

Nov. 19, 1957

J. O. EAMES

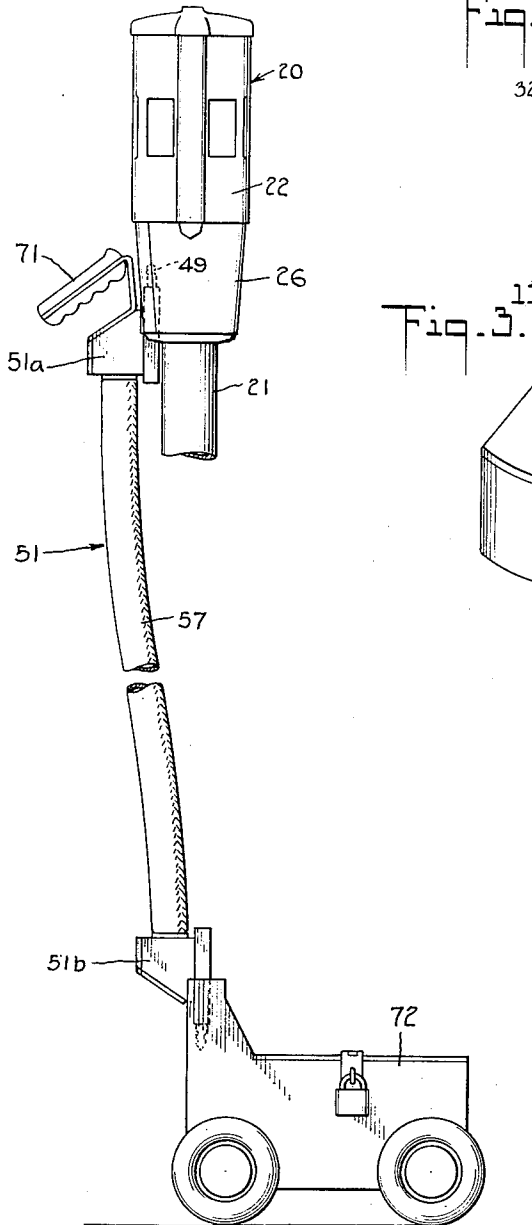
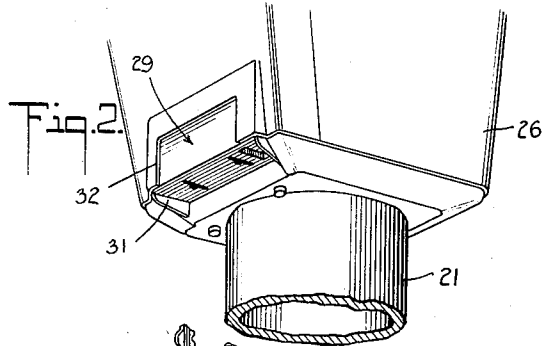
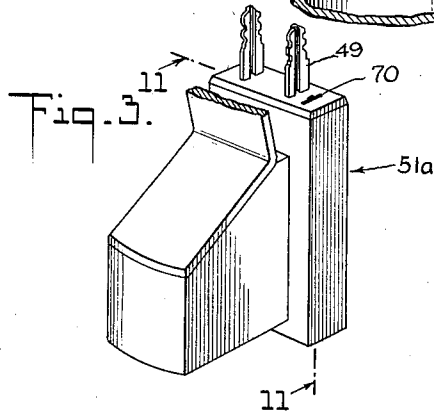
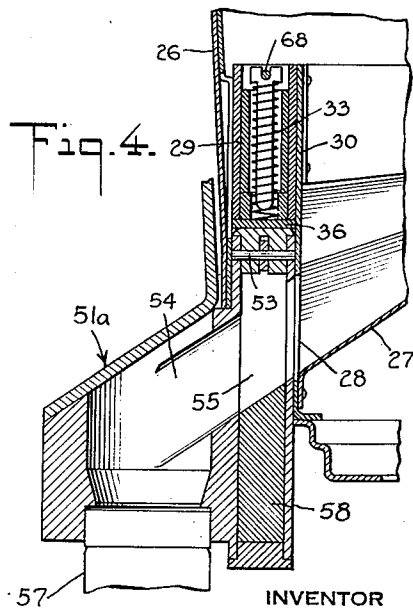
2,813,674

COIN COLLECTION APPARATUS

Filed Aug. 3, 1953

4 Sheets-Sheet 1

Fig. 1.



INVENTOR
JAMES O. EAMES

BY
Burgess, Ryan & Hills
ATTORNEYS

Nov. 19, 1957

J. O. EAMES

2,813,674

COIN COLLECTION APPARATUS

Filed Aug. 3, 1953

4 Sheets-Sheet 3

Fig. 7.

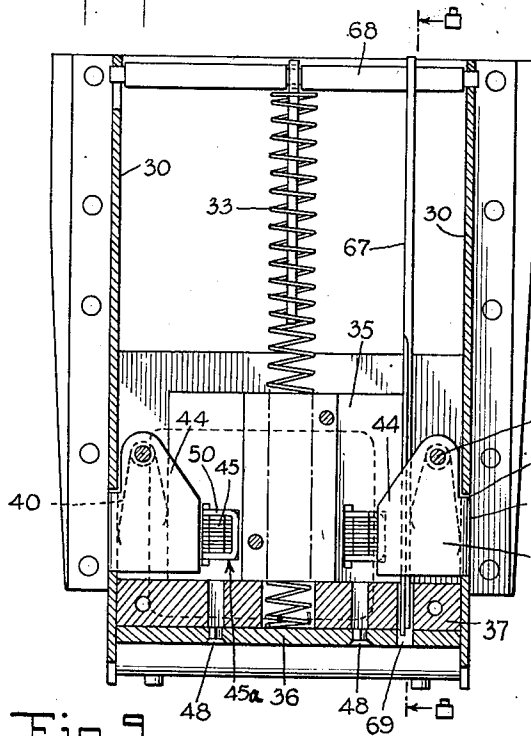


Fig. 8.

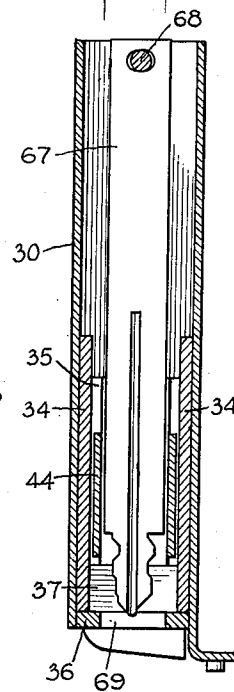


Fig. 10.

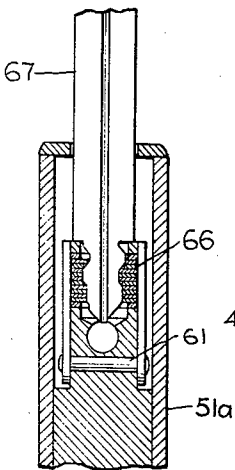
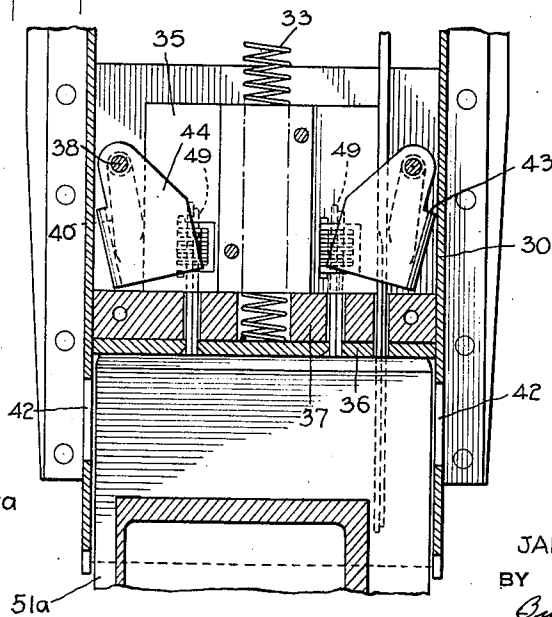


Fig. 9.



INVENTOR
JAMES O. EAMES
BY
Burgess, Ryan & Hicks
ATTORNEYS

Nov. 19, 1957

J. O. EAMES

2,813,674

COIN COLLECTION APPARATUS

Filed Aug. 3, 1953

4 Sheets-Sheet 4

Fig. 11.

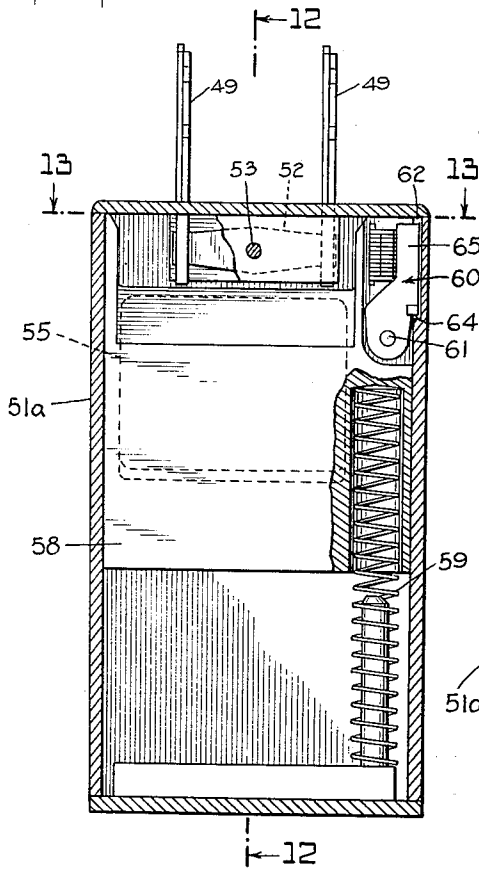


Fig.12.

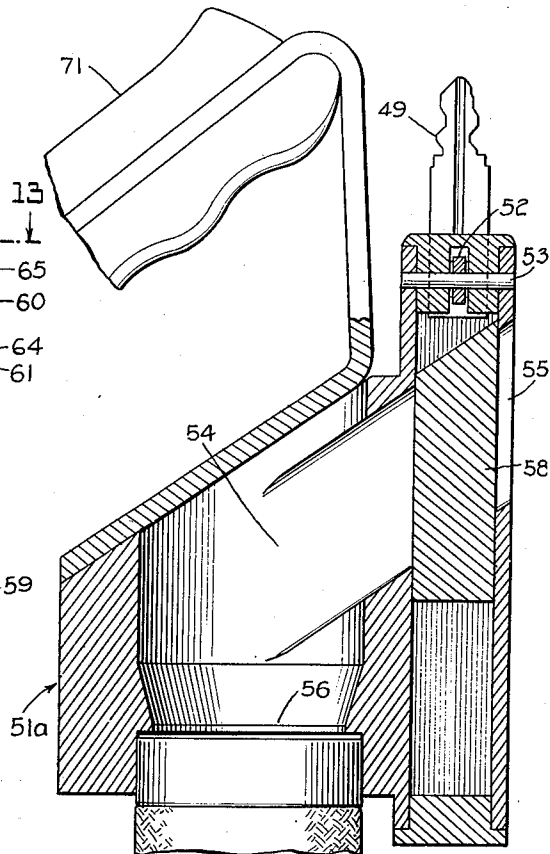


Fig. 13

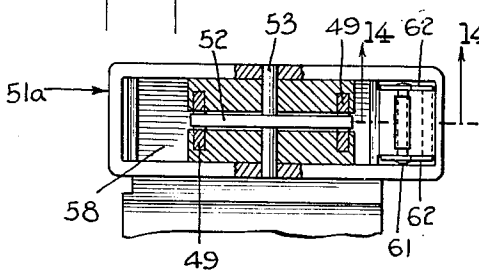


Fig. 14.

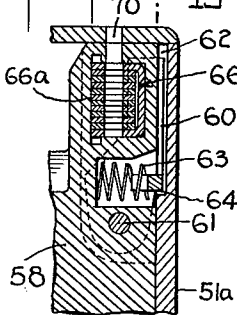
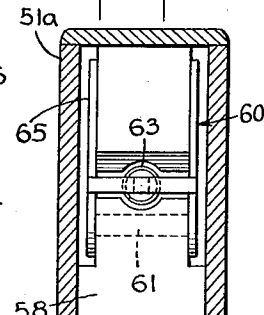


Fig.15.



INVENTOR
15 JAMES O. EAMES

BY

Burgers, Ryan & Hicks
ATTORNEYS

1

2,813,674

COIN COLLECTION APPARATUS

James O. Eames, Washington, Conn., assignor to The
Michaels Art Bronze Company, Incorporated

Application August 3, 1953, Serial No. 372,071

28 Claims. (Cl. 232—16)

The present invention relates to coin collecting apparatus and relates more particularly to a sealed coin collection apparatus for collecting coins from vending machines such as parking meters.

An object of the present invention is to provide a simplified coin collection apparatus which requires only a unilateral movement for operation thereof and which provides effective protection against theft or pilfering. Such an apparatus is especially desirable for use in collecting coins from devices such as parking meters where there is no way to check accurately on the commodity dispensed by the vending machine to see if the proper collections are being made. Such an apparatus saves time on the part of the person making the collections and permits collections to be made from a greater number of vending machines by such a person.

Other objects and advantages of the invention will be best understood from the following description and the accompanying drawings in which:

Fig. 1 is front view illustrating a coin collection apparatus embodying the invention;

Fig. 2 is a perspective view of a part of a parking meter which contains a portion of a coin collection apparatus embodying the invention;

Fig. 3 is a perspective view of a portable portion of a coin collection apparatus embodying the invention;

Fig. 4 is vertical section view of a coin collection apparatus embodying the invention;

Fig. 5 is a vertical section view of the portion of the coin collection apparatus illustrated in Fig. 2, but on an enlarged scale;

Fig. 6 is a fragmentary view in section taken along the line 6—6 of Fig. 5;

Fig. 7 is a section view taken along the line 7—7 of Fig. 5;

Fig. 8 is a section view taken along the line 8—8 of Fig. 7;

Fig. 9 is a section view corresponding to Fig. 7 but with the portable portion of the coin collection apparatus inserted for operation;

Fig. 10 is a fragmentary view in vertical section of the portable portion of the coin collecting apparatus with a key inserted therein;

Fig. 11 is a section view taken along the line 11—11 of Fig. 3;

Fig. 12 is a section view taken along line 12—12 of Fig. 11;

Fig. 13 is a section view taken along line 13—13 of Fig. 11;

Fig. 14 is a fragmentary section view taken along line 14—14 of Fig. 13; and

Fig. 15 is a section view taken along line 15—15 of Fig. 14.

Referring to Fig. 1, there is a parking meter 20 which is mounted on a post 21 or other suitable support in the usual manner at a location where an automobile is to be parked. The parking meter includes a housing 22 which encloses a meter mechanism (not shown).

2

As shown in Fig. 5, a platform 23 which has slots or openings 24 therein to permit coins discharged from the meter mechanism to drop into a coin box or receptacle 25 extends over the top of a base portion 26 of the housing. The platform 23 serves as a support for the meter mechanism and also prevents access from within the housing to coin box which is open at its top to receive the coins discharged from the meter mechanism. The coin box is thus enclosed within the base portion 26 of the meter housing 22.

The bottom 27 of the coin box slopes downwardly toward an outlet 28 in the front wall of the coin box and coins in the coin box will pass through the outlet by gravity when the outlet is open. A vertically slidable door or gate 29 in the base normally closes the outlet 28 in the coin box and upward movement of the door opens the outlet. The gate or door 29 is slidably supported in a bracket or sleeve 30 which is secured to the inside of the front wall of the base. The lower end of the sleeve 30 is open, as indicated at 31, and the front wall of the sleeve has an opening 32a therein which registers with an opening 32 in the front wall of the base 26. The rear wall of the sleeve forms the front wall of the coin box and contains the outlet 28. The openings 32a and 32 are aligned with the outlet 28 and provide clearance for the nozzle 51a when the latter is positioned in coin collecting position on the meter as shown in Fig. 1. The opening 32a is normally closed by the door 29, as shown in Fig. 2.

The door or gate 29 is in the form of a rectangular member and is urged toward its lower position by a spring 33. The gate consists of spaced face plates 34 which are located on opposite sides of a body 35. The body 35 has raised portions on its opposite faces on which the face plates rest and the lower ends of the face plates are secured to a sole plate 36 and a block 37 which forms part of the sole plate. If desired, the block and sole plate may be made as one piece.

Pins 38 extend transversely between the plates 34 at the sides thereof and the pins are supported at their ends by the plates 34. A locking dog 39 is pivotally mounted on each of the pins and the locking dogs are urged by springs 40 to positions where the lower ends 41 of the dogs project beyond the side edges of the plates 34 and into openings 42 in the sides of the sleeve 30. When the dogs are in this position, the top edges or lips 43 on the dogs engage with the sleeve at the tops of the openings 42 and prevent the gate from being raised or opened.

Flanges 44 on the locking dogs 39 project inwardly between the face plates 34 and the sides of the body and extend over cavities 45a in the body when the dogs are swung inwardly. Key operated tumbler assemblies 45 are mounted in the cavities in the body and portions of the tumbler assemblies project beyond the faces of the body and engage with the edges of the flanges 44. The engagement of the tumblers with the flanges on the dogs prevents the dogs from being swung inwardly from their sleeve engaging position and prevents the gate from being raised or opened under such conditions.

A pin 46 carried by one of the plates 34, projects into a vertical slot 47 in the front wall of the sleeve 30 and engages with the lower end of the sleeve to limit the downward travel of the door to a position where the coin outlets are closed with the dogs projecting through the openings in the sleeve. The sole plate 36 contains warded openings 48 which are exposed by the opening in the lower end of the sleeve and permit the vertical entrance of keys 49 into the tumbler assemblies 45. The tumbler assemblies 45 are composed of a plurality of stacked tumbler laminations which are supported in a clip 50 and are spring loaded so that their side edges normally project beyond the faces of the body 35 and engage with the inner edges of the flanges 44 of the locking dogs 39.

The simultaneous insertion of the keys 49 into the tumbler assemblies 45 aligns the outer edges of the tumblers with the faces of the body 35 and permits the dogs to be swung inwardly over the tumbler assemblies. During the insertion of the keys, the spring 33 and the dogs 39 serve to hold the door in its lower position against the insertion pressure. When the keys have been fully inserted in the tumbler assemblies, further upward movement of the keys forces the door upwardly. The upper edges of the openings 42 in the sleeve 30 then engage with the lips 43 on the dogs and cam the dogs inwardly, which permits the door to be moved to its upper position.

When the flanges of the dogs extend over the ends of the aligned tumblers, the tumblers are held against movement and the biting of the keys engages with the tumbler laminations and prevents the withdrawal of the keys from the tumbler assemblies (see Fig. 10). An important feature of this locking arrangement is that the operation of the locks requires only a unidirectional movement of the keys and the door and nozzle are locked together and move as one except when the door is in fully closed position, the return spring 33 and the keys 49 both acting to move the door to closed position on downward movement of the nozzle.

As seen in Figs. 1 and 3, the keys 49 for operating the door or gate 29 are carried on and form part of a sealed coin collecting device indicated generally at 51. The bitted ends of the keys 49 project from the top of a nozzle 51a and the other ends of the keys are supported on the ends of a bar 52 which is pivoted within the nozzle on a rod 53 extending transversely of the nozzle. The keys are thus movable to a limited extent vertically with respect to the nozzle and when one of the keys has been brought into seating engagement with the tumbler assembly corresponding thereto, further upward movement of the nozzle causes the bar 52 to be swung about its pivot so as to seat the other key in its tumbler assembly. This permits the keys to be used in unlocking the coin boxes of a number of meters where there may be slight variations due to manufacturing tolerances in the exact positions of the tumbler assemblies which might otherwise prevent the keys from entering their tumbler assemblies unless undue force was used.

It will be understood that a single key and tumbler assembly could be utilized to lock the coin door in closed position. However, a plurality of locks precludes the chance that the locks may be picked as in such case it would be difficult to pick both locks simultaneously.

The nozzle 51a consists of a hollow body which contains a downwardly inclined passageway 54 extending therethrough. The passageway 54 has an inlet opening 55 in one side of the nozzle and an outlet opening 56 in the bottom of the nozzle which communicates and is sealed to a receptacle in the form of a flexible tube or hose 57. The upper end of the nozzle 51a is shaped to fit into the opening 31 at the lower end of the sleeve 30 and the inlet 55 in the side of the nozzle is shaped to correspond to the outlet 28 in the front wall of the coin box 27. Thus, when the keys carried by the nozzle are seated in their respective tumbler assemblies to permit the locking dogs to be swung inwardly, the continued upward movement of the nozzle in the sleeve will raise the door or gate closing the outlet in the coin box and bring the inlet in the side of the nozzle into register with the outlet in the coin box as shown in Fig. 4. The openings 32 and 32a in the front of sleeve 30 and the housing receive an outwardly extending portion of the nozzle and permit the nozzle to be raised to this position.

The inlet opening 55 in the side of the nozzle is normally closed by a gate member 58 which is slidably mounted in the nozzle and the gate is urged upwardly in the nozzle by a spring 59 to close the inlet. The gate 58 carries a locking dog 60 which is pivoted on a pin 61 extending through the gate. The dog 60 is urged out-

wardly into a notch 62 in the side of the nozzle by a spring 63 and a lip 64 on the dog engages with the end of the notch to prevent the gate 58 from being moved downwardly to open the inlet 55 of the nozzle.

The dog 60 has flanges 65 which project inwardly over the sides of the gate 58 and extend over a cavity 66a in the gate when the dogs are swung inwardly. A tumbler assembly 66 similar to the tumbler assemblies previously described is located in the cavity in the gate and need not be described in detail. The tumbler assembly 66 normally engages with the inner edges of the flanges on the locking dog and holds the dog in locking position.

For the purpose of releasing the tumbler assembly 66 from engagement with the dog 60, a key 67 is supported within the sleeve 30 and extends through the slidable door therein at one side of the body portion as shown best in Figs. 7 and 8. The top end of the key 67 is mounted on a rod 68 which extends between the sides of the sleeve 30 and the bitted end of the key extends through an opening 69 in the sole plate 36 of the vertically movable door 29.

When the door 29 to the coin box has been unlocked by the insertion of the nozzle keys as previously described, the bitted end of the key 67 in the sleeve 30 then enters a warded slot 70 in the top of the nozzle and tumbler assembly 66 as the nozzle and the door are raised to open the latter. When the key is seated, the dog is cammed inwardly over the tumbler assembly and the nozzle gate is held stationary by the key while the nozzle continues to move upwardly with the key being locked against removal from the tumbler assembly as already described in connection with keys 49. Further upward movement of the nozzle raises or opens the coin box door 29 so as to clear the outlet from the coin box and at the same time moves the inlet 55 in the side of the nozzle upward to clear the stationary nozzle gate 58. When the nozzle is fully raised, the parts are in the position shown in Fig. 4 and there is a continuous downwardly sloping path provided for the discharge of coins from the coin box to the hose or other sealed receptacle which is connected to the outlet of the nozzle.

From the foregoing, it will be noted that, in the embodiment shown, unlocking of the door and nozzle gate is sequential, the door being unlocked from the sleeve on abutment of the nozzle with the sole plate 36, and the nozzle gate being unlocked from the nozzle during upward movement of the door and nozzle in the sleeve, while during removal of the nozzle, the nozzle gate and door are locked in the order named. The unlocking of the door and gate could be arranged to take place substantially simultaneously if desired, however. It is also pointed out that whenever the door is unlocked from the sleeve it is locked to the nozzle, and that the nozzle gate is locked to its key carried by the housing whenever it is unlocked from the nozzle. This prevents the possibility of unlocking and opening the door and nozzle gate in the normal manner, and then holding them open by some tool or instrument and removing the nozzle to collect the coins in an unauthorized manner. This locking action also insures the positive return of the parts to normal position on removal of the nozzle, so that the proper operation of the mechanism does not depend on the action of door spring 33 and nozzle gate spring 59.

A handle 71 is attached to the nozzle for use in raising the nozzle and holding it in place during the collection of coins.

If desired, the hose or receptacle 57 may be provided with a second nozzle 51b at its other end for operation of a door, similar to that closing the outlet in the coin box, which is located in a portable strong box which is locked or other container 72 suitable for transporting the money collected, as illustrated in Fig. 1. However, when the nozzle 51b is removed from the container, the end of the hose 57 will be closed and the hose itself is a sealed container for receiving the money. This is desirable as it

5

permits the hose to be carried to the meter under conditions where access to a meter is obstructed. If desired, the lower end of the hose may be sealed to the container 72 or the lower end of the hose may be sealed in a suitable manner. In the latter case, the coins collected may be removed from the hose by inverting the hose and inserting the nozzle at one end thereof into a suitable device to unlock the gate in the nozzle.

It will be understood that various modifications may be made in the embodiment of the invention illustrated and described herein without departing from the scope of the invention as defined by the following claims.

I claim:

1. In a coin-collection apparatus, the combination of a coin receptacle having an outlet therein, a door slidably carried on the coin receptacle, said slidable door normally extending over and closing said outlet and being slidably movable out of said outlet closing position, locking means for securing the slidable door in said outlet closing position and key means for releasing said locking means and moving the slidable door out of the outlet closing position thereof, said locking means being operable by and said slidable door being movable by a unidirectional movement of the key means.

2. In a coin-collection apparatus as defined in claim 1 wherein the locking means includes a tumbler assembly comprising stacked laminations carried by the slidable door, said laminations being spring biased, and having edges normally projecting beyond a face of the slidable door, said projecting edges being alignable with the face of the slidable door upon insertion of a key into the tumbler assembly and a locking member pivoted on the slidable door, said locking member engaging with and normally being held in locking position by the projecting edges of the laminations.

3. In a coin-collection device, the combination of a coin receptacle for receiving coins deposited therein, said coin receptacle having an outlet therein for the discharge of coins therefrom, a slidable door associated with the coin receptacle, said door normally closing the outlet therein and being movable out of said outlet closing position, locking means carried by the door for securing the door in outlet closing position and portable means for collecting the coins from the coin receptacle, said portable means including a coin-receiving member having an inlet therein and key means carried by the coin-receiving member for operating the locking means and moving the slidable door out of the outlet closing position thereof, the locking means being operable and the slidable door being movable in response to a unidirectional movement of the coin-receiving member and the key means, said unidirectional movement of the coin-receiving member and the key means in operation of the locking means and movement of the door bringing the inlet of the coin-receiving member into alignment with the outlet of the coin receptacle.

4. In a coin-collection device, the combination of a coin receptacle for receiving coins deposited therein, said coin receptacle having an outlet therein for the discharge of coins therefrom, a slidable door associated with the coin receptacle, said door normally closing said outlet and being movable out of said outlet closing position, locking means carried by the door for securing said door in outlet closing position, portable means for collecting coins from the coin receptacle, said portable means including a coin-collecting member having a chamber therein and an inlet communicating with said chamber, a slidable gate normally closing the inlet to the chamber and locking means for securing said gate in the inlet closing position thereof, key means carried by said coin-collecting member for operating the first-mentioned locking means and key means carried by the coin receptacle for operating the second-mentioned locking means, each of said key means engaging with and operating the respective locking means in response to a unidirectional movement of

6

the coin-collecting member in a direction to bring the inlet of the coin-collecting member into alignment with the outlet of the coin receptacle.

5. In a coin-collection device, the combination as defined in claim 4 which includes a sealed coin container communicating with the chamber in the coin-collecting member.

6. A coin-collecting apparatus for the collection of coins from a parking meter which comprises a housing having an opening therein, a coin receptacle located in the housing and having an outlet opening therein communicating with the opening in the housing, a door slidably mounted between the housing and the coin receptacle for closing the openings therein, said door normally closing said openings and being movable out of said closed position, locking means carried by the door for securing the door in closed position, a portable coin-collecting member having an inlet therein and a passageway communicating with said inlet, and key means carried by the coin-collecting member for operating the locking means on the door, said locking means being operable and said door being movable from the closed position thereof in response to a unidirectional movement of the coin-collecting member and the key means.

7. A coin-collecting apparatus as defined in claim 6 wherein the locking means on the door includes a pair of spaced locks and the key means on the coin-collecting member includes a pair of keys spaced for entry into said locks.

8. A coin-collecting apparatus for the collection of coins from a parking meter which comprises a housing having an outlet opening therein, a coin receptacle located in the housing and having an outlet opening therein communicating with the opening in the housing, a door slidably mounted with respect to the housing and the coin receptacle, said door normally closing the outlet openings therein and being movable out of said outlet closing position, locking means carried by the door for securing the door in the outlet closing position thereof, a portable coin-collecting member having an inlet therein and a passageway communicating with said inlet, a sealed coin container communicating with said passageway, a gate slidably mounted in the coin-collecting member, said gate normally closing the inlet in the coin-collecting member and being movable relative to said coin-collecting member, locking means carried by the gate for securing the gate in inlet closing position, key means carried by the coin-collecting member for operating the locking means on the door and key means located within the housing for operating the locking means on the gate, both of said locking means being operable to release the door and the gate, respectively upon a unidirectional movement of the portable coin-collecting member into the opening in the housing.

9. A coin-collecting apparatus for the collection of coins from a parking meter as defined in claim 8 wherein the locking means carried by the door and by the gate, respectively, comprises a tumbler assembly having a stack of laminations, said laminations being spring biased and having edge portions normally projecting into a locking position and a locking dog cooperating with the tumbler assembly, said locking dog being movable into and out of a locking position and engaging with the projecting edge portions of the laminations when in the locking position thereof, the projecting edge portions of the laminations being movable out of engagement with the locking dog by a unidirectional insertion of a key into the tumbler assembly.

10. In a coin-collecting apparatus, a portable coin-collecting member which comprises a body having a chamber therein and an inlet communicating with said chamber, a gate slidably mounted in said body and normally closing said inlet, said gate being movable relative to said body to open said inlet and locking means for securing said gate in the inlet closing position thereof, said locking

means including a movable locking dog carried by the gate and a key operable tumbler assembly comprising a stack of laminations carried by the gate and having a keyway therein, said laminations being spring biased and having edges normally projecting into engagement with the locking dog, said projecting edges holding the locking dog in a locking position and being movable out of engagement with the locking dog upon unidirectional insertion of a key into the keyway.

11. A coin-collection device for collecting coins from a vending machine comprising a coin receptacle for receiving coins discharged from a vending machine, said receptacle having an outlet therein for the removal of coins therefrom, a door slidably mounted on the coin receptacle and normally closing the outlet in said receptacle, said door being movable out of said outlet closing position and a lock for securing the door in the outlet closing position thereof, said lock including a locking dog pivotally carried on the door, said locking dog having a flange extending over one face of the door and a portion normally extending beyond the door into locking engagement with the receptacle and a stack of spring biased laminations carried by the door, said laminations having a keyway therein and having edge portions normally engaging with the flange on the locking dog, said edge portions holding said locking dog in locking engagement with the coin receptacle and edges being movable out of engagement with the locking dog upon a unidirectional insertion of a key into the keyway.

12. A device for collecting coins from a vending machine comprising a receptacle for receiving coins discharged from a vending machine, said receptacle having an outlet therein for the removal of coins therefrom, a sleeve associated with the coin receptacle, a door slidably mounted on and normally closing the outlet in the receptacle, said door being movable from said outlet closing position, a lock means for securing the door in the outlet closing position thereof, said lock means including a locking dog pivotally mounted on the door, said locking dog having an inwardly extending flange and a portion normally extending beyond the door into locking engagement with the coin receptacle and a stack of spring biased laminations carried by the door, said laminations having a keyway therein and having edge portions normally projecting into engagement with the flange on the locking dog, said edge portions holding the locking dog in locking engagement with the coin receptacle, a portable coin-collecting member having an inlet therein and a key carried by said portable member and positioned to enter the keyway in the laminations, said key moving the edges of the laminations out of engagement with the locking dog upon unidirectional insertion of the key into the keyway.

13. A device for collecting coins from a vending machine as defined in claim 12 wherein a number of lock means are employed to secure the door in closed position and a corresponding number of keys are carried by the portable coin collecting member.

14. A device for collecting coins from a vending machine comprising a coin receptacle for receiving coins discharged from a vending machine, said receptacle having an outlet therein for the removal of coins therefrom, a door slidably mounted on and normally closing the outlet in the receptacle, said door being movable from said outlet closing position, a lock means for securing the door in the outlet closing position thereof, said lock means including a locking dog pivotally mounted on the door, said locking dog having an inwardly extending flange and a portion normally extending beyond the door into locking engagement with the coin receptacle and a stack of spring biased laminations carried by the door, said laminations having a keyway therein and having edge portions normally projecting into engagement with the flange on the locking dog and holding the locking dog in locking engagement with the coin receptacle, a portable

coin-collecting member having a chamber therein and an inlet communicating with said chamber, a gate slidably mounted in said member and normally closing the inlet therein, a second lock means for securing the gate in inlet closing position thereof, a key carried by the portable member for releasing the locking means holding the door in outlet closing position and a second key secured to the coin receptacle for operating the lock means holding the gate in inlet closing position, both of said lock means being operable by a unidirectional movement of the portable member relative to the coin receptacle.

15. A coin receiving and collecting mechanism including a housing, a coin receiving receptacle in said housing, said receptacle having an outlet therein, a movable door normally closing said outlet and lock means for locking said door in closed position, a separate member having a coin collecting chamber therein and an inlet to said chamber, a gate movably mounted in said member and normally closing said inlet, and lock mechanism for locking said gate to the member, said member being movable bodily to engage and move said door to open position, means carried by the member for engaging and unlocking the door locking means on movement of the member into engagement with the door, and means supported by the housing for engaging and unlocking the gate locking mechanism to permit relative movement of said member and gate.

16. In an apparatus of the character described, the combination of a housing, a movable member carried by the housing, said member being movable between an open position and a closed position and locking means for securing the movable member in closed position, said locking means including a locking dog pivotally mounted on the movable member, said locking dog being movable into and out of locking engagement with the housing, a tumbler assembly associated with the locking dog and mounted in the movable member, said tumbler assembly comprising a stack of spring biased laminations, said laminations having central apertures therein and edge portions normally engaging with and holding the locking dog in engagement with the housing, and a key having a bitted portion insertable in the apertures in the laminations, said bitted portion engaging with the respective laminations and moving the edge portions thereof out of engagement with the locking dog upon a unidirectional insertion of the key in the tumbler assembly.

17. In an apparatus of the character described, the combination as defined in claim 16 wherein the locking dog extends over laminations of the tumbler assembly and maintains the laminations in engagement with the bitted portion of the key upon movement of the locking dog out of engagement with the housing, said engagement of the laminations with the key preventing removal of the key from the tumbler assembly.

18. In an apparatus for collecting coins from a housing having a coin chamber therein and an outlet communicating with said chamber with a movable door normally closing said outlet, said door being movable between open and closed positions with respect to said outlet, the improvement which comprises a separate member having a coin receiving chamber therein, said member being movable bodily relative to the housing for engagement with and movement of the said movable door to an open position, lock means for securing said door in a closed position, and key means carried by said separate member for engaging and operating said lock means to unlock said door on engagement of said door by said separate member, said lock means being operable and said door being movable by unidirectional movement of the separate member and key means relative to the housing.

19. In an apparatus for collecting coins, the improvement as defined in claim 18 which includes means for securing the door against movement relative to the separate member when the lock means is unlocked.

20. In an apparatus for collecting coins, the improve-

ment as defined in claim 18 wherein the separate member has a coin inlet communicating with the chamber therein, a movable gate carried by said member and normally closing said inlet, said gate being movable between an open and a closed position with respect to said inlet and means on the housing for engaging with and moving said gate to the open position thereof in the unidirectional movement of the separate member relative to the housing.

21. In an apparatus for collecting coins, the improvements as defined in claim 18 wherein said separate member has a coin inlet communicating with the chamber therein, a movable gate carried by said member, said gate normally closing said inlet and being movable between an open and a closed position with respect to the inlet, means on the housing for engaging with and moving the gate to its open position in the said unidirectional movement of the separate member relative to the housing, and means associated with the locking means for securing the door against movement relative to the separate member when the lock means is unlocked.

22. In an apparatus for collecting coins from a housing having a coin-receiving chamber therein and an outlet communicating with said chamber with a movable door normally closing said outlet, said door being movable between a closed position and an open position with respect to said outlet, the improvement comprising lock means for securing the outlet closing door in closed position with respect to the outlet in the housing, said lock means having a key receiving opening therein and being operable by a unidirectional movement of a key with respect thereto, a portable coin collecting member having a coin-collecting chamber therein, said coin collecting member being movable bodily with respect to the housing into engagement with the movable door and a key carried by said portable member, said key being positioned to enter the key opening in the lock means for operation of the lock upon unidirectional movement of the coin collecting member relative to the housing into engagement with the movable door.

23. In an apparatus for collecting coins, the improvement as defined in claim 22 which includes means for securing the movable door against movement relative to the coin collecting member when the lock means is unlocked.

24. In a coin collecting mechanism, the combination of a housing having a coin chamber therein and an opening communicating with said chamber, a portable coin collecting member having a coin receiving chamber therein, said coin collecting member having a portion shaped to enter into the opening in the housing, said portion having a coin-receiving opening in one face thereof communicating with said coin receiving chamber, said coin receiving opening communicating with the coin chamber in the housing when said portion of the coin collecting member is inserted within the housing through the opening therein, a door slidably mounted in the housing and normally closing the opening therein, said door engaging with and being movable to a position away from said opening by movement of the coin collecting member relative to the housing, interengaging means on the door and housing for locking said door in the opening blocking position thereof, means carried by the coin collecting member for releasing said interengaging means and permitting movement of the door relative to the housing upon engagement of the door by the coin collecting member, and means for securing the coin collecting member to the movable door so long as the interengaging means is released, said securing means being operable by movement of the door away from the opening blocking position thereof.

25. In a coin collecting mechanism, the combination set forth in claim 24 which includes a gate slidably mounted in the coin collecting member, said gate normally closing the coin receiving opening and being movable away from said opening, and means carried by the

housing for engaging with and moving the gate away from said opening upon insertion of the shaped portion of the coin-collecting member into the opening in the housing.

26. In an apparatus for collecting coins from a housing having a coin chamber and an opening communicating with said chamber with a movable door normally closing said opening, said door being movable between open and closed positions relative to said opening which is characterized by a portable coin collecting member having a coin receiving chamber therein, said coin collecting member having a portion shaped to enter into the opening in the housing and into engagement with the movable door, said portion having a coin receiving opening in one face thereof communicating with said coin receiving chamber, said coin receiving opening being in communication with the coin chamber in the housing when the shaped portion of the coin collecting member is inserted within the housing through the opening therein, locking means for securing said door in the closed position thereof, key means carried by the coin collecting member for engaging with and releasing said locking means upon unidirectional movement of the shaped portion of the coin collecting member through the opening of the housing and into engagement with the movable door, and means for securing the coin collecting member to the movable door when the locking means is released.

27. In a coin receiving and collecting mechanism, the combination of a housing having a coin chamber therein and an opening communicating with said chamber, said chamber having a bottom slanting downwardly toward said opening whereby coins in said chamber move by gravity toward the opening, a door slidably mounted in the housing and normally closing the opening therein, said door being vertically movable with respect to the housing between a lowered position in which said door blocks said opening and a raised position in which said door is above said opening for the gravity discharge of coins from the chamber through the opening, a coin collector having a coin receiving opening therein, said coin collector being movable bodily with respect to the housing, a gate slidably mounted in said coin collector and normally closing the opening therein, said gate being vertically movable with respect to the coin collecting member between a raised position in which the gate blocks the coin receiving opening and a lowered position in which the gate is below the coin receiving opening, said coin collector having a portion adjacent the gate and defining the coin receiving opening therein which is shaped to enter into the opening in the housing, said portion engaging with the door and moving the door to the raised position thereof in movement of the coin collector relative to the housing, and means on the housing for engaging with and moving the gate to its lowered position in said movement of the coin collector relative to the housing, whereby openings in the housing and in the coin collector are brought into communication with each other upon movement of the coin collector in a single predetermined direction relative to the housing and coins are permitted to pass by gravity from the receptacle into the collector.

28. In coin receiving and collecting mechanism, the combination as defined in claim 27, which includes means for securing the coin collector against movement relative to the movable door upon movement of the door away from its lowered position by the coin collector.

References Cited in the file of this patent

UNITED STATES PATENTS

967,667	Powell	Aug. 16, 1910
1,495,905	Jerling	May 27, 1924
2,182,588	Jacobi	Dec. 5, 1939
2,277,916	Klent	Mar. 31, 1942
2,430,384	Broussard	Nov. 4, 1947
2,620,971	Hale	Dec. 9, 1952
2,749,030	Jones	June 5, 1956