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COIN GATE MECHANISM

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*Fig. 1*

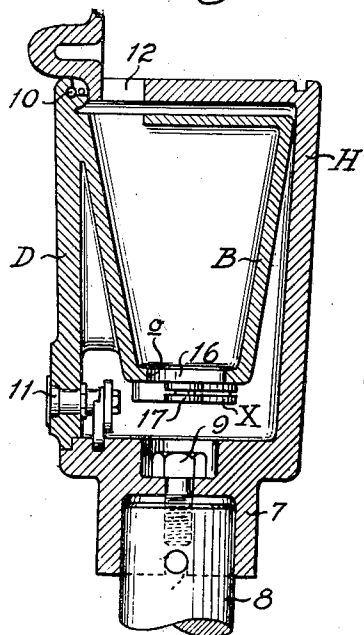


*Fig. 2*

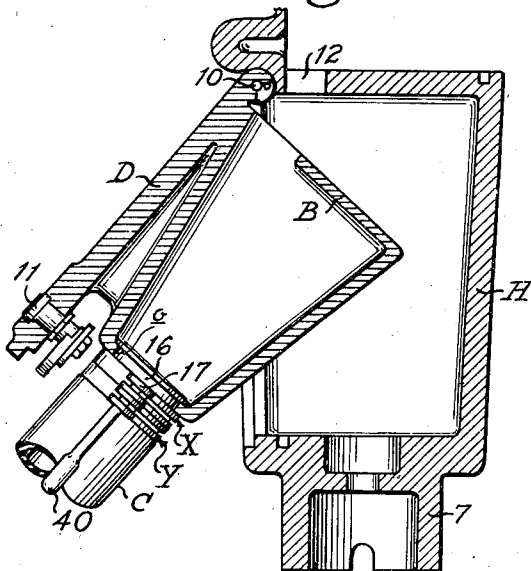


*Fig. 3*

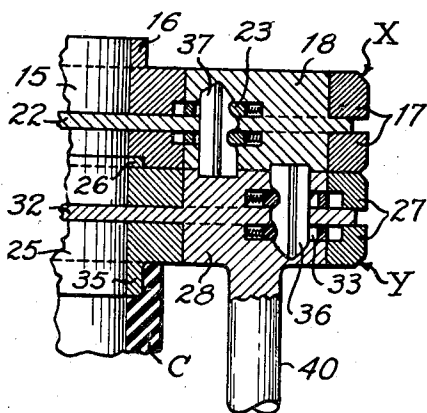


*Fig. 4*

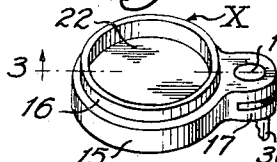


*Fig. 6*

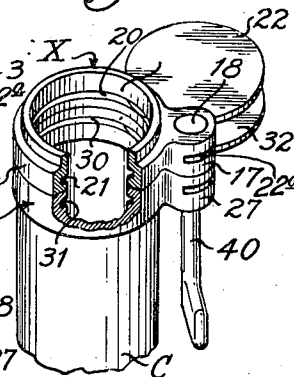
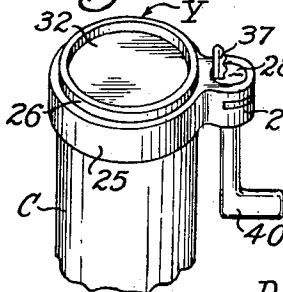


*Fig. 5*



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## UNITED STATES PATENT OFFICE

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## COIN GATE MECHANISM

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ary 16, 1948, Serial No. 2,602

7 Claims. (Cl. 232-16)

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This invention relates to a coin gate mechanism adapted for application to a machine from which coins accumulated in the machine may be removed therefrom by an authorized collector while maintained inaccessible to him during and after the removal operation. For this purpose I provide at the coin outlet of the machine a gate which coacts in a special manner with a complementary gate on a conduit which extends to or constitutes a collecting receptacle; the coins in passing through both gates into the collecting receptacle remain fully surrounded and completely enclosed.

For its objects my invention aims to provide a simple and effective protecting apparatus for the purpose noted. In the accomplishment of this end I utilize a pair of complementary key-controlled gates, one coacting with the other, and both operable by a common handle. Means are also provided to prevent opening of the gates until after the conduit leading to the collecting receptacle has been fitted operatively in place. Additionally, means are provided to prevent removal of the conduit until after the gates are again closed, so that in this concluding stage of the coin handling, access is barred to the money compartment within the machine and also to the conduit leading to the collecting receptacle.

These and other objects of my invention may be realized by a construction of which a suggestive embodiment is set forth in the accompanying drawing wherein—

Figure 1 is a vertical section through the base chamber of a coin machine showing a coin box therein in its normal or fully enclosed position;

Fig. 2 which is a similar view shows the coin box swung to an outer position, as when the coin handling apparatus is fitted thereto;

Fig. 3 is an enlarged detail in vertical section through the complementary gates of the money box and conduit, taken on line 3-3 of Fig. 4;

Fig. 4 is a plan-perspective view of the gates which are affixed to the coin box of the machine;

Fig. 5 is a similar view of the gate which is inseparably united to the free end of the conduit leading to the collecting receptacle; and

Fig. 6 is a view in perspective, partly broken away to exhibit certain parts in section, showing the two complementary gates in operative relationship with both gates swung to open positions.

The mechanism of this invention is applicable to coin machines in general. In the form illustrated, the base housing H is such as might be used with a parking meter. It may be provided at its lower end with a downwardly facing socket

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17 adapted to receive the upper end of a supporting post 8 which may be fixedly secured thereto as by a bolt 9. A door D, hinged at its top to a spindle 10, provides a closure for the chamber within the housing, a key-operated lock 11 being employed to secure the door in its normally closed position.

As shown, a coin box B is cast integrally with the door D for support upon the inner face thereof directly below an opening 12 through which descending coins drop into the box. Toward its bottom the box B may be tapered, and a circular outlet opening o is there provided for affixation of a key-controlled gate X.

The gate comprises a cylindrical body 15 from which is extended a circular flange 16 adapted to enter within the opening o in the bottom of the box B, and to be headed over to secure the gate thereto. A transversely slotted ear 17 which extends from one side of the gate body 15 is provided with a longitudinal circular opening for receiving the barrel 18 of a cylindrical lock of which the ear 17 forms the cylinder. Extending approximately one-half way around the inner wall of the gate body 15 is a groove 20 (see Fig. 6), which is aligned with and joins a slot 21 extending through the remaining half of the gate body and through the ear 17. A circular disk 22 is slidably fitted in the groove 20 and in the slot 21 about its peripheral margins, and this disk 22 which constitutes a gate is provided with a laterally extending apertured tab 22a which lies within the slot in the ear 17 to encompass the barrel 18 to which the disk is secured, as by riveting, welding, or the like. A series of tumblers 23 carried by the barrel 18 act normally to prevent rotation of the barrel within the ear 17, whereby the opening in the gate X is normally closed by the disk 22 to prevent coins from passing outwardly from the box B to which the gate is affixed.

A similar key-controlled gate Y, comprising a body 25, a flange 26, and a transversely slotted ear 27 forming part of a cylindrical lock including a barrel 28, is arranged to mate with the gate X. The gate body 25 is also provided with a groove 30 (see Fig. 6) extending half-way around the inner wall thereof and aligned with and joining a slot 31 extending through the other half of the gate body and the ear 27. Within this slot and groove there is disposed a disk 32 provided with a laterally extending tab which extends into the slot in the ear 27 in encompassing relation to the barrel 28 to which it is secured as by riveting, welding, or the like. Tumblers 33,

disposed in aligned openings in the barrel 28 and in the inner wall of the ear 27, normally prevent rotation of the barrel relative to the body 25 of the gate. A circular flange 35 depends from the gate body into the end of a flexible conduit C, to which it is secured as by soldering, brazing, or the like, and which extends to or forms part of a portable collecting pouch or receptacle.

The gate X includes a depending key 36 adapted to unlock the complementary gate Y; this key is secured to and carried by the barrel 15 of the gate X. Similarly, the gate Y is provided with an upstanding key 37 which is adapted to fit the lock of the other gate X, this latter key being secured to and carried by the barrel 28 of the gate Y. In order to remove the coins from the coin box B, the collector fits the two gates X and Y together, as shown in Figs. 2 and 3. When this is done, the keys 36 and 37 then operate the tumblers 23 and 33 to retracted positions which permit rotation of the barrels 18 and 28 by means of a handle 40 extending from one of the barrels. Rotation of the handle 40 causes the disks 22 and 32 to be swung out from the bodies of the respective gates through the slots 20 and 30 in the sides thereof, thereby permitting coins to pass from the coin box B through the two gates and into the conduit C en route to the portable pouch or receptacle carried by the collector.

It will be noted that as soon as the barrels 18 and 28 are rotated from their normal positions it is impossible for the tumblers 23 and 33 to move in a radial direction, since their outermost ends will then abut the inner walls of the ears 17 and 27. As these tumblers are then in locking engagement with the notches in the keys 36 and 37, it is impossible to withdraw the gate X from the mating gate Y when the gates are open; thus the gates can never be opened unless they are connected, as shown in Fig. 3, whereby to preclude any possibility of the collector obtaining access to the coins at any time.

It will be noted that each gate is pivotally mounted upon the lock barrel 18 or 28, as the case may be, so as to swing coaxially thereof. The interfitting keys 36 and 37 provide an operative connection between the two gates such that both are required to swing in unison. Also the two keys enter simultaneously into operative positions when the two gates are fitted one upon the other so that but a single movement is necessary to position all parts ready for operation. The operating handle 40 may be attached with perhaps greater convenience to the ear 28 which is connected to the gate 32, and a turning motion imparted thereto is at once communicated to the other gate so that both are operated together. When the conduit is disconnected from the money box, the two gates must first be closed but thereafter the parts are freed for separation without any further or subsequent operation to maintain the gates in closed positions for both the conduit and the money box. The latter is adapted to be swung inwardly to its normal vertical position within the chamber of the housing H, and there be secured with the aid of the key operated lock 11. In this protected position it will remain until the next removal of coins takes place in the manner already set forth.

A previous disclosure of this invention was contained in my application Serial No. 717,835, filed December 23, 1946, of which this case is a division.

#### I claim:

1. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a normally locked gate in said box through which the accumulated coins may be removed, and a second normally locked gate for sealing a portable container into which the coins are to be transferred, each of said gates including a fixedly mounted key which fits into the lock of the other gate to provide a motion transmitting connection thereto when both gates are disposed in aligned and abutting relation, whereby the gates can be opened in unison only when they are assembled, a continuous conduit being then provided for transference of the accumulated coins to the portable container.
2. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a normally locked gate in the box through which the accumulated coins may be removed, and a second normally locked gate providing a closure for a portable container into which the coins are to be transferred, each of the gates comprising fixedly mounted coacting means interfitting with the other to provide a motion transmitting connection thereto when both gates are disposed in aligned and abutting relation adapted thereupon to free both gates simultaneously for opening movement, and operating means associated with one gate operative to open both gates simultaneously whereby a continuous conduit is then provided for transference of the accumulated coins to the portable container.
3. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a normally locked gate in the box through which the accumulated coins may be removed, and a second normally locked gate providing a closure for a portable container into which the coins are to be transferred, each of the gates comprising a lock and a key operating means coacting with the lock of the other gate to effect a release thereof and provide a motion-transmitting connection therebetween, and an operating device for opening and closing both gates together.
4. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a normally locked gate in the box through which the accumulated coins may be removed, and a second normally locked gate providing a closure for a portable container into which the coins are to be transferred, each of the gates comprising a lock and a key operating means coacting with the lock of the other gate to effect a release thereof and provide a motion-transmitting connection therebetween, and an operating device for opening and closing both gates together, the coacting key-operating means, when operated, serving also to lock the two gates against separation whereby to maintain continuity in the conduit for transference of the accumulated coins to the portable container.
5. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a first gate affixed to the box for controlling the release of coins therefrom, a second gate carried at one end of a conduit, a cylinder lock comprising a barrel forming a pivotal mounting for each gate, a key anchored to the barrel of each lock and extended outwardly therefrom for entry into the key-way of the other lock adapted, when interfitted therewith, to operate the same, and a handle affixed to the barrel of one lock for transmitting rotary motion there-

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to and to the barrel of the other lock, and means connecting each gate with its associated barrel for swinging movement therewith about the axis of the barrel as a center.

6. In combination, a coin-controlled mechanism including a box in which accumulated coins are stored, a gate affixed to the coin box for controlling the release of coins therefrom, a second gate carried at one end of a conduit, a cylinder lock having a rotatable barrel in connection with each gate adapted for operation thereof, a key anchored to the barrel of each lock and extended outwardly therefrom for entry into the key-way of the other lock adapted, when interfitted therewith, to operate the same, the two keys serving to transmit rotary motion from one barrel to the other and thereby to the gates associated therewith.

7. In combination, a coin-mechanism comprising a housing enclosing a chamber open upon one side and provided with a discharge opening at the top, a door hinged to the housing to provide a closure for the chamber therewithin, a coin box carried by the door upon its inner side to swing outwardly therewith and provided at its top with an inlet opening, the coin box occupying a position within the housing chamber such that its inlet opening will lie below the discharge opening of the housing to receive coins dropping into the

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chamber when the door is closed, and when the door is opened the inlet opening of the coin box will still be positioned within the housing chamber to remain inaccessible from the exterior thereof, the coin box being provided at its bottom with a discharge outlet, a normally-closed gate affixed to the coin box at its outlet to control the release of coins therefrom and exposed fully only when the door is swung to open position, a complementary normally-closed gate affixed to a conduit, a cylinder lock having a rotatable barrel for operating each gate, and a key anchored to the barrel of each lock and extending therefrom for entry into the key-way of the barrel of the other cylinder lock adapted, when interfitted therewith, to transmit motion therebetween whereby to open and close both gates in unison.

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