

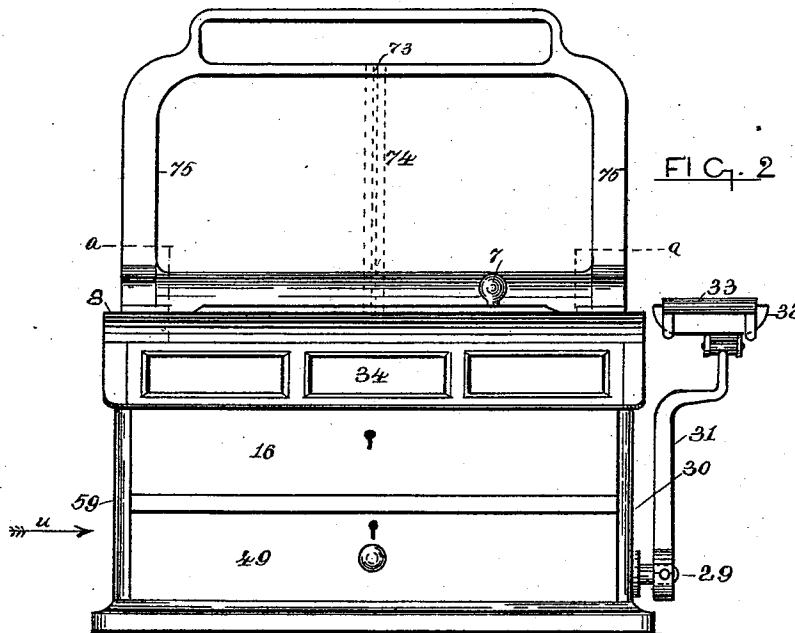
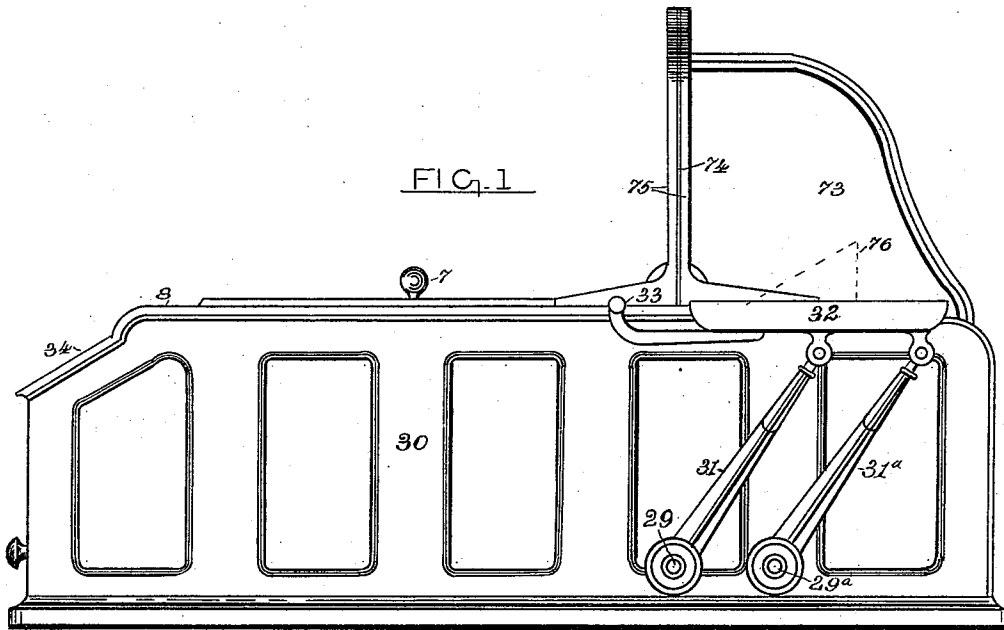
(No Model.)

3 Sheets—Sheet 1.

A. QUORTRUP.
CASH CONTROLLING MACHINE.

No. 527,808.

Patented Oct. 23, 1894.



Witnesses.

A. R. Frisbie

C. J. Tanner

Inventor

August Quortrup

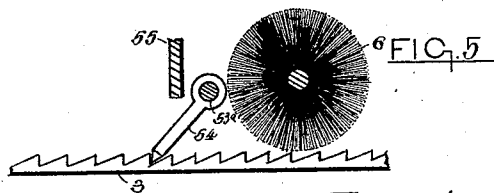
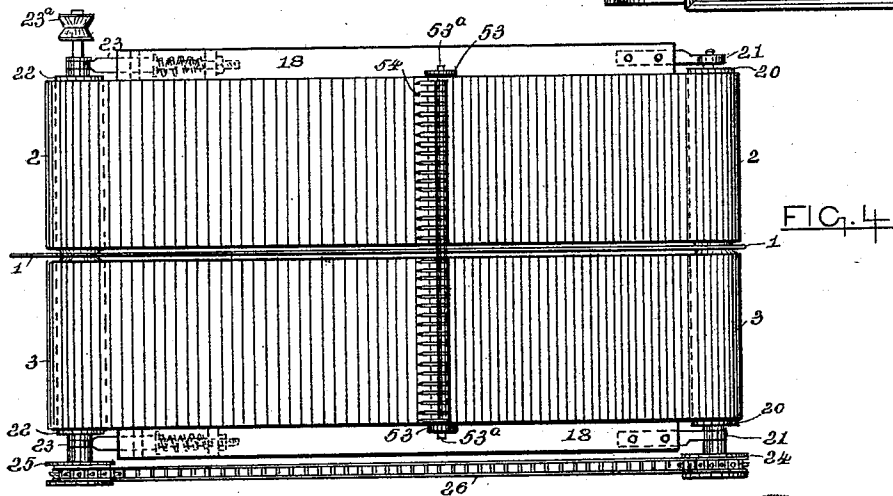
By his Atty.

Geoff Phillips

3 Sheets—Sheet 2.

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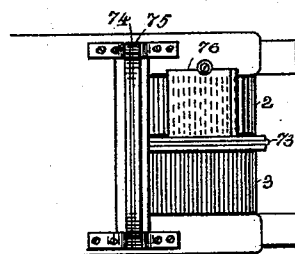
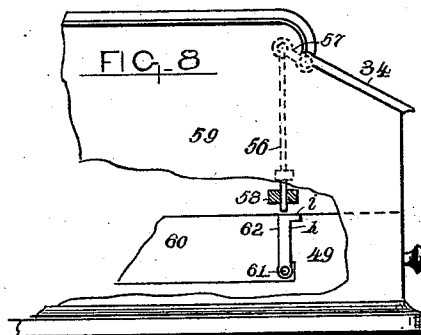
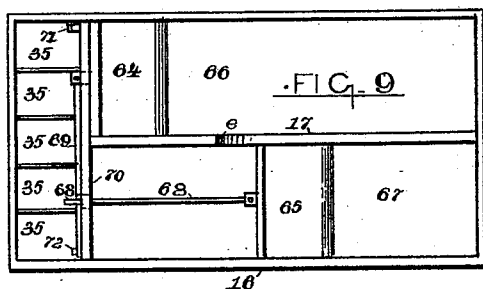
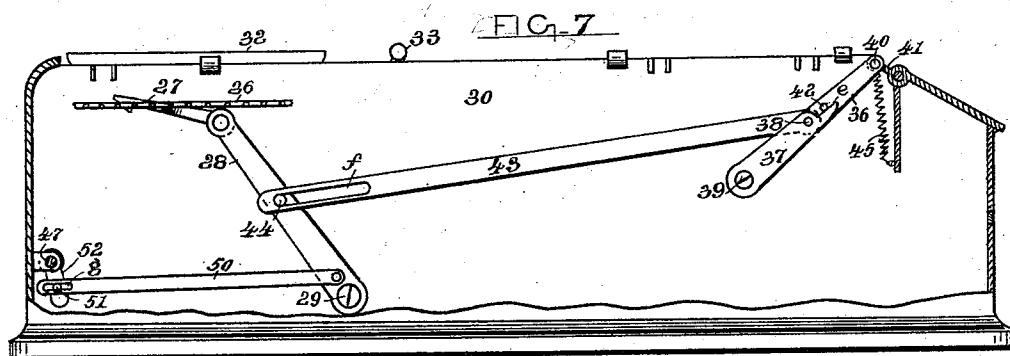
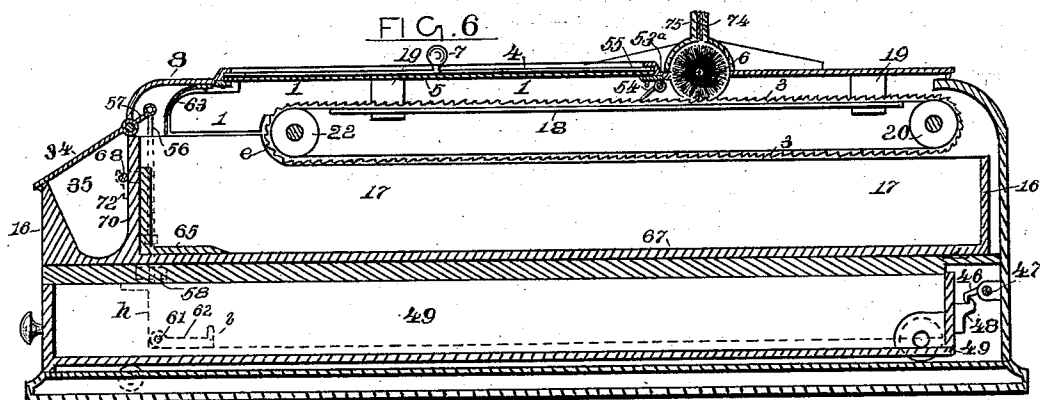
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No. 527,808.

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Witnesses,
H. R. Frisbie,
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Inventor,
August Quortrup
By his Attys. Geo. Phillips.

UNITED STATES PATENT OFFICE.

AUGUST QUORTRUP, OF JAMAICA, NEW YORK.

CASH-CONTROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 527,808, dated October 23, 1894.

Application filed November 11, 1893. Serial No. 490,623. (No model.)

To all whom it may concern:

Be it known that I, AUGUST QUORTRUP, a citizen of the United States, and a resident of Jamaica, in the county of Queens and State of New York, have invented certain new and useful Improvements in Cash-Controlling Machines, of which the following is a specification.

The present invention relates to machines for controlling cash receipts and checks to balance the same, it being an improvement on the patent granted to Victor With June 9, 1891, No. 453,824, and also the one granted to T. F. Russel and J. Brady July 25, 1893, No. 501,962.

The improvement consists in employing a carrying belt having a corrugated outer surface and a series of check pins or other like device to engage such corrugations and thus prevent the belt being slipped back independent of the carrying rolls, such pins also operating to prevent the withdrawal of either checks or money which have passed by the spiral brush.

The present arrangement enables the cashier, for the purpose of making change, to have access while in transit, to the money on the carrying belt beneath the glass pane or, it can be used, as heretofore, wherein the money having passed the brush is deposited into the receipt drawer with the checks and is accessible only to the proprietor; also, mechanism for operating the coin-pocket lid independent of the lower cash drawer, and means, on such lid and drawer, whereby the former and cash tray are locked together. These, among other improvements, will be more fully set forth in the following specification and such features as I believe to be new and novel, particularly pointed out in the claims to follow.

To enable others to understand my invention, reference is had to the accompanying drawings, and to the figures and letters of reference marked thereon, in which—

Figure 1 represents a side elevation of the machine; Fig. 2, a front elevation; Fig. 3, a top plan view of the machine showing the vertical shield broken away on the dotted line *a* of Fig. 2 and broken view of the revolving brush. Fig. 4 is a detail upper plan view of the endless belt or carrier. Fig. 5 is

a detail end elevation of the spiral brush, broken section of the endless belt or carrier, check pin engaging with the corrugation of the same, and broken view of a stop to limit the upward movement of said pin. Fig. 6 is a sectional side elevation of the machine through line *b* of Fig. 2, showing the interior arrangement. Fig. 7 is a broken view of the base of the machine and interior side elevation of the side next to the cash or change tray, looking in the direction of arrow *c* Fig. 3, showing the mechanism for operating the coin-pocket lid. Fig. 8 is a broken section of the side of the machine opposite the one in Fig. 7, also broken view of the cash drawer, showing the locking device for the lid of the coin-pocket and the change tray. Fig. 9 is an upper plan view of the receipt drawer and coin-pockets as part of the same, but separated therefrom by a partition. A partition also divides the receipt drawer into two parts, one for the money and the other for the checks. Scrapers or conveyers are also shown in each compartment of the receipt drawer for pushing back checks and money liable to accumulate in the forward end of said drawer. Fig. 10 is a reduced size and broken view of the upper part of the top plate of the machine and carriers or belts, showing an incline over the check carrying belt whereby the checks are deposited close to the revolving brush which will insure their being fully delivered beyond the same.

Its construction and operation are as follows: Heretofore the machine was so constructed and arranged that the cashier was supposed to handle no money deposited in the machine, that once it had passed under the revolving brush it was deposited, together with the check, into the receipt drawer immediately below. This arrangement made it necessary for the cashier to commence operations with a large amount of money in the cash drawer for making change. My improvement enables the cashier to reach the money in transit for the purpose of making change, while the checks, which should agreed with the money, are not accessible to the cashier, but are deposited in the receipt drawer. To accomplish this, the thin central partition 1, — Figs. 3, 4, and 6— separates the endless belt into two parts or belts, the belt 2 for the

checks, and 3 for the money. These belts are corrugated for the purpose presently to be explained. The glass pane is also divided into two parts 4 and 5. The former overlies the check carrying belt 2 and is fixed and immovable in the top plate of the machine, while the latter is arranged to slide in said plate and under the former in the direction of arrow a^2 , Fig. 3 so as to reach the money on the belt 3, after it has passed by the spiral brush 6. For this purpose, a hole is formed through the sliding pane 5 through which is passed the stem of the knob 7, —Fig. 3— by which the pane is operated. Below the said pane and operatively secured to the under side of the top plate 8, is the locking arrangement for the pane 5. This locking device consists of the slide 9, carrying at one end the pin 10, which engages slot 11 of the catch 12, which latter, is fulcrumed on the pin 13. The hook portion 14 of said catch engages with the before mentioned pin of the knob 7. The opposite end of the slide 9 has the projection 15 which enables the said slide to be operated by pulling out the receipt drawer 16. —Fig. 2—. As this receipt drawer is under the control of the proprietor, he can, by simply pushing the said slide, give the cashier access to what money he needs for making change while it is in transit to the receipt drawer, or, by locking the sliding pane 5, the machine can be used as heretofore.

The dividing partition 1 —Fig. 6— just clears the under side of the sliding pane 5 thus effectually shutting off all communication with the checks on the belt 2, so that, while the money may be reached for the purpose above mentioned, the checks cannot, but must be deposited in the receipt drawer 16, with which the money must always balance. The central partition 17, —see also Fig. 9— is cut away so as to bring said partition close to the under side of the endless belt and partition 1, thereby shutting off communication with the checks after they are deposited in the receipt drawer.

The belt mechanism —see also Fig. 4— consists of the plate 18 and is suspended in the machine by the brackets 19. —Fig. 6—. Referring again to Fig. 4, the roll 20 is journaled in the brackets 21 of said plate, while the other roll 22 is journaled in the adjustable or tightening brackets 23, also attached to plate 18. As the partition 1 is attached to this supporting plate, it necessitates employing two belts instead of one as heretofore. Each of the rolls 20 and 22 carry the sprocket wheels 24 and 25 for the chain 26. Formerly, only one sprocket wheel has been used, viz: on the roll 20, which ran over a smooth pulley on the other roll, and, in consequence, would slip at times and refuse to turn said roll.

The belt rolls are operated by means of the pawl 27, —Fig. 7— pivotally supported to the lever 28, which, in turn, is rigidly mounted upon the shaft 29. This shaft is journaled in the side 30 of the machine, projecting

through the same and carries on such outward projecting end the supporting lever 31 of the cash or change tray 32; thus, pulling the said tray, by means of its handle 33, in the direction as indicated by arrow b^2 , —Fig. 3— will revolve the said belt rolls, also brush 6— through the medium of the belt 22^a, pulleys 21^a and 23^a, the former mounted on the projecting end of said brush, and the latter on the end of roll 2.

The forward movement of the change tray, just mentioned, will also raise the lid 34 of the coin-pockets 35 as follows:—The toggle arms 36 and 37 —Fig. 7— are journaled by one end to the pin 38 and their opposite ends to the stud 39, and pin 40 of the ear 41 of said lid. The stop pin 42 projecting from arm 36, engages the finger e of the arm 37, thus bringing said arms in line with each other so that, when the change tray is back, as shown, the lid 34 cannot be raised without the assistance of said tray. One end of lever 43 is pivotally supported to pin 38, while its opposite end has the slot f to engage with pin 44 of lever 28. The forward movement of the change tray—before mentioned—will carry the pin 44 of lever 28 along the slot f of lever or bar 43 until it reaches the end of same, when it will open the toggle arms and raise the lid 34. The spring 45 is attached to the ear of said lid to assist in closing the same when the movement of the change tray is reversed. The arrangement for locking the lever or cash drawer is the same as heretofore, which consists of the hook 46 —Fig. 6— mounted on the rock shaft 47. Said hook is adapted to engage with the catch 48 attached to the rear end of the cash drawer 49, which drawer, is simply unlocked but not opened—as heretofore— when the lid to the coin-pockets is raised. The bar 50 —Fig. 7— is pivotally supported by one end to the lever 28, while the other end is provided with the slot g engaging with pin 51 of the rock arm 52 of the shaft 47.

On the under side of the top plate 8 of the machine —Fig. 6— and supported in the standards 53 —Fig. 4— is the shaft 53^a. —See also enlarged view Fig. 5—. Loosely mounted upon this shaft are the pins 54 whose free ends normally fall into the corrugation of the endless belts 2 and 3, and thus effectually prevent said belts being slipped back on their carrying rolls and bring the checks and money that have once passed beyond the brush into the open place where they were originally deposited. To render this operation still more difficult, the ends of said pins are pointed, so that they will engage the paper check or money and thus prevent their being withdrawn even if they have not passed entirely beyond the brush. The projection 55 limits the upward movement of said pins sufficient to permit checks and money to pass freely without furnishing room enough to introduce an instrument to withdraw them. The check pins will readily ride over the corrugations of

the belts in their forward movement but will instantly engage therewith—as before mentioned—so as to prevent their being reversed.

The upper end of the vertical rod 56—Figs. 3 and 8—is pivotally supported to the ear 57 of the lid 34, and passes freely through the supporting bracket or projection 58 of the side frame 59. In the side of the cash drawer 49 is provided the longitudinal recess 60, beginning at the shouldered part *h*—Fig. 6—and extending to the rear end of said drawer. Pivottally supported on pin 61 at the bottom of this recess is the swinging piece 62 adapted to be raised in a vertical position—as shown in Fig. 8—which brings the upper surface *i* of said piece or stop directly under and close to the lower end of the rod 56, which effectually prevents the downward movement of said rod, and, in consequence thereof, the change tray cannot be moved forward. Therefore, all that is required to temporarily lock both the lower cash drawer 49 and the coin-pockets against intruders is, first, to pull out the said drawer far enough to reach the stop 62 and raise it to a vertical position against the shoulder *h* and close the drawer. Now, as the rod 56 cannot descend, the change tray cannot be moved forward far enough to raise the coin-pocket lid.

The curved shield or guard 63—Fig. 6—attached to the under side of the plate 8 projects down far enough to just clear the central partition 17 of the receipt drawer 16, and will insure both the checks or money being deposited into the receipt drawer, immediately below.

To prevent the accumulation of the checks and money in the forward end of the receipt drawer, the conveyers 64 and 65—see Figs. 6 and 8—are provided in each of the compartments 66 and 67 of said drawer. To each of said conveyers is pivoted the rods 68 and 69 which extend through holes in the partition 70 and into the coin pockets 35. When the conveyers are against the partition 70, the rods are arranged at right angles thereto and supported in brackets 71 and 72 of the said partition in the coin-pocket apartment. In operating the conveyers, the rods are brought into a position parallel with the drawer and pushed back as shown in the money compartment 67.—Fig. 9.—This arrangement is a decided improvement over the swinging blade heretofore used for that purpose as the contents of the compartments can be carried farther back.

In Figs. 1 and 2 is shown the vertical partition 73 which meets the central web 1 of the endless belts—Figs. 3 and 4—and this partition, like the window opening 74 in the frame 75, may be of glass or wire netting.

To insure the checks being deposited on the belt in a position to be fully carried beyond the revolving brush, I have provided the incline 76—see Figs. 1 and 10—pitching toward the brush, whereby such checks—which in some cases may be four or five inches long—

will have their ends brought so close to the brush they will be sure to pass under.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein described improvement in a cash controlling machine, comprising in combination, a box or casing; two endless belts or carriers and mechanism for operating the same, one of said carriers arranged for carrying the checks and the other the money, a vertical partition between the two, a fixed immovable glass pane over a part of the check carrier, a movable glass pane over a part of the money carrier so that the money may be taken from said carrier while in transit, or said pane securely locked against intrusion and means for effecting the same, a receipt drawer directly below said carriers having a longitudinal partition therethrough to coincide with the partition of the said carriers, as set forth.

2. In a cash controlling machine comprising in combination, a box or casing, an endless belt or carrier having a corrugated upper surface, means for operating said carrier, combined with a series of check pins or devices of like character arranged to engage the said corrugations and prevent a reverse movement of the carrier, as set forth.

3. The combination, in a cash controlling machine, of the character described, of the box or casing, two endless belts or carriers mounted on rollers and means for operating the same, a longitudinal partition between such belts, thereby forming two compartments above, combined with a longitudinal partition and a divided money drawer below a rotatable brush, arranged as shown, the outer surfaces of said belts corrugated, pins loosely mounted above said outer surface to engage such corrugations and thereby prevent a retrograde movement of said belt, independent of its supporting rollers.

4. In combination in a cash controlling machine, of the character described, a box or casing, two endless corrugated carriers, a central partition longitudinal therethrough, a revolving brush arranged as shown, means for operating both carriers and brush, check pins to prevent a retrograde movement of one or both of said carriers, a fixed pane over a part of the check carrier, and a movable pane over a part of the money carrier, combined with a receipt drawer below said carriers having separate compartments for said checks and money.

5. The combination in a cash controlling machine of the character described, of the frame or box, lid 34 thereof, cash drawer 49, change tray 23, with a movable stop piece attached to said drawer, and a vertically operating rod attached to said lid whereby said lid and drawer may be locked against the operating mechanism of the change tray, as set forth.

6. In a cash controlling machine of the character described, comprising in combination a

box or casing, endless check and money carriers, operating mechanism therefor, of the receipt drawer 16 situated directly under said carriers, having the compartments 66 and 67, 5 longitudinally movable conveyers 64 and 65 therefor, operating rods 68 and 69 pivoted thereto, said rods arranged to be folded when not in use, against the separating partitions between said drawer and the cash pocket 10 apartment 35, as set forth.

7. In a cash controlling machine of the character described, with a box or casing, two end-

less belts or carriers, operating mechanism therefor, a partition separating such carriers within said box or casing, combined with the 15 partition 73 projecting above the machine, as set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 11th day of October, A. D. 1893.

AUGUST QUORTRUP.

Witnesses:

WILLIAM N. BEARDSLEY,
L. MYRON SLADE.