Sept. 10, 1957 J. JORGENSEN 2,805,676

COIN HANDLING APPARATUS

Filed Jan. 30, 1953 7 Sheets-Sheet 1

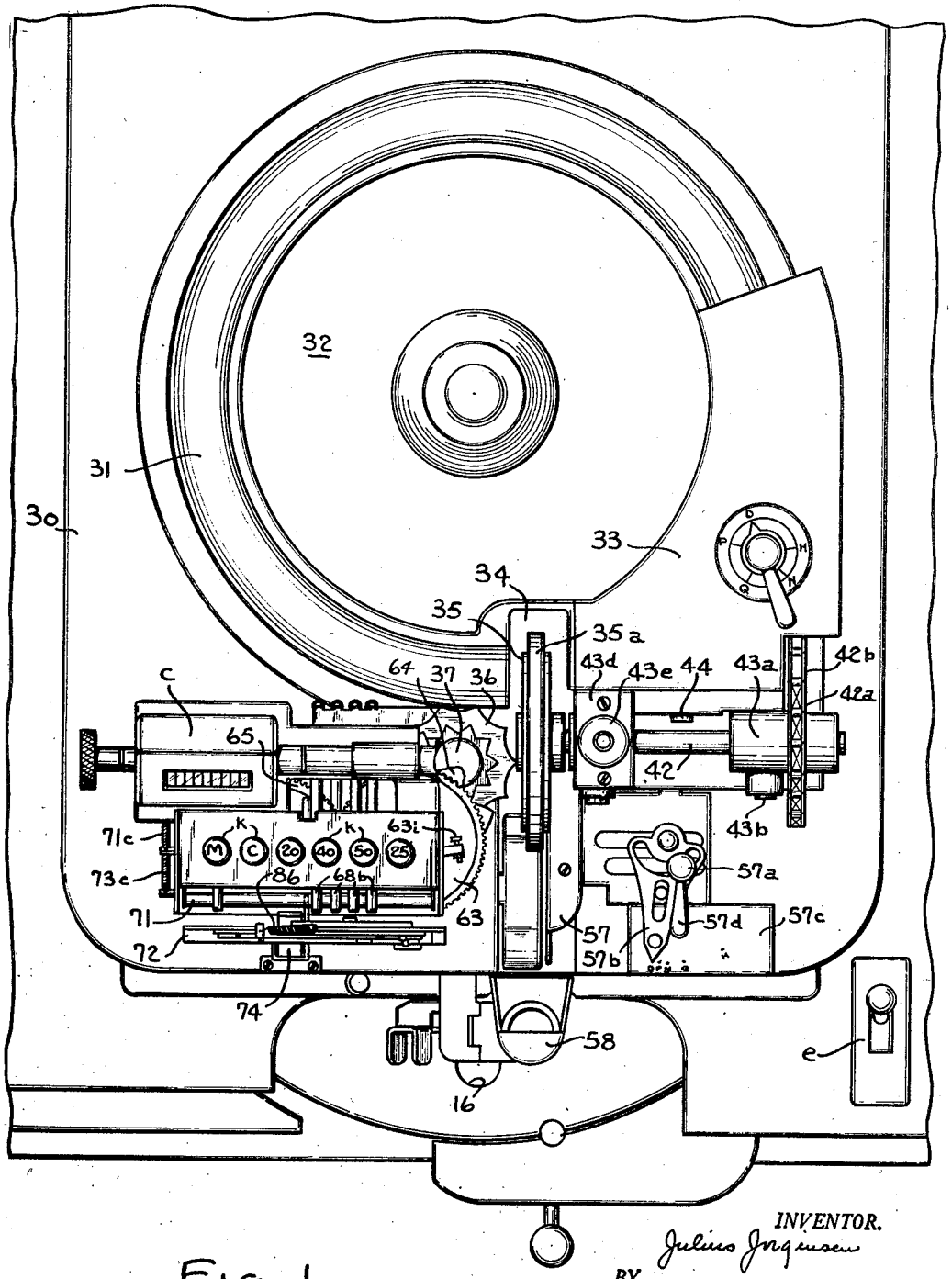


Fig. 1

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COIN HANDLING APPARATUS

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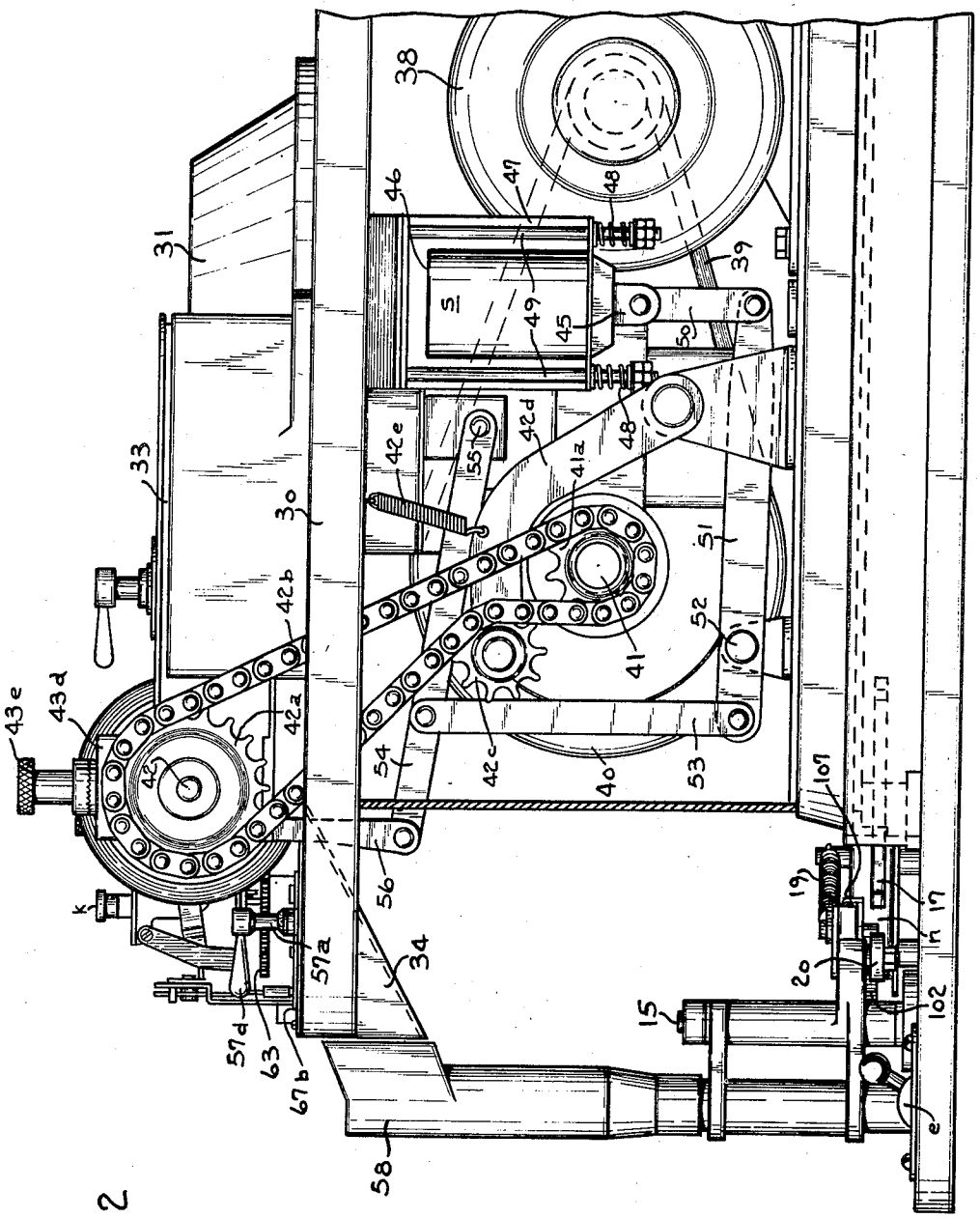


FIG. 2

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COIN HANDLING APPARATUS

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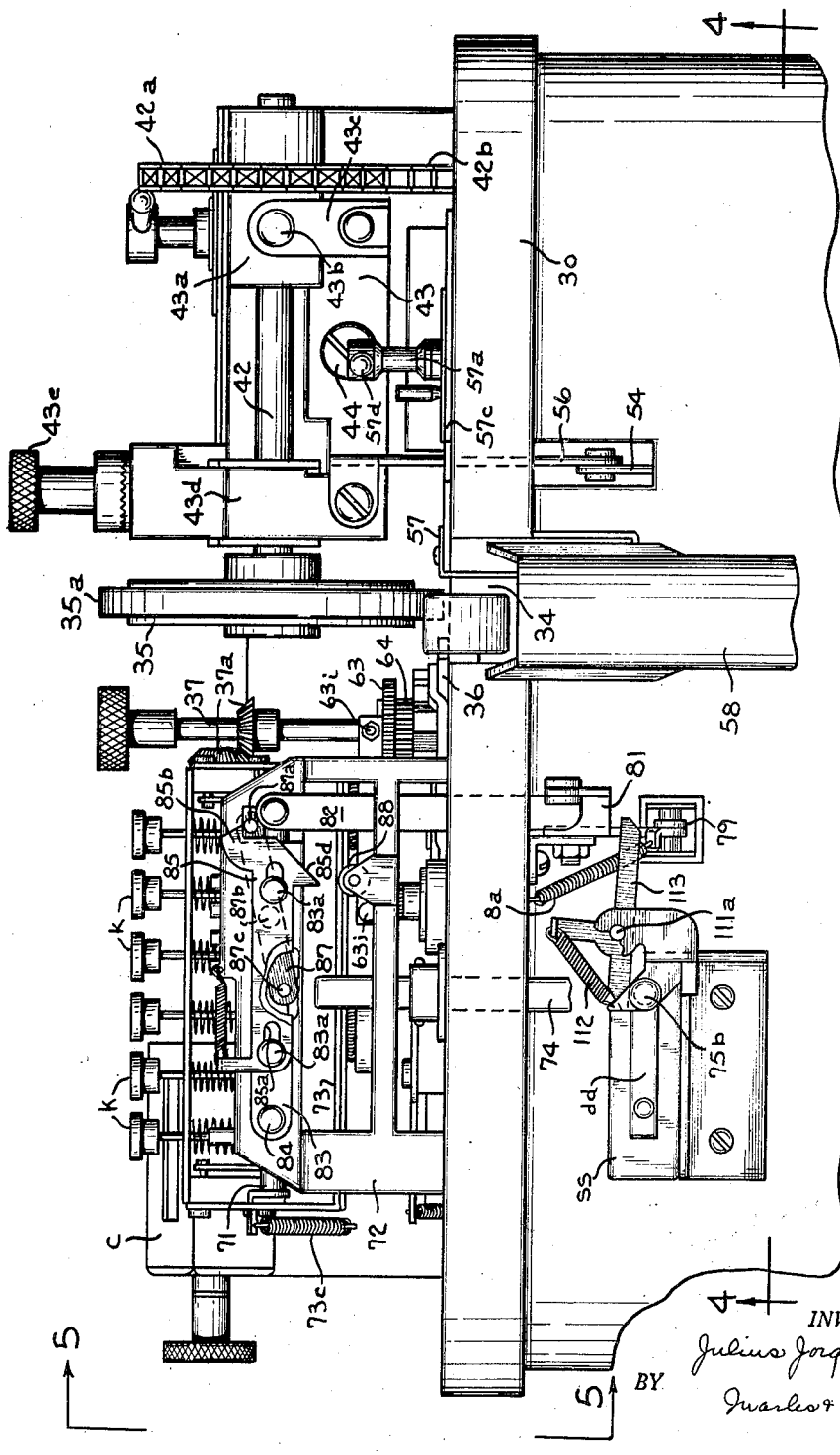


FIG. 3

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COIN HANDLING APPARATUS

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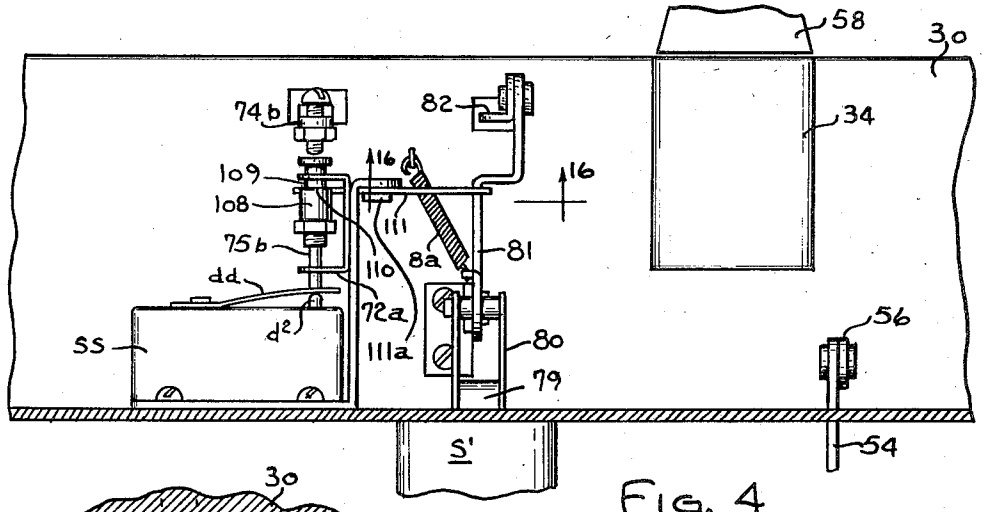


FIG. 4

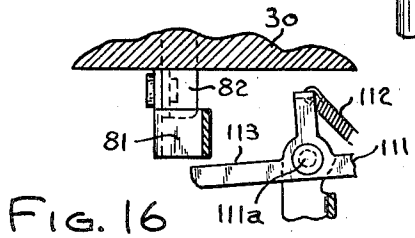


FIG. 16

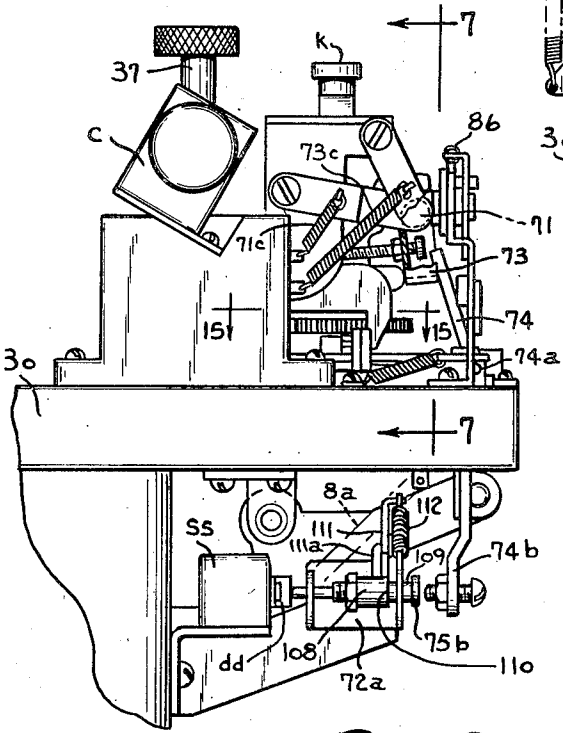


FIG. 5

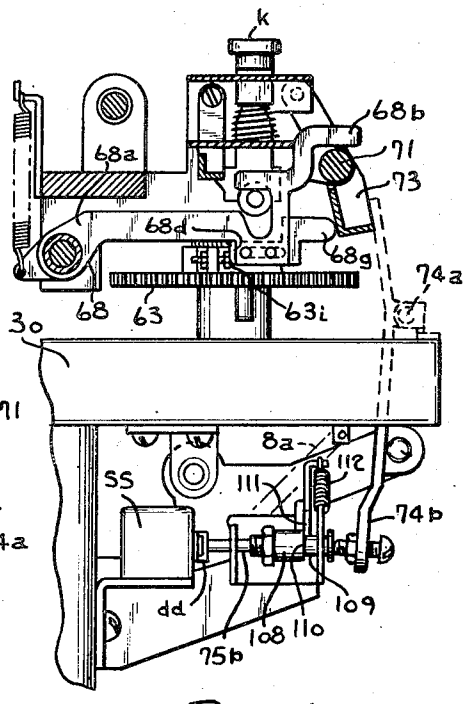


FIG. 6

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COIN HANDLING APPARATUS

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FIG. 7

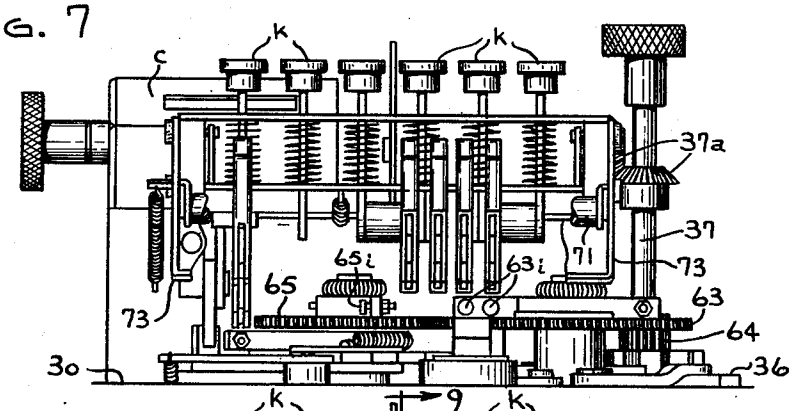
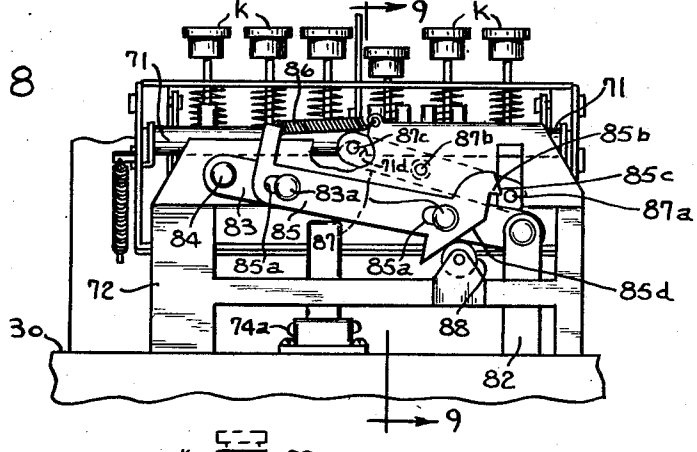


FIG. 8



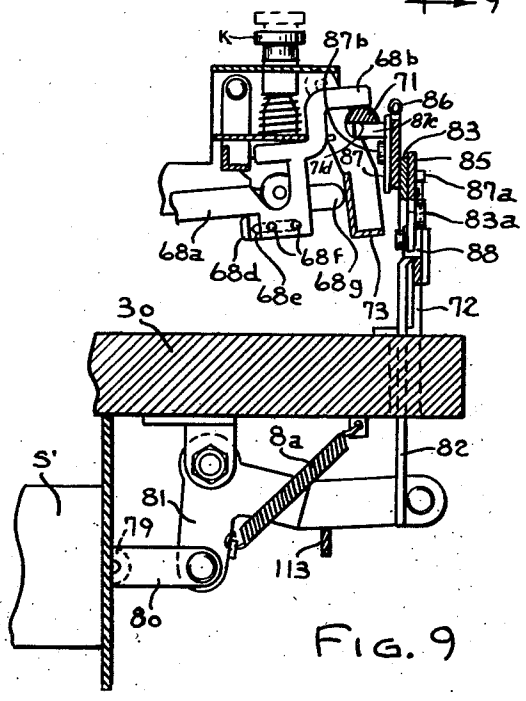


FIG. 9

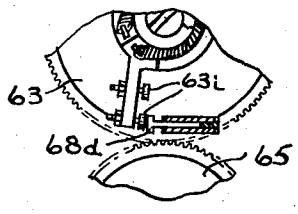


FIG. 15

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COIN HANDLING APPARATUS

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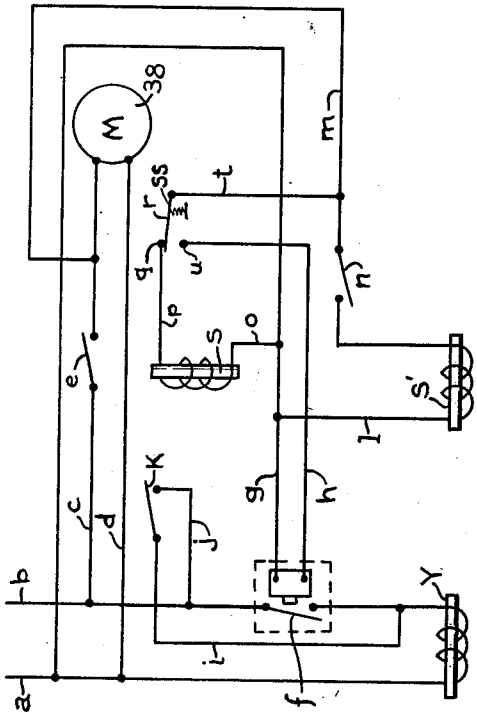


FIG. 12

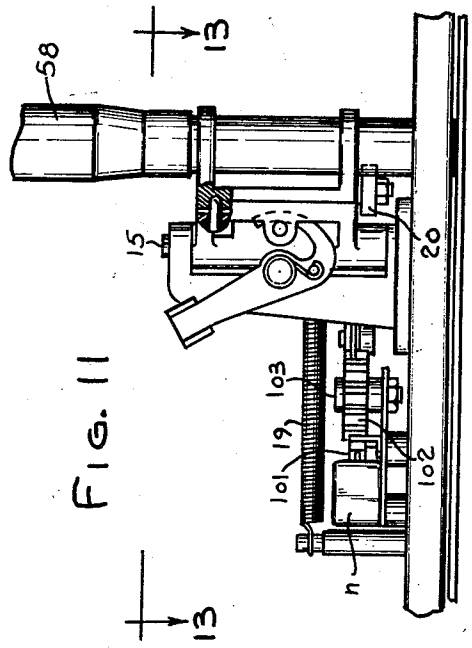


FIG. 11

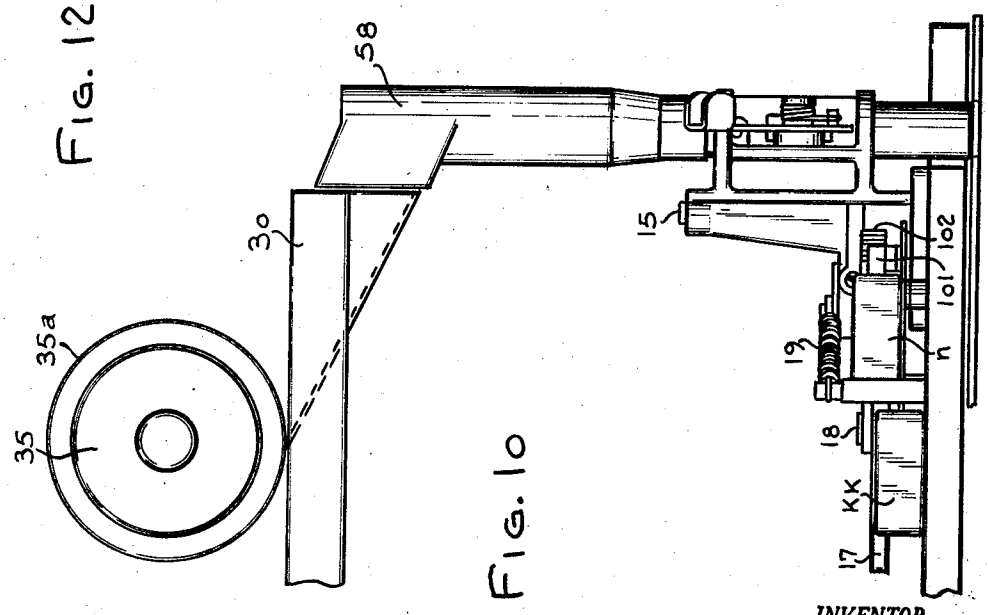


FIG. 10

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COIN HANDLING APPARATUS

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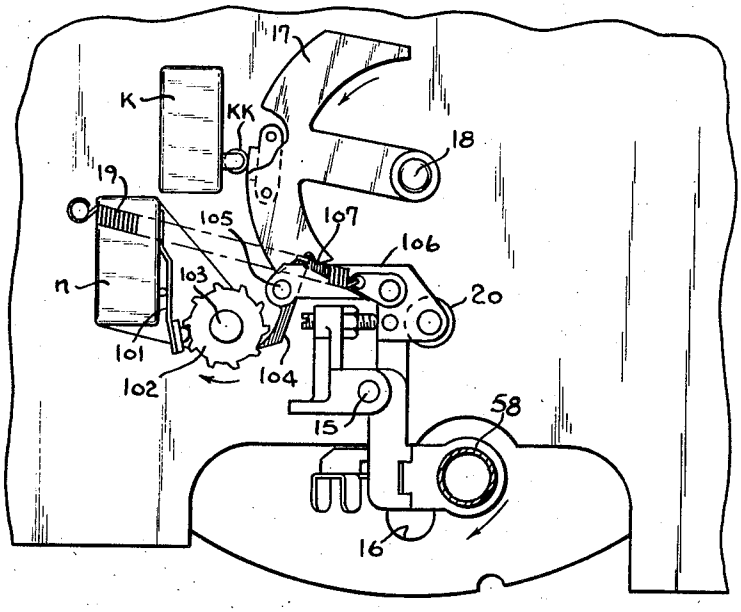


FIG. 13

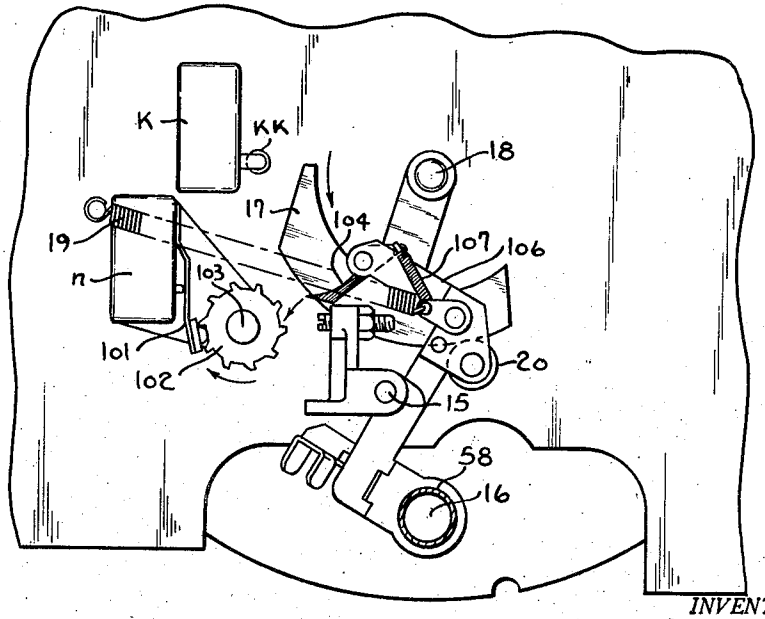


FIG. 14

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United States Patent Office 2,805,676 Patented Sept. 10, 1957

2,805,676

COIN HANDLING APPARATUS

Julius Jorgensen, Detroit, Mich., assignor to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin

Application January 30, 1953, Serial No. 334,239

4 Claims. (Cl. 133—8)

The invention relates to a coin handling machine and its control mechanism.

The main object of the invention is to adapt the coin counting machine of the type shown and described in the copending application Serial No. 260,860, filed December 10, 1951, of Arnold R. Buchholz, for Coin Counting Machine, and now matured into Patent 2,679,849, dated June 1, 1954, for use as the counting unit in the copending application Serial No. 64,574, filed December 10, 1948, of myself for Coin Handling Apparatus, and now matured into Patent 2,709,880, dated June 7, 1955.

In the Buchholz application above noted the control of the feed wheel drive shaft to render the feed wheel operative to feed coins past the counter drive star wheel is effected by a feed wheel control solenoid operatively associated with said drive shaft, this solenoid being controlled by a switch controlled by the predetermined count mechanism of the counter. Also a starting control includes a manually controlled switch which controls a reset solenoid that acts through parts of count control mechanism to control the first named switch. The object of the present invention is to provide an arrangement of controls for a counter of the Buchholz type so that the feed wheel control solenoid mentioned above and its control switch and the control of the reset solenoid may be correlated with the operation of the transfer tube and the wrapping mechanism of the application Serial No. 64,574 to provide an all electric control for the counter in place of that of the counting machine shown and described in said application Serial No. 64,574.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a top plan view of the coin counter, the transfer tube and the packager associated with the present invention;

Fig. 2 is a side elevation view of the coin counting unit and transfer tube;

Fig. 3 is a front elevation view of the upper part of the coin counting machine;

Fig. 4 is a detailed horizontal sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a partial elevation view looking from the left side of the machine along the line 5—5 of Fig. 3;

Fig. 6 is a detailed view of parts shown in Fig. 5 showing them in a different position;

Fig. 7 is a detailed vertical sectional view taken on the line 7—7 of Fig. 5;

Fig. 8 is a front elevation view of parts shown in Fig. 3 showing them in a different position;

Fig. 9 is a detailed vertical sectional view taken on the line 9—9 of Fig. 8;

Fig. 10 is a side elevation view of the counter discharge tube and the associated transfer tube;

Fig. 11 is a front elevation view of parts shown in Fig. 10, parts being broken away and parts being shown in section;

Fig. 12 is a wiring diagram of the electrical system used in the machine;

Fig. 13 is a detailed horizontal sectional view taken on the line 13—13 of Fig. 11;

Fig. 14 is a view similar to Fig. 13 showing the parts in a different position;

Fig. 15 is a detailed sectional view taken on the line 15—15 of Fig. 5;

Fig. 16 is a detailed sectional view taken on the line 16—16 of Fig. 4.

Where it is possible, parts herein similar to those shown and described in application Serial No. 260,860 will be similarly numbered.

Referring to Figs. 1, 2 and 3 of the drawings, the machine includes a frame 30 having a hopper 31 provided with a rotary bottom plate 32 by which the coins deposited in the hopper are carried out by centrifugal force to a side discharge opening controlled by a vertically adjustable gate 33 and delivered to a passage 34 where they are engaged, one at a time, by a revolving feed wheel 35 which carries them into engagement with and past a star wheel 36 on a counter drive shaft 37 which is connected by a bevel gear drive including gears 37*a* with a counter C. An electric drive motor 38 is connected by a belt drive including a pulley on the motor shaft, a belt 39 and a pulley 40 on a shaft 41 to drive said shaft and which shaft in known manner (see Figs. 2 and 3 of U. S. Patent No. 2,438,822, dated March 30, 1948) is connected to a vertically disposed shaft carrying the bottom plate 32 for its continuous rotation while the motor 38 is running.

The feed wheel 35 is mounted on a shaft 42 journalled in bearings carried by a tiltable support 43 which is pivotally mounted at 44 on the gate or block 33. The shaft 42 carries a sprocket 42*a* connected by a chain 42*b* with a sprocket 41*a* on the shaft 41 so that the wheel 35 is continuously rotated while the motor 38 is running. The chain 42*b* has a chain tightener or tensioner associated therewith comprising a sprocket 42*c* carried by a pivotally supported arm 42*d* urged by a spring 42*e* into chain tensioning positioning, said spring normally acting through the chain to swing the outer end of the shaft 42 downwardly to move the feed wheel 35 to an inoperative or non-feeding position.

The feed wheel 35 is moved into coin feeding position by linkage connecting the support 43 with the plunger 45 of a solenoid S whose energizing coil 46 is mounted on a square frame structure 47 carried by springs 48 at each corner from fixed rods 49 so as to relieve the shocks imparted to the frame by the action of the solenoid. The linkage includes a link 50 operatively connecting the plunger 45 with one end of a lever 51 pivoted on the machine frame at 52 and operatively connected by a link 53 with the intermediate portion of a lever 54 pivoted at one end 55 on the machine frame and operatively connected at its other end by a link 56 with the support 43. As shown in Fig. 3, the rear bearing 43*a* of shaft 42 is pivoted at 43*b* to a bracket arm 43*c* connected to the main support 43 and the front bearing for shaft 42 is carried in a bearing box 43*d* which is slidably mounted on the support 43. This manner of mounting shaft 42 permits of its manual adjustment relative to the support 43 by the raising or lowering of box 43*d* through a feed screw (not shown) connected with said box and operated by a hand knob 43*e* to compensate for the wear of the wheels rubber facing 35*a*.

In addition to the adjustable gate 33 to accommodate different denominations of coins, a coin width gauge plate 57 for the coin delivery passage is provided. This plate is slidably mounted and guided on the machine frame and operatively connected by a pin 57*a* to a settable lever 57*b* which is associated with an index plate 57*c*, said

lever 57*b* being locked in adjusted position by using the pin 57*a* as a clamp and providing it with a handle 57*d* for this purpose.

After the coins of any given denomination are counted, they pass down the discharge passage 34 into coin transfer tube 58 mounted to swing about a pivot 15 from a coin receiving position (when loaded) to a coin discharging position over an opening 16 which is at the upper end of the coin holder of the application Serial No. 64,574, previously referred to, and similar to that application and shown particularly in Figs. 13 and 14, the movement of the tube 58 is controlled by a cam 17 on the wrapper drive shaft 71 of that application, but here numeraled 18, and a return spring 19. In the position shown in Fig. 13 the transfer tube is held in coin receiving position by the spring 19. After this tube is loaded with a predetermined number of coins, a switch *f* hereinafter described controlled by the counter and by a normally closed switch K energizes a solenoid Y (see Fig. 12) controlling the main drive clutch of the wrapper mechanism (shown in Serial No. 64,574) so that shaft 18 is driven by its drive motor, thus turning the cam 17 which acts to open switch K to stop the wrapper drive and which as it moves from its stop position shown in Fig. 13 to the position shown in Fig. 14 engages a roller 20 on the mounting for tube 58 and swings it against the action of the spring 19 to the coin discharging position shown in Fig. 14 and holds it in this position until cam 17 leaves the roller 20. Just after the tube 58 moves to its discharging position and while wrapper switch K is closed and the coins are deposited by gravity into the coin holder, a wrapper blank is fed into this holder, all as more particularly shown and described in said application Serial No. 64,574. As the present invention is not concerned with the wrapper web feed and the formation of the package, a detailed showing of this mechanism and its associated controls is not considered necessary. Also as this invention is not concerned with the details of construction of the predetermined count mechanism of the prior Buchholz application Serial No. 260,860, only such of the mechanism as is considered necessary to a proper understanding of the present invention has been shown.

The present invention is more particularly concerned with the control of the feed wheel operating solenoid S and a solenoid S' for resetting the predetermined count control mechanism and the coordination of the counter operation with that of the movable coin transfer tube 58 and the wrapper drive mechanism.

Referring to Fig. 12, the letters *a* and *b* designate the main current supply lines having branch conductors *c* and *d* connected to the terminals of the counter drive motor 38, the line *c* having a manually operable "on and off" switch *e* therein. The lines *a* and *b* connect with the terminals of the energizing coil for a solenoid Y which in application Serial No. 64,574 is the solenoid controlling the main drive clutch for the wrapper mechanism. The line *b* has a relay operated wrapper mechanism start switch *f* therein whose coil is connected at one end by a conductor *g* with the line *c* and at its other end to a conductor *h*. A by-pass circuit around the switch *f* is formed by branch conductors *i* and *j* connected with line *b* on opposite sides of switch *f* and adapted to be connected together by a wrapper mechanism control switch K which is controlled by the cam 17. The energizing coil of the counter reset solenoid S' has one of its terminals connected by a conductor *l* with the line *g* and its other terminal connected by a conductor *m* with the conductor *c* between the switch *e* and motor 38. A switch *n* controlled by the coin tube 58 forms part of conductor *m* and controls the reset solenoid S'. The energizing coil of the feed wheel operating solenoid S has one of its terminals connected by a conductor *o* to the conductor *g* and its other terminal connected by a conductor *p* with a contact *q* adapted to be connected by the movable contact carrying arm *r* of a double throw switch *ss* with a conductor *t* connecting with conductor *m* ahead of switch *n*. The arm *r* is normally biased to engage *q* but also is movable into contact with the contact *u* of conductor *h*. When the operator closes the switch *e*, current flows through conductors *b*, *c*, motor 38 and conductors *d*, *a*, and motor 38 then rotates plate 32 and shafts 41 and 42, the hopper 32 having been supplied with coins. At the same time current from line *b* passes through conductors *c*, *m*, *t*, switch arm *r*, contact *q*, conductor *p*, coil of solenoid S, conductors *o* and *g* to line *a*, thus energizing the coil of solenoid S so that through the linkage previously described the feed wheel 35 is swung down to operative position and the feed of coins past the star wheel 36 starts and continues until the predetermined count mechanism stops it.

The predetermined count mechanism shown herein is the same as that of the Buchholz application Serial No. 260,860, and portions of this mechanism are shown in Figs. 5, 7 to 9, and Fig. 13. As indicated in Fig. 1, the counter drive shaft 37 carries a gear 64 which meshes with a predetermined count gear 63, which last named gear meshes with a second predetermined count gear 65. As the feed wheel 35 pushes the coins past the star wheel 36 to drive the shaft 37, the gears 63 and 65 are also rotated. The teeth ratio of these gears is such that by the use of stops such as 63*i* and 65*i* associated through lost motion connections more particularly shown in the aforementioned case with the hubs of the gears, said gears are allowed to make either one revolution or half a revolution to permit the desired predetermined number of coins being fed past the star wheel for the counts of 25, 50, 40, 20 and 1000. The above specified counts are predetermined by the setting of the appropriate key *k*. The function of each key *k* is to move down an associated stop mechanism so that a stop member 68*d* projects into the path of movement of one of the stops, such as 65*i*, on one of the gears. This stop member 68*d* is carried by a lever 68*a* whose movement to operative stop position is controlled by one of the keys *k*. In each instance the stop member 68*d* referred to above is carried by but has limited sliding movement through a pin and slot connection 68*e* and 68*f* with relation to its carrier lever 68*a*, and when set, it is in the path of movement of the appropriate stop on the gear. Each stop 68*a* has a finger projection such as 68*g*. As count control gear 63 or 65 is given a step by step rotation by the drive from the star wheel, its stop contacts the key-adjusted relatively movable stop member 68*d* so as to move this stop member a slight distance before it stops its associated gear and consequently the counter drive shaft 37. This slight movement of the stop member acts through projection 68*g* to move a common swingable spring returned angle bar 73 for all of the stops 68*d* so that it will be moved from its inoperative position shown in Fig. 5 toward the right to the position shown in Fig. 6. The spring 73*e* acting through the pivoted arms carrying bar 73 normally holds it in the position shown in Fig. 5. During this movement the bar 73 comes into contact with and moves a lever 74 pivoted at 74*a* and engageable at its screw carrying end 74*b* in the present case with the end of a switch tappet member or plunger 75*b* slidably guided in the spaced arms of a bracket 72*a* and engageable with a switch actuating arm *dd* which through a button d^2 controls the movement of the arm *r* of the double throw switch. Thus at the end of a predetermined count, lever 74 through the connections above described moves the arm *r* of the double throw switch from the contact *q* to the contact *u*. Breaking of the contact between *r* and *q* deenergizes the coil of the feed wheel solenoid S so that no more coins pass the star wheel, and with the movement of arm *r* to contact *u* a circuit is established through the coil of the relay switch *f*, this circuit being line *b*, conductors *c*, *m*, *t*, switch arm *r*, contact *u*, conductor *h*,

coil of relay *f*, conductor *g*, to line *a*. As soon as the coil of relay *f* is energized, its switch arm closes the open ends of line *b* so that the coil of solenoid Y is energized by current from the lines *a* and *b*. Solenoid Y being energized, the main drive clutch of the wrapping mechanism is closed, and the wrapper mechanism drive then turns the wrapper drive shaft **18** and with it the cam **17**, and the cam then moving off of the actuating roller KK of switch K allows this switch to close so that the circuit will continue to energize the solenoid Y after the switch *f* opens. Just after the cam leaves the roller KK it acts on the roller **20** of the coin transfer tube **58**, and as previously described this transfer tube is then moved from its coin receiving position to its coin delivery position and the coins dropped into the coin holder of the wrapping mechanism which under the control of the wrapping mechanism occurs about the same time as the front end of the wrapper is fed into the coin holder. As soon as the cam leaves the roller **20**, the coin holder is returned. The reset switch *n*, shown in Figs. 13 and 14, unlike the prior application Serial No. 260,860, is operated momentarily by the movement of the coin transfer tube **58** by the spring **19**. As shown in Fig. 13 a resilient switch actuating finger **101** is normally urged at its outer end into engagement with a toothed ratchet member **102** turning on a pivot **103**. The teeth of the ratchet are adapted to be engaged by a pawl **104** pivoted at **105** on an extension **106** of one arm of the coin tube **58**, the pawl **104** being normally urged into engagement with the ratchet by a spring **107**. With this arrangement as the cam **17** swings the tube **58** from the position of Fig. 13 to the position of Fig. 14, the pawl **104** will be disengaged from the ratchet wheel **102**, but as the coin tube **58** under action of spring **19** returns to its coin receiving position, the pawl **104** comes into operative association with the ratchet **102** and acts to move the ratchet one tooth. Since the teeth of the ratchet **102** are at all times in operative association with the outer end of the actutaing arm **101**, this one tooth movement of the ratchet **102** will momentarily move or swing the arm **101** to a switch operating position so as to close the reset switch *n* for a brief interval.

Closing of the switch *n* energizes the reset solenoid S', the circuit being line *b*, conductors *c* and *m*, switch *n*, coil of solenoid S', conductors *l* and *g* to line *a*. Referring to Figs. 3, 4, 8 and 9, the plunger **79** of the solenoid S' is operatively connected by a link **80** with one arm of a bell crank lever **81** whose other arm is operatively connected by a link **82** with a lever **83** pivoted at **84** on frame **72**. A spring **8***a* acting through the lever **81** returns the above named parts to their initial position. The lever **83** through pins **83***a* thereon carries a slidable latch member **85** provided with slots **85***a* in which pins **83***a* work and with a latch portion **85***b* having a cam surface **85***c* and a cam surface **85***d*. Member **85** is normally urged to a latching position by a spring **86**. The latch **85***b* is normally urged to engage over a pin **87***a* on one end of a lever **87** medially pivoted on the frame **72** at **87***b* and carrying a pin **87***c* engageable in a notch **71***d* of the swingable spring returned reset bar **71** of the count determining mechanism so that lever **87** and bar **71** move together. A roller **88** journalled in bearings on the frame **72** cooperates with the cam surface **85***d* to move the latch **85** to a release position on the downward movement of the lever **83** by the solenoid S' through its connection above described with said lever.

With this arrangement, when the reset bar **71** is in its lowered position (see Figs. 3 and 5) during a counting operation the lever **83**, under the action of spring **8***a*, lever **81** and link **82**, is in its raised position and the latch **85***b* is engaged over the pin **87***a* of the lever **87**. As soon as the solenoid S' is energized by the closing of reset switch *n*, its plunger **79** acting through link **80**, lever **81**, link **82**, lever **83**, and latch **85** pulls the latched end of the lever **87** downwardly to near the position shown in Fig. 8, thereby through pin **87***c* raising the bar **71** to its reset position, and immediately thereafter the cam surface **85***d* engages the roller **88** to push the latch **85** to the release position shown in Fig. 8 as the solenoid operated lever **83** moves to its lowest position. With the parts in the position shown in Fig. 8, the spring **71***c* acting through the bar **71** swings the lever **87** back to its initial position indicated in Fig. 5. As noted above, the pawl and ratchet mechanism controlled by the coin transfer tube **58** only momentarily closes the switch *n* to energize solenoid S' so that the reset bar **71** is raised to reset the counter mechanism stop **68** by the engagement of this bar with the finger projection **68***b* of any set stop (see Fig. 9). As soon as switch *n* opens, the lever **83** and latch **85** are swung upwardly by the spring **8***a* to a latched engagement with lever **87** (see Fig. 3), the cam surface **85***c* of latch **85** during this movement engaging the pin **87***a* which acts against said surface to push the latch **85** backwardly against the action of the spring **86** until the latch **85***b* can snap by and latch over the pin **87***a* ready to repeat the cycle. The counting cycle is repeated when the switch arm *r* moves from contact *u* to contact *q* which occurs as soon as the reset bar **71** reaches its inoperative position shown in Fig. 5 since at that time the stops **68***d* have been moved back by the spring returned bar **73**, and this bar is free of lever **74** so that spring arm *dd* may act to push plunger **75***b* and lever **74** back to their initial position and since arm *dd* releases its pressure on the button d^2, the arm *r* returns into contact with contact *q* and at the same time the circuit to coil of relay switch *f* is opened. Thus the energization of the coil of switch *f* and solenoid S' is only for a brief interval during the time the counter is being reset and the transfer tube **58** is operating. The use of the relay switch *f* in the circuit of Fig. 12 is to avoid separate plug connections for the circuits controlling the counter mechanism and also to close the circuit to the wrapper feed control solenoid Y to start the drive of shaft **18** to move cam **17** off of the roller KK so that switch K can then continue to keep the solenoid Y energized until it is again opened by the cam **17**. To insure the switch arm *r* remaining closed with contact *u* during this brief interval, latch mechanism has been provided for holding switch actuating plunger **75***b* against accidental release.

Referring to Figs. 3 to 6, the plunger **75***b* has a large cylindrical portion **108** and a smaller cylindrical portion **109** to provide a locking shoulder **110** which is adapted to be engaged by a latch **111** when as previously noted the lever **74** moves the plunger **75***b* inwardly to move switch actuating arm *dd* and button d^2 to move the arm *r* of the double throw switch to engage contact *u* to stop the counter and permit energizing of the solenoid S' on the closing of reset switch *n*. The latch **111** is in the form of a lever medially pivotally mounted on frame parts at **111***a* and having one arm normally urged by a spring **112** against plunger portion **108** so that as plunger **75***b* is moved toward the left as viewed in Fig. 5, past the shoulder **110**, this arm will snap down behind said shoulder and engage the portion **109** as shown in Fig. 6. The other arm **113** of the latch **111** extends outwardly to position under the lever **81** of the counter reset mechanism so that as the solenoid S' is moving the lever **81**, link **82** and lever **83** downwardly the lever **81** will engage this arm **113** and acting against the spring **112** will tilt the latching end of the lever latch **111** upwardly to release its latched engagement with the plunger **75***b* so that arm *dd* can return plunger **75***b* to the position shown in Fig. 5 and Fig. 4 and so that on the deenergization of solenoid S' and the upward movement of lever **81**, link **82** and lever **83** to the position shown in Fig. 3 the lever **81** will be clear of the arm **113** so that on the next cycle it will snap down into its locked position as above described.

It is to be noted that the count control mechanism herein described may be used with counting machines of the

general type above described in which instead of the counting wheel being continuously driven, said wheel is driven intermittently by a clutch connection with a continuously rotating shaft as, for example, in the prior U. S. Patent No. 2,378,828, to A. R. Buchholz et al., of June 19. 1945, in which instance the solenoid S herein instead of acting to move the drive shaft from an inoperative to an operative position would be used to effect engagement of the clutch without departing from the invention.

It is also to be noted that this invention may be used with the wrapper blank forming mechanism of my copending application Serial No. 315,116, filed October 16, 1952.

From the above description it will be noted that for a counting machine having a solenoid operated coin feed and predetermined count mechanism actuated by the counted coins that this solenoid is automatically controlled by a supply circuit including a double throw switch which in one position causes said solenoid to be energized and that in its other position controls the energization of a relay switch controlling a wrapper drive mechanism and that a coin transfer tube between the counting machine and the wrapper mechanism controls a switch in a circuit including a solenoid which through counter reset mechanism acts to reset the predetermined count mechanism.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. In coin handling apparatus including a counting machine, wrapper mechanism and a movable coin transfer tube for delivering a predetermined number of coins received from said counting machine to said wrapper mechanism for packaging and controlled by said wrapper mechanism, said coin counting machine including a coin operated counter drive member, feed means engageable with the coins for forcing the same past said member, settable predetermined count control mechanism operated by said member, a solenoid operatively connected to said feed means for controlling its effective feed, and resetting mechanism for said predetermined count control mechanism including a solenoid, the combination of a current supply circuit for said solenoids including a source of current and control switches, one of said switches being controlled by said predetermined count control mechanism to deenergize said first named solenoid at the end of a predetermined count of coins by said coin counting machine to release its control of said feed means, and means actuated by said movable coin transfer tube to actuate the other of said switches to energize said second named solenoid to permit the resetting of said predetermined count control mechanism by said resetting mechanism as said coin transfer tube moves to a position to receive coins from said coin counting machine.

2. In a coin handling apparatus including a counting machine, wrapper mechanism having a drive control including a solenoid, and a movable coin transfer tube for delivering coins received from said counting machine to said wrapper mechanism and controlled by said wrapper mechanism, said coin counting machine including a coin feed control solenoid, settable predetermined count control mechanism, and resetting mechanism for said predetermined count control mechanism including a reset solenoid, the combination of a current supply circuit for said solenoids including a source of current, and a control switch for each of said solenoids, one of said switches being a relay operated switch to energize the drive control solenoid for said wrapper mechanism to establlish the drive for the wrapper mechanism, another of said switches being controlled by said predetermined count control mechanism to deenergize said coin feed control solenoid at the end of a predetermined count of coins for said coins by said counting machine to release its control of said feed means and operate the relay of said relay operated switch, and the third of said switches being actuated by means actuated by said coin transfer tube to energize said reset solenoid to permit the resetting of said predetermined count control mechanism by said resetting mechanism as said coin transfer tube moves to a position to receive coins from said coin counting machine.

3. In a coin handling apparatus including a counting machine having feed means engageable with the coins, a solenoid operatively connected to said feed means for controlling its effective feed, settable predetermined count control mechanism and resetting mechanism for said predetermined count control mechanism, the combination of a current supply circuit for said solenoid including a source of current and a control switch for said solenoid, means operated by said predetermined count control mechanism at the end of a count to move said switch to open position at the end of a count, latching means for holding said switch in open position, and means operable by the counter resetting mechanism to release said latching means after the predetermined count control mechanism is reset.

4. In a coin handling apparatus including a counting machine, wrapper mechanism including a driven shaft and a swingable coin transfer tube for delivering coins received from said counting machine to said wrapper mechanism, means operable by said driven shaft for swinging said transfer tube from a coin receiving position to a coin delivery position, means for returning said transfer tube to coin receiving position, said coin counting machine including settable predetermined count control mechanism and resetting mechanism for said predetermined count control mechanism including a reset solenoid, the combination of a current supply circuit for said solenoid including a source of current and a control switch for said reset solenoid, and means including a pawl carried by said transfer tube and a ratchet for closing said switch operable by said pawl as said transfer tube moves to coin receiving position.

References Cited in the file of this patent

UNITED STATES PATENTS

2,679,849 Buchholz ---------- June 1, 1954