatically thrown
 115 open.

For the purpose of preventing operation of
 the machine except when the cash drawer is
 closed and locked I have provided a hooked
 locking arm or lever R', Figs. 4 and 5, pivoted
 120 to the arm N' and yieldingly held by a spring
 S' against a lug T' thereon, Fig. 5. The hooked
 end of this locking arm R' is adapted to co-
 operate with an arm U' fast on the shaft E.
 When the drawer is closed and locked the en-
 125 gagement of the bolt F' with the locking plate
 E' will hold the parts in such position that
 the hooked end of the arm R' is slightly above
 the path of travel of the arm U' on the shaft
 E, but when the drawer is released and thrown
 130 open the bolt F' is free to move farther down-
 ward and a spring V' connected to the arm
 N' pulls the latter and connected parts down-
 ward until a stop W' on the link M', Figs. 5

and 6 engages the bottom of the casing, and this downward movement of the arm N^2 will lower the hooked end of the arm R^2 into the path of the arm U^2 on the shaft E, so that the latter cannot be turned forward until the drawer is closed and locked again and the hooked end of the arm R^2 lifted above the arm U^2 . The stop W^2 is vertically adjustable upon the link M^2 , consisting of a slotted plate bent at right angles at its lower end and secured upon the link M^2 by a slot and screw. Upon loosening the screw and lowering the plate until its lower end rests upon the bottom of the casing, and then tightening up the screw, the link M^2 and the locking arm R^2 will be permanently held in their upper position, so that the machine can be operated at all times, whether the drawer be open or closed.

A gong X^2 is arranged to be sounded by a striker Y^2 carried by a lever Z^2 pivoted at A^3 , Figs. 4 and 5, and having pivoted to its lower end a trip B^3 whose left hand end in Fig. 5 is widened and rests in the corner formed by the junction of the two upper arms of the plate G and also projects laterally into the path of the arm U^2 on the shaft E. When said shaft is turned forward in the direction of the arrow the arm U^2 will carry the trip B^3 and lower end of the lever Z^2 to the right in Fig. 5, (to the left in Fig. 4.) until the end of the arm U^2 clears the trip, whereupon a spring C^3 connected at its right hand end to the trip and at its left hand end to one of the arms of the plate G will throw the parts back to normal position and cause the striker Y^2 to sound the gong.

Having thus fully described my invention I claim:

1. In a machine such as described, the combination of a numbered dial, an oscillatory shaft, an operating handle secured thereto, an indicator and a ratchet movable together on the shaft, a pawl engaging the ratchet for holding the indicator at any point to which it is moved, a connection between the ratchet and shaft by which the latter turns the ratchet and indicator in a forward direction and moves independently of them in the reverse direction, means for disengaging the pawl from the ratchet at the beginning of the forward movement of the operating handle and shaft, a detent for holding the pawl out of engagement with the ratchet until the latter has been returned to initial position, and means for re-engaging the pawl with the ratchet when the latter reaches such position, substantially as described.

2. In a machine such as described, the combination of the numbered dial, the oscillatory shaft, the operating handle secured thereto, the ratchet and indicator movable together on the shaft, the notched arm J' , the detent K' co-operating therewith, the pawl arm G' loosely connected to the arm J' and co-operating with the ratchet, and a connection between the arm J' and the ratchet and shaft

forward movement of the shaft and in the opposite direction at the return of the ratchet to initial position, substantially as described.

3. In a machine such as described, the combination of the oscillatory shaft E having the operating handle J fast thereon, the indicator, ratchet and arm C loose upon said shaft and moving together, the notched disk K fast on the shaft, a connection between said disk and the arm C' for causing the disk to turn the arm and ratchet and indicator forward with it and permit it to return independently of them, the notched arm J' , the detent K' co-operating therewith, the pawl arm G' loosely connected to the arm J' and co-operating with the ratchet, and the hooked arm N' connected to the arm J' and co-operating with the disk K and arm C', substantially as described.

4. In a machine such as described, the combination of the oscillatory shaft E, operating handle J and notched disk K fast thereon, indicator loose thereon, ratchet F' and arm C' moving with the indicator, notched arm J' , detent K' co-operating therewith, arm N' rigid with the arm J' and co-operating with the disk K, pawl arm G' loosely connected to the arm J' and co-operating with the ratchet F', hooked arm N' co-operating with the disk K and arm C', and a connection between the disk K and arm C' for causing the disk to carry the arm with it during its forward movement and permit it to move backward independently of the arm, substantially as described.

5. In a machine such as described, the combination of the rack arm N geared to the operating shaft, the rack arm A' geared to the indicator, the resetting springs for said arms and the hooked locking arm R' co-operating with projections on the arms N and A', respectively, for the purpose of locking the arm N from movement except when held out of locking position by the projection on the arm A', substantially as described.

6. In a machine such as described, the combination of the rack arm N geared to the operating shaft and provided with the lug S', the rack arm A' geared to the indicator and provided with the pin T', and the hooked arm R' normally tending to move over the lug S' on the arm N and held from such movement by the pin T' on the arm A' when the latter is in its initial position, whereby the arm N and operating shaft are locked from movement except when the arm A' and indicator are in initial position.

7. In a machine such as described, the combination of the rack arm A' geared to the indicator, the resetting spring B' connected to said arm, and the lever U' pivoted at one end to the casing and connected at its other to the arm A' intermediately and to the piston rod V' of the piston within the cylinder W', substantially as and for the purpose described.

8. In a machine such as described, the combination of the central operating shaft E, the

plate O² carried by the arm N² and having the shoulder P² co-operating with the arm Q² on the shaft E, the sliding money drawer, the locking bolt therefor, the link M² connected at its upper end to the arm N², and a connection between the lower end of said link and the drawer bolt, whereby the lifting of said link will disengage the bolt from the drawer, substantially as described.

9. In a machine such as described, the combination of the central operating shaft E, the arm Q² fast thereon, the pivoted arm N², the plate O² carried by the arm N² and having the shoulder P² co-operating with the arm Q², the sliding money drawer, the rock-shaft J², the arms I² L² fast on said shaft, the locking bolt carried by the arm I², and the link M² connecting the arm L² with the arm N², substantially as and for the purpose described.

10. In a machine such as described, the combination of the central operating shaft E, the arm U² fast thereon, the pivoted arm N², the hooked locking arm R² carried by the arm N² and co-operating with the arm U² fast on the shaft E, the sliding money drawer, the locking bolt therefor, and a connection between said bolt and the arm N², whereby the hooked locking arm R² will be held out of the path of the arm U² on the shaft E when the drawer is closed and locked and will be lowered into the path of said arm when the drawer is unlocked and opened, substantially as described.

11. In a machine such as described, the combination of the central operating shaft E, the arm U² fast thereon, the pivoted arm N², the hooked locking arm R² carried by the arm N² and co-operating with the arm U² fast on the shaft E, the sliding money drawer, the locking bolt therefor, a connection between said bolt and the arm N² by which the hooked locking arm R² is held out of the path of the arm U² when the drawer is closed and locked, and moved into its path when the drawer is unlocked and opened, and an adjustable stop by which the locking arm R² may be held out of the path of the arm U² when the drawer is unlocked and opened, substantially as described.

12. In a machine such as described, the combination of the central operating shaft E, the arms Q² and U² fast thereon, the pivoted arm N², the shouldered plate O² carried thereby and co-operating with the arm Q², and the hooked locking arm R² also carried by it and co-operating with the arm U², the sliding money drawer, the rock-shaft J², the arms I² L² fast thereon, the locking bolt F² carried by the arm I², the link M² connecting the arm L² with the arm N², and the spring for throwing the drawer open when released, substantially as described.

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