

Oct. 14, 1952

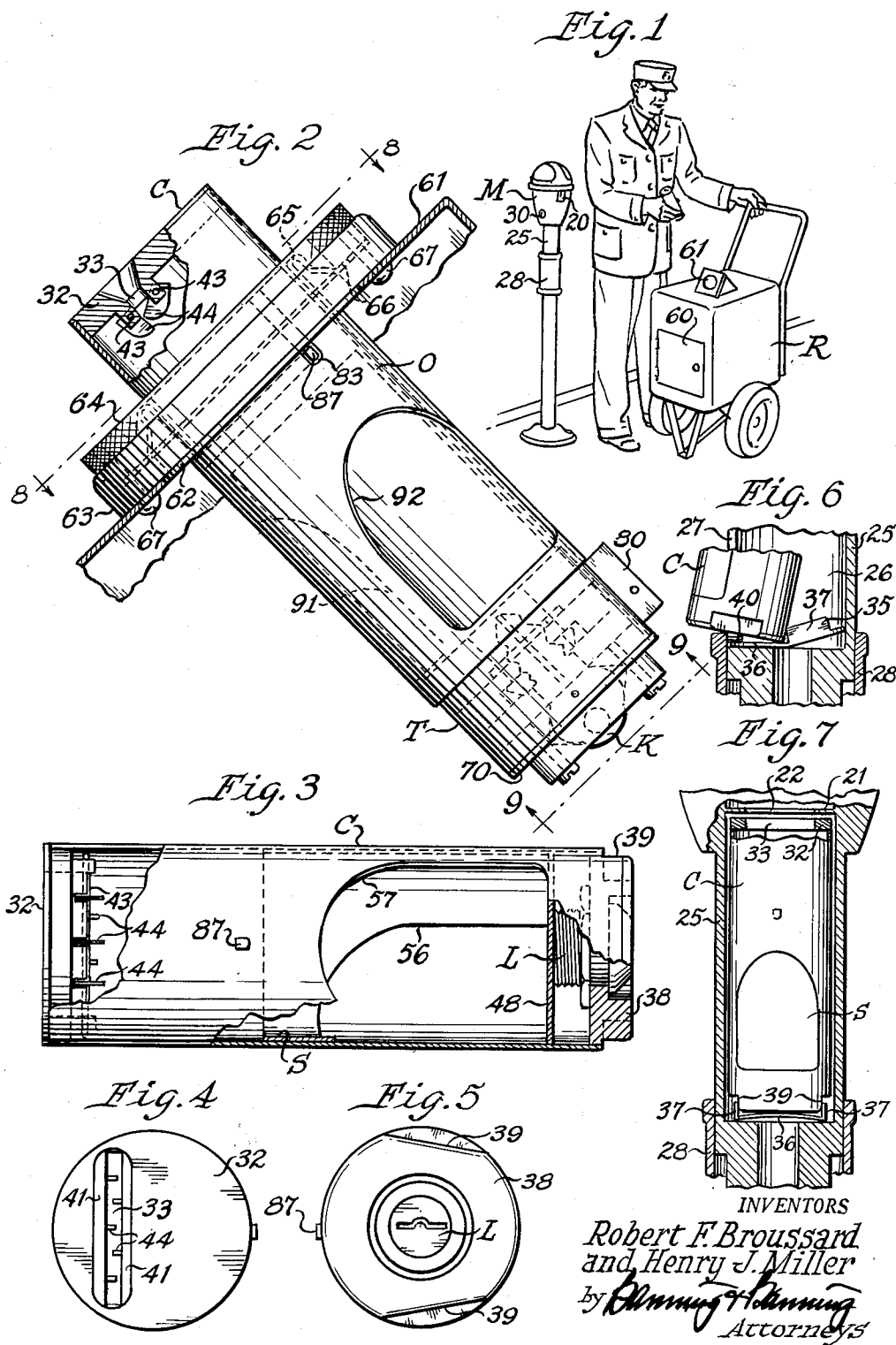
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2,613,871

COIN HANDLING APPARATUS

Filed April 12, 1949

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COIN HANDLING APPARATUS

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Fig. 8

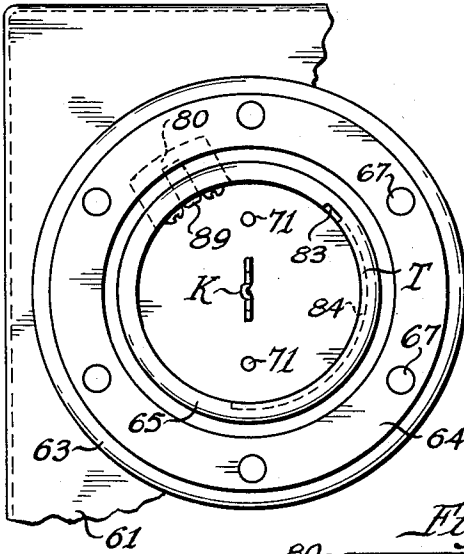


Fig. 9

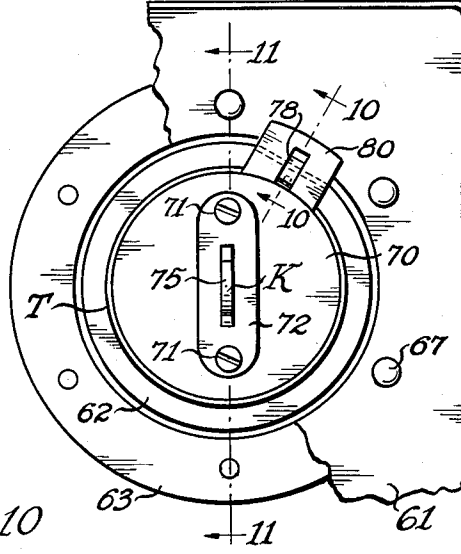


Fig. 10

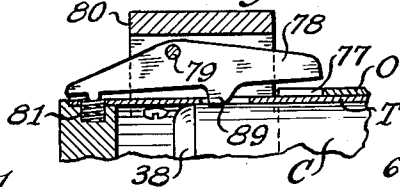


Fig. 11

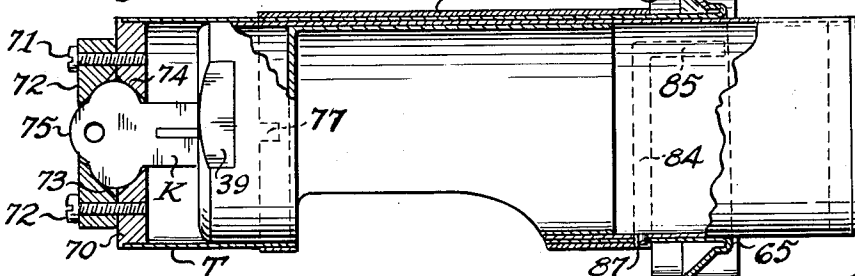


Fig. 19

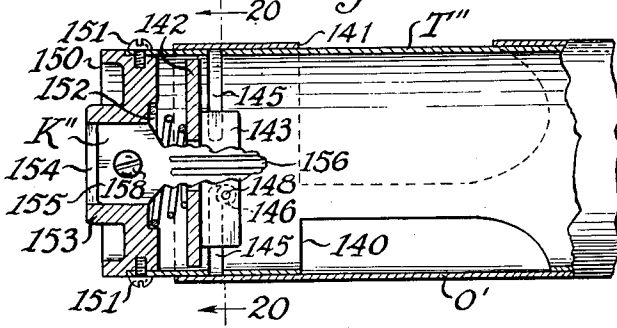
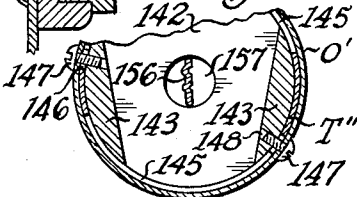


Fig. 20



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Fig. 12

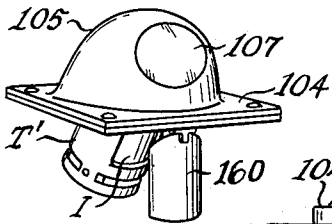


Fig. 13

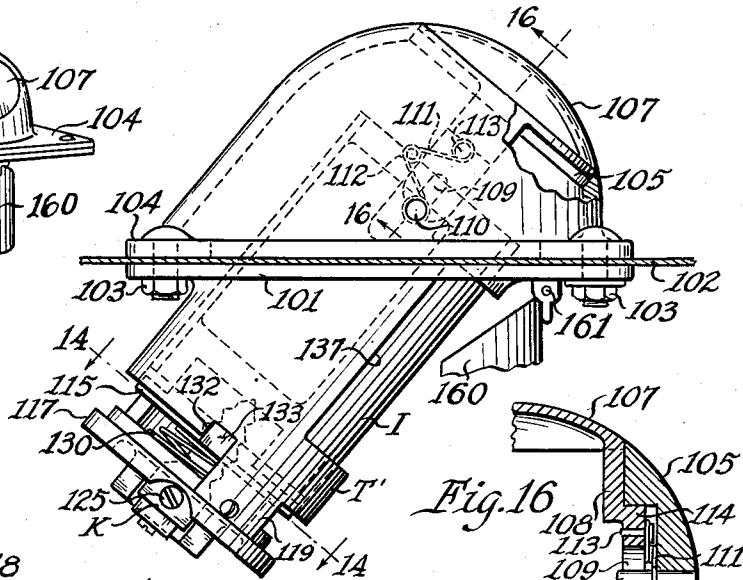


Fig. 14

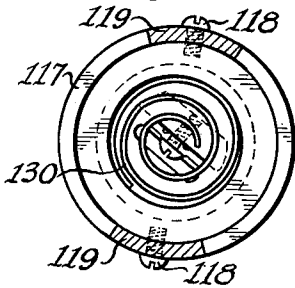


Fig. 18

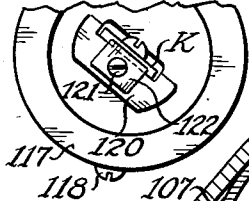


Fig. 17

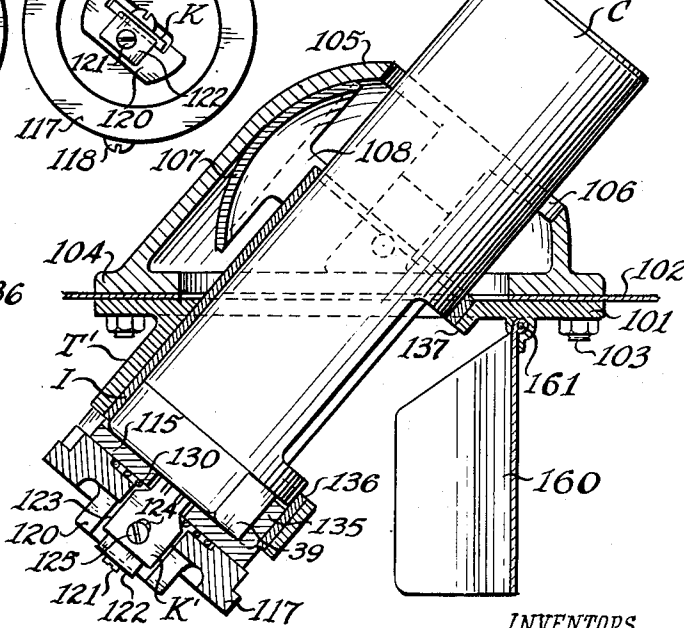
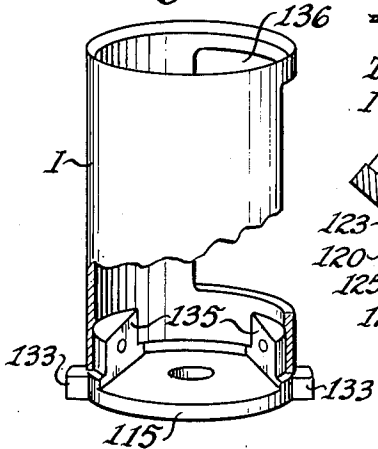


Fig. 15



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UNITED STATES PATENT OFFICE

2,613,871

COIN HANDLING APPARATUS

Robert F. Broussard, Houston, Tex., and Henry J. Miller, Chicago, Ill., assignors, by direct and mesne assignments, to Duncan Parking Meter Corporation, Chicago, Ill., a corporation of Illinois

Application April 12, 1949, Serial No. 87,066

10 Claims. (Cl. 232—16)

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This invention relates to a coin box in the form of a tubular cartridge adapted for use with a mechanism which is coin-operated or coin-actuated, a parking meter being the example herein disclosed. The primary object of this invention is to provide a cartridge having means which will prevent unauthorized theft of coins therefrom while permitting the cartridge to be moved bodily to a collection container into which the coins may be automatically released by gravity. By use of a coin cartridge of this description, the collector whose duty it is to empty each cartridge is powerless to tamper with the coins at any stage during the transfer of the cartridge from the coin mechanism to the collection container.

A feature of the present invention is the provision of a sleeve rotatably assembled with the cartridge and adapted to be operated only in response to a torsional force which is applied thereto from a key which is fixedly mounted in the collection container into which coins accumulated within the cartridge are to be transferred by an authorized collector. Both the cartridge and the sleeve are formed with lateral openings, adapted to be positioned in register only when the sleeve has been rotated as the result of operation from a key such as the one above referred to; at all other times, when the cartridge is separated from the collection container, the opening in the cartridge is closed by the sleeve which occupies the proper rotative position for this purpose.

A further feature which characterizes this invention is the provision in the collection container of a receiving tube in which the cartridge is fitted when a transfer of coins is to be made thereto. This tube is also equipped with a co-operating collar fitted rotatively thereto. Either the tube or the collar is fixedly carried by the container, so that the associated part will be free to rotate relative thereto. Lateral openings in both the tube and its collar are provided to permit coins to pass therethrough into the collection container, but only when these two openings are positioned in register. Operation of the collar or tube, as the case may be, may be produced only by the cartridge which becomes the operating medium therefor. The key which is fixedly mounted at the base of the tube controls the operation of the sleeve within the cartridge, and the latter, when rotated, then transmits a corresponding motion to the tube, or to the collar assembled therewith, whereby to uncover the lateral opening in the tube or collar to open up com-

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munication therethrough. The opening movements of the sleeve in the cartridge, and of the tube or collar associated therewith, proceed concurrently, and the same is true of the closing movements which take place preliminary to separation of the cartridge from the collection container.

By the means described we provide ample protection for all coins which accumulate in the cartridge so that tampering therewith at any stage in the transfer operation is effectively prevented; also the collection container is maintained closed at all times except when a cartridge is fitted thereto for transfer of its coins thereinto. In this way the collector who is responsible for these operations is prevented from access to either the cartridge or to the container and consequently is under no suspicion in connection therewith.

The cartridge of my invention is characterized by certain improved features in its construction and operation, all as will hereinafter be described in detail in conjunction with the accompanying drawings wherein—

Figure 1 is a view in perspective of a collector in the act of transferring a coin cartridge from a parking meter to a mobile receiving container;

Fig. 2 is an elevational view of the coin cartridge applied to the receiving tube (shown in section) of the container;

Fig. 3 is a side elevation of the coin cartridge, broken away at places to exhibit the construction interiorly thereof;

Fig. 4 is an elevational view of the receiving end of the cartridge;

Fig. 5 is a similar view of the opposite end thereof;

Fig. 6 which is a fragmentary view through the lower end of a cartridge compartment in a coin mechanism shows in elevation a kick-out device whereby the cartridge is displaced outwardly at its lower end preliminary to its removal from the compartment;

Fig. 7 is a view in sectional elevation looking toward the coin cartridge when in its position within the compartment therefor that is provided in a coin mechanism;

Fig. 8 is a view in elevation, looking on line 8—8 of Fig. 2, the cartridge being removed from the view;

Fig. 9 is a view in elevation, looking on line 9—9 of Fig. 2;

Fig. 10 is a fragmentary detail in section, taken on line 10—10 of Fig. 9;

Fig. 11 is a longitudinal section through the

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cartridge and the receiving tube therefor, taken on line 11—11 of Fig. 9;

Fig. 12 is a view in perspective of a head of modified construction, designed for installation upon the top of a container for receiving accumulated coins from a cartridge;

Fig. 13 which is a vertical section through the container top shows the associated head in side elevation;

Fig. 14 is a transverse section, taken on line 14—14 of Fig. 13;

Fig. 15 is a perspective view, partly broken away, of the collar which is fitted interiorly of the tube that is fixedly carried by the container top;

Fig. 16 is a detail in section, taken on line 16—16 of Fig. 13;

Fig. 17 is a longitudinal section through the head-tube assembly with a cartridge fitted therein for release of coins therefrom;

Fig. 18 is a fragmented view in elevation, looking toward the inner end of the chute tube;

Fig. 19 is a longitudinal section through a head-collar assembly of modified construction; and

Fig. 20 is a transverse section therethrough, taken on line 20—20 of Fig. 19.

By way of example, a coin-operated machine M in the form of a parking meter is shown in Fig. 1, but so far as concerns the present invention it might just as well be a coin-actuated or coin-operated machine for nearly any conceivable purpose. The machine is provided with a coin entry slot 20 connected by a suitable chute or otherwise with a separating plate 21 having a discharge slot 22 (see Fig. 7) through which descending coins are guided in any appropriate way.

Below the separating plate the machine casing is formed into a cylindrical neck 25 providing therewithin a chamber 26 for the reception of a coin box C. A side opening 27 in the neck affords clearance for movement of the box into and out of the chamber 26. I provide for this chamber a door which may take the form of a sleeve 28 which is slidably fitted around the neck and which will cover or uncover the neck opening 27 according as it is raised or lowered, respectively. The door is locked by a suitable key-operated lock 30, such as is disclosed in Patent 2,483,805, dated October 4, 1949, whereby to secure the door in its upper or covering position.

The coin box C with which we are here concerned may be termed a "receiver." Its form is that of a tubular cartridge having at its top end a closure head 32 through which is a coin inlet slot 33 adapted to lie oppositely of and below the discharge slot 22 in the separating plate when the cartridge is operatively positioned within the chamber 26. A displacer 35 for the cartridge is also positioned within the chamber. As shown, this device is an angled plate that is tiltably mounted at the base of the chamber with a sill portion 36 extended into the neck opening 27 to fix the rotative position of the displacer therewithin. From opposite sides jaws 37 upstand from the displacer, these jaws being slanted away from each other toward the neck opening 27.

The cartridge which is adapted to rest on the displacer when placed within the chamber 26 has depending from its bottom end 38 a block with opposed wedge faces 39 slightly converging, which may enter between the jaws 37 to be engaged thereby whereby to fix the rotative position of the cartridge so that its coin inlet slot 33 will align with the discharge slot 22 in the separating plate thereabove. The displacer sill 36 stands in the

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path of a pin 40 which is carried by the sleeve 28 so as to be engaged thereby at the conclusion of its downward movement. The displacer is then rocked to the position of Fig. 6 whereby to shift the lower end of the cartridge outwardly where grasping thereof by the fingers is facilitated.

Referring now particularly to Figs. 2-4, adjacent the coin inlet slot 33 are flaring walls 41 which provide means for guiding the successive descending coins thereinto. Within the cartridge and at opposite sides of the inlet slot 33 is a pair of rock shafts 43 carried in suitable mountings which depend from the top head 32. Each rock shaft carries, fixedly or otherwise, a plurality of spaced-apart dogs 44 occupying spaced-apart positions which are staggered with respect to each other. Normally each set of dogs depends by gravity to cooperate with the other set so as to offer an obstruction to movement of any coin outwardly through the inlet slot 33. By some such means as this, we provide a gravity-operated gate which effectively prevents a reverse outward movement of coins through the inlet slot 33, thereby enhancing the protection afforded to the coins contained within the cartridge.

The cartridge comprises in its assembly an inner sleeve S which is rotatably fitted therein in its lower end portion. The upper end of the sleeve is open so as to receive the coins which enter into the cartridge through its inlet slot 33 at the top. The sleeve is provided with a bottom 48 to which is fixedly secured the inner end of a rotatable plug forming part of a key-operated cylinder lock L which is mounted on the cartridge bottom 38. By application of a proper key, as hereinafter described, the sleeve S may be held stationary while the surrounding cartridge C is rotated through a limited distance. The sleeve is formed with a large side opening 56 and a similar opening 57 is formed in the cartridge at a corresponding axial position. In the normal position of the sleeve, its opening is closed by the cartridge whose opening 57 is misaligned therewith. There is then a fully closed receiver from which coins may not be removed. In order to condition the receiver for discharge of all coins which have accumulated therein, the sleeve is held stationary by the use of a proper key and the cartridge is rotated to bring the opening 57 thereof into alignment with the opening 56 of the sleeve.

From the description up to this point it will be noted we have provided a cartridge which has an inlet opening to receive coins when the receiver is operatively installed within the coin machine. At such times the sleeve S occupies a closed position relative to the lateral opening of the cartridge so that the way is blocked for removal of any coins therefrom. When in use, the cartridge is also protected by the sleeve 28 which bars access to the chamber wherein the cartridge is contained. Except when proper keys are available for operating the door-lock whereby to remove the cartridge, and then for rotating the sleeve to an open position to free the coins, access to the interior of the receiver remains barred.

We provide also a container R to which transfer is made of coins accumulated in the cartridges of the machines comprised in the same circuit. Such a container may be portable or be mounted on wheels, as shown in Fig. 1. It is provided with a normally-locked door 60 which, when opened, permits removal therethrough of the coins which have been transferred thereto. The container

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top may be equipped with a small head having an inclined wall 61 wherein is a large aperture 62 surrounded by an annulus 63 formed with an upwardly-facing seat to receive a clamping ring 64. A tube T which is extended through the aperture 62 is reversely bent near its upper end at 65 and then outwardly flared and laterally extended at 66, thereby providing a flange which fits in between the annulus seat and the clamping ring 64, the latter being tightly and permanently secured to the annulus and to the container head as by means of a plurality of rivets 67. In some such way as this the tube T is fixedly secured to the container head wall 61 so as to expose its upper open end exteriorly of the container while extending therewithin for a substantial distance, as clearly indicated in Fig. 2, thereby providing, in effect, a chute for the coins which are to be discharged into the container.

The inner end of the tube T is closed by a head 70 whereon is carried, with the aid of clamping screws 71, a block 72 having therein an elongated slot 73 which registers with a complementary slot 74 that is formed in the head 70 diametrically thereof. The two slots 73 and 74 are of increased length as they approach each other so as to receive and confine therebetween the head end 75 of a key K whose bitted shank is extended into the tube T axially thereof. The cartridge C is of proper size to be entered into the tube T for a sliding and rotatable fit therewithin and, when advanced axially thereof for a sufficient distance, to receive into the slot of its lock L the shank of the key K which then serves as an operating medium therefor.

An outer collar O is rotatably fitted upon the tube T to extend inwardly from near the annulus 63 to a point somewhat short of the bottom of the cartridge when the latter is positioned operatively within the tube (see Figs. 10 and 11). A notch 77 is formed at the inner end of the outer collar O, and opposite thereto is the acting end of a latch arm 78 pivotally mounted at 79 in a slotted block 80 which is affixed to the tube T at a point where it may engage with the proximate end of the outer collar O to hold the latter against endwise sliding movement in one direction. A spring 81 urges the latch arm to a position of engagement with the notch 77 whenever the outer collar O is rotated to the correct position for this purpose.

At its outer end the outer collar is provided with a second notch 83 which lies oppositely of the transverse branch 84 of a bayonet slot whose longitudinal branch 85 opens out upon the outer end of the tube T wherein this bayonet slot is formed. This slot and also the notch 83 is adapted to receive a stud 87 which protrudes radially from the cartridge C, but only when the latter is rotatively positioned properly for the purpose. In advancing the cartridge with the tube T, the stud 87 requires that the movement be axial up to the point of the stud reaching the juncture of the two branches of the bayonet slot; from that point on the movement is rotative with the stud transmitting a like movement to the collar O. Preliminary to start of this rotative movement, the lower or inner end portion of the cartridge will have advanced within the tube T a distance sufficient to engage a cam 89 (see Fig. 10) on the latch arm 78, thereby causing its acting end to be rocked away from and out of the notch 77 of the collar O where it normally remains to lock this collar against rotation. With the latch arm thus operated to inoperative posi-

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tion, the collar O is free to rotate in response to the turning movement that is transmitted thereto by the stud 87 of the cartridge under manipulation.

The tube T is formed with a lateral opening 91 and a like opening 92 is formed in the collar O, the one opening being registrable with the other when the collar is turned to the requisite rotative position for this purpose in response to turning movement transmitted thereto from the cartridge; both openings 91 and 92, when in register with each other, are also in register with the cartridge and sleeve openings 56 and 57 when the latter are in register with each other. Such a coincidental relationship is assured by utilizing the fixed key K which is carried by the tube T as the medium for holding the sleeve S while the cartridge C is turned, and by utilizing the turning cartridge as the medium for rotating the collar O upon the fixed tube T. All four openings, when in register, face downwardly so that the coins contained within the cartridge will discharge therefrom by gravity into the container R.

Removal of the cartridge from the tube T involves only a reversal of the movements just described. Before the cartridge can be withdrawn axially it must be turned through approximately 90°, and in so doing it rotates the collar O back to the position where the rocking arm will again engage the notch 77 to lock the collar in its position of closure relative to the lateral opening 91 of the tube. Also in this same movement the inner sleeve S is similarly rotated to a closure position so that when the cartridge commences its axial movement outwardly from the tube T the lateral discharge opening of the cartridge will have been closed, thereby conditioning the cartridge for replacement in the coin machine M.

The tube-collar assembly just described is characterized by the collar O being applied to the exterior of the tube, by the provision of a latch which normally locks one to the other to prevent relative rotation, this latch being operated by axial advance of the cartridge so as to free the collar for rotation when a turning movement is imparted thereto, and by a bayonet slot in the tube to receive therethrough a stud projecting from the cartridge for engagement with a notch in the collar whereby to provide an operating medium therefor.

In Figs. 12-18 we have illustrated a modified construction of the container receiving-tube designed for reception of, and operation by, a cartridge-sleeve assembly such as the one already described. The explanation to follow will accordingly be concerned primarily with the head at the container top and the tube assembly associated therewith.

The tube T' is here shown to depend from a circular plate 101 with which it may be integrally joined, this plate being affixed to the under face of the container top wall 102 as by means of bolts 103 which pass therethrough and through the base plate 104 of a fitting 105 which is fixedly positioned upon the top face of the same wall. The fitting is shaped to provide a hood having an opening 106 directly opposite the outer end of the tube T' and in spaced relation thereto. There is also provided for the hood opening a closure cap 107 in the form of a round concavo-convex plate that is carried between the free ends of a pair of arms 108 having slots 109 extended inwardly from their opposite ends; a pin 110 anchored to the hood extends inwardly thereof a sufficient distance to engage the slot

109 of the proximate arm and to provide therefor an axis about which the closure cap may both rotate and slide; and a wire spring 111 which is looped around each pin 110 and then extended away and through coils 112 to connect with a second pin 113 on the proximate arm 108, serves to press the closure cap outwardly. The arms are offset to provide shoulders 114 for engaging the periphery of the hood opening when the cap 107 is positioned therewithin to afford a stop therefor. Pressure from the springs 111 will hold the cap securely in this closure position. To uncover the hood opening 106, the cap is pushed in enough to clear the inner face of the wall of the hood and then swung leftward (as viewed in Fig. 17) as far as necessary for a full exposure of the outer open end of the tube T' within the hood. When so disposed the continuing spring pressure will maintain the cap in frictional engagement with the hood interiorly thereof so as to hold the cap in whatever position it has reached. At the conclusion of a coin transference operation the cap may again be manipulated to swing over into the hood opening 106 to provide a closure therefor.

The fixed tube T' provides a mounting for a rotatable collar I interiorly thereof. The bottom 115 of this collar is centrally apertured to receive therethrough a key K' which is carried by a holder in the form of a plate 117 which is secured, as by screws 118, to opposite lugs 119 which are extended from the tube T' beyond the inner end thereof. Depending from the holder plate 117 is a lug 120 having a tapped hole in its end to receive a screw 121 which traverses a leaf spring 122 which is angled to lie in part between the handle of the key K' and a shallow recess 123 in the lug face confronted by the key. The key handle is formed with a longitudinal slot 124 through which is entered the shank of a screw 125 which is anchored in a tapped hole in the lug 120. Such a mounting for the key permits a limited longitudinal movement thereof against the tension of the spring, and also a limited rocking movement of the key within the confines of the recess 123 which is slightly wider than the key handle (see Fig. 17). This is an important feature because the key is thereby enabled to adjust itself correctly to the lock L, or vice versa, when the cartridge is fitted operatively in place within the fixed tube T'.

A coiled spring 130 is seated in the holder to exert an outward pressure upon the collar bottom 115 thereby tending to maintain the collar I in the endwise position shown. Adjacent each lug 119 is a notch 132 for receiving a wing 133 which is extended radially outwardly from the collar I, the two wings being disposed about 180° apart at the inner end portion of the collar (see Fig. 15). When the wings are engaged within the notches 132, the collar I will be locked non-rotatably to the tube T', and it may be freed for rotation relative thereto only when first advanced endwise against the pressure of the spring 130.

Interiorly of the collar I, adjacent its bottom, is a pair of spaced jaws 135, 135 slanted in conformity with the opposite walls 39 of the block at the bottom end of the cartridge C. When the latter is fitted into the collar I, the slanted walls 39, 39 and jaws 135, 135 will interengage to furnish a ready means to transmit from the cartridge to the collar I a rotary motion whereby to bring into register two lateral openings, one (136) in the collar I and the other (137) in the tube T'.

When assembled with the tube T', the collar I is locked in place with capacity for rotation relative thereto between two positions in one of which the two lateral openings 136 and 137 are in register and in the other of which the collar opening 136 is closed by the wall of the tube T'.

The tube-collar assembly last described is characterized by the collar I being applied to the interior of the tube with capacity for a limited endwise movement therein in opposition to the tension of a spring, by the provision of a lock which normally prevents rotation of the collar but which is rendered ineffective when the collar has been axially shifted by the inserted cartridge, and by a pair of jaws within the collar engageable by the block at the inner end of the cartridge to transmit a turning movement from the cartridge to the collar.

In Figs. 19 and 20 there is shown a construction in which an exterior collar O' is assembled with a tube T'' in surrounding relation thereto. The tube in this case, as in the constructions previously described, has a fixed mounting on the container top and is extended, in part, into the interior thereof where it is provided with a lateral discharge opening 140. A complementary opening 141 is formed in the collar O' so that, when in register, coins may fall out by gravity into the container for accumulation therewithin. The tube T'' extends inwardly somewhat further than the collar O' and near its inner end is provided with a disc bottom 142 to which is joined a pair of jaws 143 which are slanted in conformity with the opposite walls 39 of the block at the bottom end of the cartridge C the same as previously described herein.

There is formed in the tube T'' a circumferential slot 145 extending through approximately 90° with one end of the slot laterally turned outwardly at 146 for a slight distance. Two such slots, one a duplicate of the other, may be provided upon opposite sides of the tube T''. In engagement with each slot is a pin which may take the form of a screw 147 that is carried by the collar O' and anchored in a tapped hole 148 that is provided in the jaw 143 opposite thereto. In the closed position of the collar shown in Fig. 19 the pin occupies a position at the outturned end 146 of the slot 145 so as to lock the collar against rotation. To rotate the collar to open position, the collar is shifted axially inwardly in response to endwise pressure transmitted by the cartridge, whereupon the pin 147 lies opposite the circumferential portion of the slot 145 in position to be advanced rotationally therinto. In this assembly it will be noted that it is the collar O' on the outside which is joined to the disc bottom 142 on the inside of the fixed tube T'', and that the interconnecting pins 147 pass through circumferential slots in the tube whereby to determine the rotative capacity of the collar and the conditions under which it is free to operate, and that these same interconnecting pins provide the medium for transmission of motion to the collar from the disc bottom when the latter is operated by a cartridge when engaged therewith.

In this construction there is also comprised a key holder 150 in the form of a plate which is secured, as by screws 151, at the inner end of the tube T''. A coiled spring 152 is seated in the holder plate to exert an outward pressure upon the disc bottom 142 thereby tending to maintain the pins 147 in the outturned ends 146 of the slots 145 at all times when the lateral discharge openings 140 and 141 are closed, as shown in Fig.

19. The holder plate is formed upon its inner side with a boss 153 wherein is formed a diametric slot 154 for reception of the handle 155 of a key K'' whose bitted shank 156 is extended outwardly through a central aperture 157 for projection interiorly within the tube T'' and in operative position relative to the lock L that is mounted in place at the inner end of the cartridge C designed for association therewith. A screw 158 traversing the boss 153 passes through the key handle 155 whereby to anchor it in place and non-rotatably with respect to the holder plate 150.

With this construction the cartridge serves as the operating medium as hereinbefore described. The cartridge is advanced axially into the tube T'' and positioned rotatively therein with its slanted walls 39, 39 between the coacting jaws 143, 143 at the inner end of the collar; a further axial movement is also required to shift the collar endwise against the tension of the spring 152 to the point of positioning the pins opposite the circumferential slots 145. As a result of these manipulations, the key K'' will have operatively engaged the lock L of the cartridge so that in the ensuing rotational movement which is imparted to the cartridge (a) its own sleeve S will be turned to the coin discharge position and (b) the outer collar O' of the tube T'' will also be turned to a like discharge position. Engagement of the key K'' with the lock L will prevent axial withdrawal of the cartridge until after a reverse rotary movement has taken place, thus assuring closing of the lateral openings in both the tube T'' and cartridge C before separation of one from the other can take place.

For further protection of the coins which are transferred into the container R from time to time, we provide a depending apron 160, pivoted at 161 to the under side of the plate 101 (see Figs. 13 and 17) and normally hanging vertically opposite the discharge opening 137 of the tube T' which faces upon its under side. Should one succeed in rotating the collar I to the position wherein the discharge opening 137 of the tube T' is uncovered, it will still be necessary to substantially invert the container R to induce a gravity movement of coins outwardly through the tube. In any such position the apron 160 will be swung by gravity to a position of closure relative to the coin discharge opening 137 in the tube T', thereby preventing any coins from entering thereinto for passage outwardly therefrom.

The tube-collar assembly last described is characterized by the collar being applied to the exterior of the tube with capacity for a limited endwise movement therein in opposition to the tension of a spring, and by a disc bottom within the tube near the inner end thereof in fixed connection with the collar exteriorly of the tube by means which permits the transmission thereto of a rotary movement only when the collar is in the single rotative position wherein the coin discharge opening is closed, the disc bottom being provided with a pair of jaws engageable by the cartridge which then serves as the operating medium by which to concurrently open its own coin discharge opening as well as that in the tube.

We claim:

1. In a coin apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to have inserted into it a coin-receiv-

ing cartridge provided at one point with a radially projecting stud, a collar surrounding the tube and rotatable relative thereto, there being a discharge opening in the tube and a coacting opening in the collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotative positions relative to the tube, there being a notch in the collar and oppositely thereof a bayonet slot formed in the tube, the slot having a longitudinal portion in registry with the notch to permit insertion of the cartridge in the tube in a position wherein the stud passes through the slot to engage the notch in the collar, the slot also having an arcuate portion branching at right angles from its longitudinal portion to permit the cartridge to rotate and transmit its rotary movement to the collar, and means for limiting the range of rotative movements of the collar.

2. In a coin apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to have inserted into it a coin-receiving cartridge, and a collar surrounding the tube and rotatable relative thereto, there being a discharge opening in the tube and a coacting opening in the collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotative positions relative to the tube, there being formed in the tube a circumferential slot having at one end a longitudinal extension and in the collar a notch at a point opposite the longitudinal extension of the slot to receive a stud projecting radially from the cartridge whereby to transmit turning movements therefrom to the collar through a range commensurate with the length of the slot.

3. A coin apparatus according to claim 2 in which means is provided for normally locking the collar in its closed rotative position and which is engageable by the cartridge to free the collar for rotation preliminary to effective transmission of a turning movement thereto.

4. In an apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof, the interiorly arranged portion of the tube providing a support for a non-rotatable key extending axially of the tube toward its outer end, a collar assembled with the tube and permanently mounted thereon and constituting a portion of the container and rotatable relative to the tube, there being a discharge opening in the tube and a coacting opening in the collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotative positions relative to the tube, and an operating medium for the collar comprising a cylindrical coin-receiving cartridge together with a sleeve assembled in unitary relation therewith for rotation relative thereto, there being in the cartridge and its assembled sleeve coacting discharge openings arranged to register only when the sleeve occupies a predetermined rotative position relative to the cartridge, a cylinder lock having a plug carried by the sleeve and engageable by the key within the tube when the cartridge is inserted therein for holding the sleeve stationary when the cartridge is turned whereby the coacting discharge openings of the sleeve and cartridge may be brought into register, and axially-separable interengaging motion-transmitting means on the cartridge and collar for operating the latter to its open position coincidentally with

effecting registration of the coacting discharge openings of the cartridge and sleeve.

5. A coin apparatus of the kind described comprising a cartridge having a coin inlet slot at one end, a sleeve rotatably fitted within the cartridge, there being discharge openings in the cartridge and sleeve in and out of register when the cartridge and sleeve occupy one or the other of two rotative positions relative to each other, a cylinder lock having a plug coaxial with the sleeve and secured fast thereto at its end remote from the coin inlet slot in the cartridge, and a block at the cartridge end proximate to the lock having opposed converging sides, the block being receivable laterally in a predetermined rotative position between a pair of converging jaws at the base of a chamber below the discharge chute of a coin machine whereby to align the coin inlet slot with the discharge chute to receive coins from the coin machine, the block also being receivable axially in a predetermined rotative position between a pair of like jaws in a collar having a rotatable mounting in a tube affixed to one wall of a container with a key anchored to the tube and extending axially therewithin for entry in the plug of the cylinder lock when the cartridge is advanced into the collar, and the cartridge when rotated therewithin transmitting a like movement to the collar while the key holds the sleeve from turning, the collar and tube being formed with discharge openings adapted for positioning in and out of register when the collar and tube occupy one or the other of two rotative positions relative to each other, the arrangement being such that turning of the cartridge within the collar will concurrently bring all four discharge openings into register with each other.

6. In an apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to be inserted into it, a coin-receiving cartridge having at its inner end a cylinder lock comprising a plug rotatable coaxially of the tube, a key within the tube at its inner end extending axially thereof toward its outer end for engagement with the rotatable plug of the cartridge when the latter is inserted within the tube for the requisite distance, a mounting near the inner end of the tube wherein the key is held against rotation with capacity for limited axial movement, spring means urging the key outwardly whereby the key is free to adjust itself axially, as required, for coaction with the plug when in engagement therewith, and a closure collar assembled with the tube and rotatable relative thereto and engageable by the cartridge, when the key is in engagement with the plug, to be turned thereby.

7. A coin apparatus according to claim 6 wherein a mounting is provided for the key with provision for a limited movement of the key relative to the mounting whereby the key is free to adjust itself for coaction with the rotatable plug when engaged therewith.

8. In a coin apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to have inserted into it a coin-receiving cartridge, a collar assembled coaxially with the tube, rotatable relative thereto, and permanently mounted thereon to constitute a portion of the container, there being a discharge opening in the tube and a coacting opening in the

collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotatable positions relative to the tube, means on the collar engageable by the cartridge when inserted into the tube for transmitting turning movements from the cartridge to the collar, and means normally locking the collar, when in its closed rotative position, engageable by the cartridge to free the collar for rotation preliminary to effecting transmission of a turning movement thereto.

9. In a coin apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to have inserted into it a coin-receiving cartridge, a collar assembled coaxially with the tube and permanently mounted thereon to constitute a portion of the container and movable both rotatably and axially of the tube, there being a discharge opening in the tube and a coacting opening in the collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotative positions relative to the tube, means on the collar engageable by the cartridge when inserted into the tube for transmitting turning movements from the cartridge to the collar, a spring associated with the collar and exerting a force thereon counter to axial movement thereof in one direction, means locking the collar in its closed position when released to the action of its spring, and means engageable by the cartridge for moving the collar counter to the tension of its spring to free the collar for rotation preliminary to effecting transmission of a turning movement thereto.

10. In a coin apparatus of the kind described, a container provided with a tube fixed thereto and extending interiorly and exteriorly thereof and adapted to have inserted into it a coin-receiving cartridge, a collar within the tube movable both rotatably and axially relative thereto, a spring associated with the collar and exerting a force thereon counter to axial movement thereof in one direction, there being a discharge opening in the tube and a coacting opening in the collar arranged to occupy open and closed positions relative to each other when the collar is in one or the other of two rotative positions relative to the tube, means at the inner end of the cartridge in axially separable engagement with complementary means inwardly of the collar for transmitting turning movements from the cartridge to the collar, means locking the collar in its closed position when released to the action of its associated spring, and means engageable by the cartridge for moving the collar counter to the tension of the spring to free the collar for rotation preliminary to effecting transmission of a turning movement thereto.

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