Jan. 29, 1957 W. W. JONES 2,779,535

COIN-COLLECTING DEVICES

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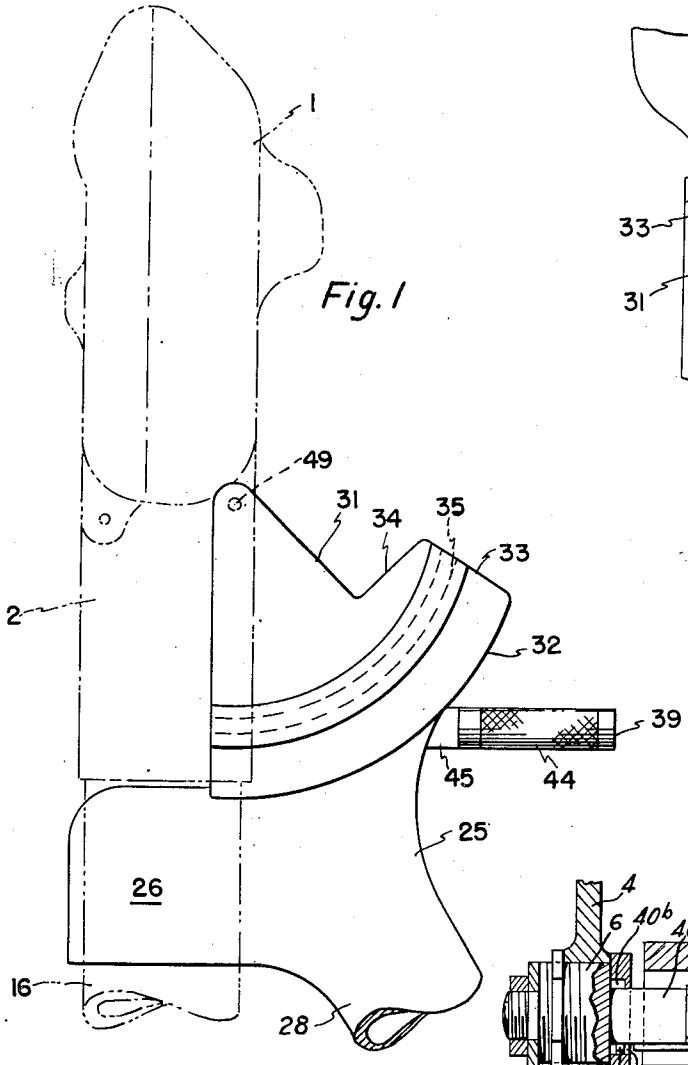


Fig. 1

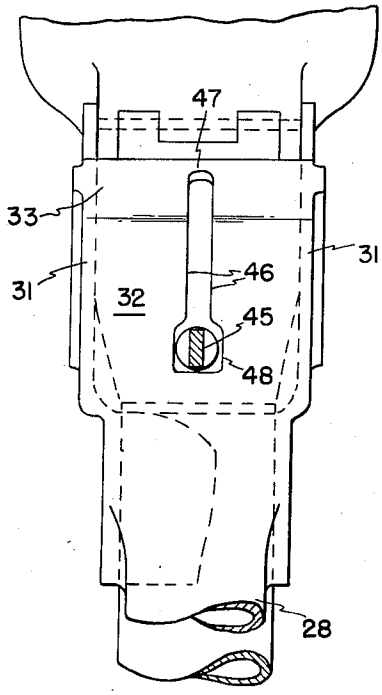


Fig. 2

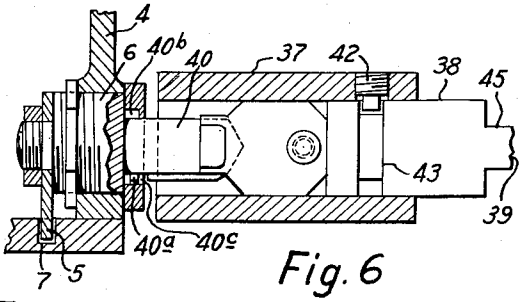


Fig. 6

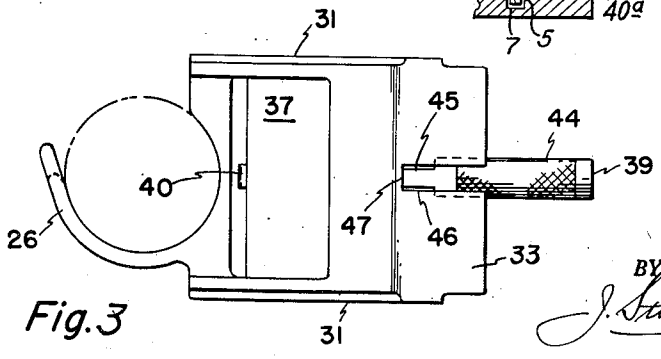


Fig. 3

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COIN-COLLECTING DEVICES

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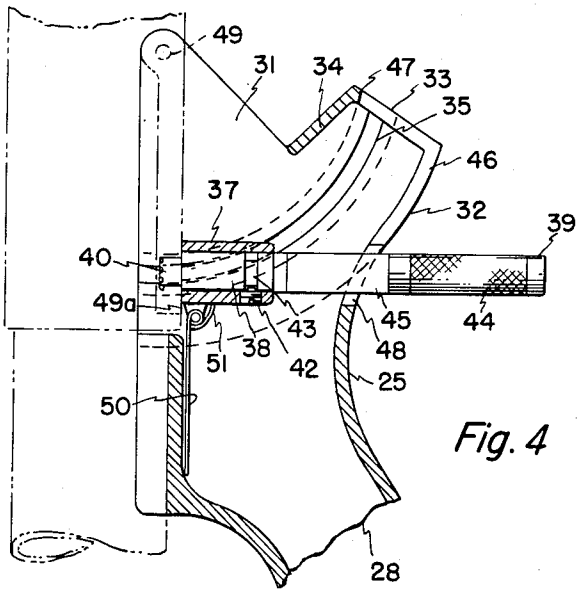
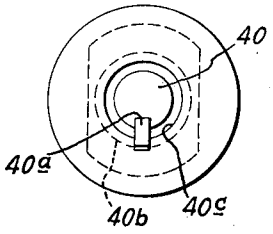


Fig. 4

Fig. 7



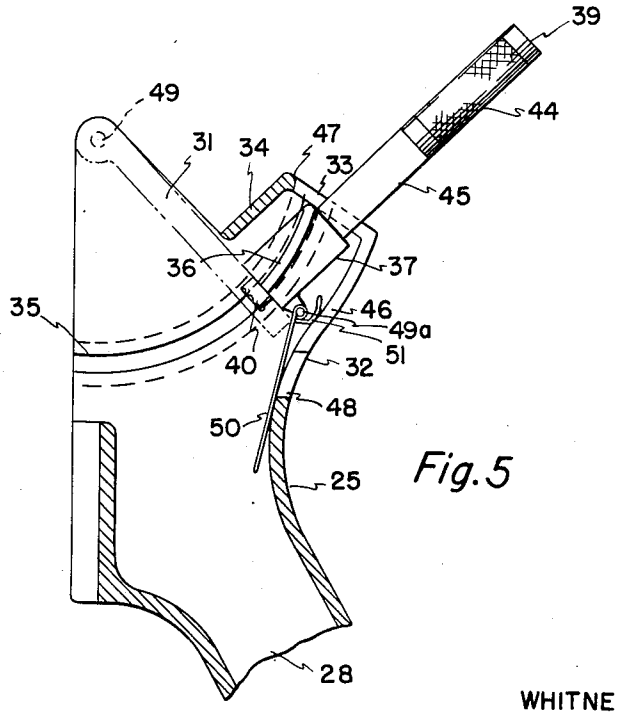


Fig. 5

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COIN-COLLECTING DEVICES

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3 Claims. (Cl. 232—16)

The object of the invention is to provide improvements in coin-controlled mechanisms of many types, and particularly in means for increasing the efficiency with which coins may be collected therefrom, and at the same time insure such collection of coins against illegal extraction, and in fact preventing them from coming into contact with or being accessible to any part of the body of even the one authorized to make such collection. Specific reference hereinafter to parking meters is intended to relate to any and all coin-controlled devices to which the invention is applicable.

Another and more specific object is to provide an embodiment of the invention, comprising a construction that is adapted for use within and in connection with various types and constructions of parking meters, which may be already installed and in operation and from which it has previously been necessary to remove the coins either individually or in groups by hand, or collectively in receptacles into which they have previously fallen, and by which improved construction a deflector is operatively secured within a coin-receiving chamber, so that the coins when falling therein gravitate towards a usually upwardly swinging hinged closure, so that the release and opening of such closure permits the coins to fall into a bag, truck, or other form of receptacle, by which they may be transported to a receiving office, bank, or other depository.

A still further object is to provide a head for the extendable, flexible coin-receiving tube of a collection receptacle, comprising a hooked portion for partially encircling the usual standard upon which a parking meter or the like is supported, and a body portion having an open intake side or cutaway portion, that registers with the discharge opening of the coin compartment of such meter, when said hooked portion is in operative engagement with the meter standard, said intake leading into a chamber that is closed upon its laterally opposite and forward sides and opens downwardly into the upper end of said flexible tube, the closure of said meter when in open position serving to close the otherwise open upper portion of said compartment, to prevent removal of coins by anyone while they are gravitating towards said collection receptable, and a handle bar extending slideably through a vertically elongated aperture in the forward portion of said head, and provided upon its rear end with a key for opening the meter closure when in one extreme position, and which handle bar upon being withdrawn forwardly and angularly upwardly effects the opening of said closure, while a reverse movement of said handle bar serves to re-close said closure and lock the same in closed position, after which said head may be disconnected from the meter standard, which separation has been totally impossible as long as the said handle bar was in engagement with said closure.

With the objects thus briefly stated, the invention comprises further details of construction and operation, which are hereinafter fully brought out in the following description, when read in conjunction with the accompanying drawings, in which Fig. 1 is a side elevation of the parking meter housing, the adjacent upper end portion of its supporting standard and the coin-receiving head of the collecting device; Fig. 2 is a right hand elevation of the coin-receiving head operatively related to the lower portion of the meter housing; Fig. 3 is a top plan view of the coin-receiving head per se; Fig. 4 is a central vertical section through the collecting head as the handle-actuated key is about to release the door or closure of the meter housing; Fig. 5 is a similar section showing the said collecting head after the handle has raised the closure to open position; Fig. 6 is a fragmentary vertical section through the lock of the door of the coin-controlled device, in combination with the key and adjacent portions of the door-opening member; and Fig. 7 is a fragmentary elevational view of the lock and adjacent portions of the door per se.

Referring to the drawings, a representative type of parking meter is shown having a housing comprising an upper portion 1, in which is located the usual time-measuring mechanism (not shown), and a depending portion 2 containing a coin-receiving chamber 3, that is bounded by rear, side and bottom walls, and forwardly by a hingedly supported door or closure 4. Said closure is supported from its upper edge, so that when raised outwardly there is in any case a minimum of difficulty in withdrawing coins from within said chamber, said closure being normally secured in its lower closed position by means of a keeper 5, controlled by a lock mechanism 6 and with its free end extending into a groove 7 in the bottom wall of said chamber, said lock having an internal shoulder engageable by a door-opening element.

The meter housing 1—2 is shown as being mounted upon the upper end of and secured to a suitable standard 16, that preferably comprises a staunch pipe or the like, the lower end portion of which (not shown) is buried in or otherwise secured to the ground or pavement. The coin-collecting head, that receives coins from within said meter housing, comprises a central body portion 25 that is essentially hollow, and from one side of which an integral handlike extension 26 projects rearwardly and thence about one-quarter of the distance around said standard immediately below said housing, so as to thereby prevent said head from being withdrawn and separated from said standard by a direct forward movement, while the housing discharge door is unfastened and in open position, as hereinafter described.

The lower body portion of said head is hollow to provide a chamber 28 into which coins drop, when the housing door 4 is in raised open position, and from which chamber the coins gravitate. Rising from said chamber 28 are a pair of side walls 31, that are both spaced apart and unconnected rearwardly and upwardly, but forwardly are connected by an arcuate wall 32 and a short upper transverse wall 33, that connects only the forwardmost portions of said side walls, and thereafter extends downwardly at 34 between said side walls and spaced from said forward wall. Each of said side walls is provided upon its inner surface with an arcuate groove 35, that at its upper end is positioned substantially midway between said forward arcuate wall 32 and the similarly curved connecting wall 34, while the lower rearward ends of said grooves extend to the rearward edges of said side walls.

Extending between said side walls and having reduced, laterally oppositely directed portions 36 slidable in said grooves is a crosshead 37, through which extends and is rotatably mounted the cylindrical end portion 38 of a lock-actuating bar 39, which is provided upon its rearward end with a suitable key 40 for releasing the housing door lock 6, and a spur 40*a* adapted to enter the space 40*b* to the rear of a shoulder 40*c* comprising an integral

part of the lock casing, said bar while freely rotatable being normally prevented from accidental separation from said crosshead by means of a suitable pin or screw 42 that extends radially into a peripheral groove 43 in said bar, the outermost forward end portion 44 of said bar being knurled or otherwise shaped to insure its being firmly gripped manually, as and for the purposes hereinafter described. An intermediate portion 45 of said bar is diametrically narrowed between a pair of parallel surfaces, and cooperates with a similarly narrowed portion 46 of a slot 47, that is transversely centrally positioned in and extends radially through said arcuate wall 32 and upper wall 33, while the lower portion 48 of said slot is transversely enlarged so that when said bar is positioned therein, it may be rotated freely. The geometric center of said grooves 35 coincides with the axis or hinge 49 about which said door oscillates.

By referring to Figs. 4 and 5, it will be seen that said bar and said crosshead as a unit are oscillatable in line with and as determined by the curvature and position of said arcuate grooves. In its lowermost, inward and rearward position said bar extends through the larger lower section 48 of the slot 47, and with its freely extending rear end portion 40 inserted into the lock mechanism 6, said bar is free to rotate and release said lock while at the same time becoming secured to said door, whereupon a forward and upward pull upon said bar operates to shift the same into the upper section 46 of said slot, where it cannot turn and resultingly cannot be released from engagement with said coin door and its lock mechanism, at the same time said door being lifted angularly into open position, so as to thereby close the upper portion of said head and at the same time permit the coins previously retained by it in the coin chamber to fall through the central body portion 25 and chamber 28 and thence into a collecting container. As soon as said chamber has been completely emptied, a lowering and rearward arcuate motion of said bar serves to close said door 4, and said bar having entered the larger lower end of said slot is rotated angularly until said door is again securely locked, whereupon said bar may be disengaged from said door and withdrawn, and the head moved laterally until the handlike extension 26 is free of said meter housing standard, after which the collection unit is ready to be shifted to another location for removal of the coins from another meter.

To the lowered forward position of the crosshead 37 is pivotally secured at 49a a depending apron 50, having an upper angular extension 51 that engages the under side of said crosshead when in lowermost position to insure said apron being maintained against the rearmost wall surface within the central body position 25 of said head, while a forward movement of said bar 45 upon opening the door 4 withdraws said apron to permit unrestricted passage of coins falling from within said housing.

From an examination of the collecting head, it will become apparent that from the time the housing door 4 is unlocked for opening, it is impossible for one by means of his fingers or tools to contact and thereby extract any of the coins as they fall into an extraneous collecting container. This results from the fact that the rearward side of the collection head is completely blocked by the meter housing, and the door in open raised position completely blocks the upper side of said head, while said apron likewise seals the restricted opening that would otherwise exist through the lower widened portion 48 of the slot 47.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. A coin-extracting head for coin-controlled apparatus, comprising a pair of side walls generally unconnected at their upper and rear edges, a substantially arcuate wall connecting the forward portions of said side walls and provided with a generally vertically arranged slot having a narrow upper portion and a transversely enlarged lower portion; a depending chamber having a downwardly directed discharge opening and defined by said side walls and by forward and rear walls, the forward wall of said chamber being a continuation of said arcuate wall, said side walls being provided with parallel arcuate tracks, a crosshead movable along said tracks, and a manually actuatable bar extending rotatably through said crosshead and provided upon its rearmost end with a key and door-engageable means, said bar being revolvable in the lower portion only of said slot and having a narrowed portion which when positioned in the upper portion of said slot is prevented from turning, whereby when said head is operatively positioned with respect to a coin-controlled apparatus the key of said bar when revolved in its lower position is engageable with and operative to unfasten, and said engageable means operative to raise, a pivotally mounted door of said apparatus to an upper open position substantially spanning the space between said side walls, and thereby permitting coins within said chamber to fall therefrom and through said discharge opening.

2. A coin-extracting head for coin-controlled apparatus, comprising a pair of side walls generally unconnected at their upper and rear edges, a substantially arcuate wall connecting the forward portions of said side walls and provided with a generally vertically arranged slot having a narrow upper portion and a transversely enlarged lower portion, a depending chamber having a downwardly directed discharge opening and defined by said side walls and by forward and rear walls, the forward wall of said chamber being a continuation of said arcuate wall, said side walls being provided with parallel arcuate tracks, a crosshead movable along said tracks, and manually actuatable bar extending rotatably through said crosshead and provided upon its rearmost end with a key and door-engageable means, said bar being revolvable in the lower portion only of said slot and having a narrowed portion which when positioned in the upper portion of said slot is prevented from turning, whereby when said head is operatively positioned with respect to a coin-controlled apparatus the key of said bar when revolved in its lower position is engageable with and operative to unfasten, and said engageable means operative to raise, a pivotally mounted door of said apparatus to an upper open position substantially spanning the space between said side walls, and thereby permitting coins within said chamber to fall therefrom and through said discharge opening, and means to prevent said head from being withdrawn directly from engagement with said apparatus as long as said bar and said door are respectively in their raised and open positions.

3. A coin-extracting head for coin-controlled apparatus, comprising a pair of side walls rising therefrom and generally unconnected at their upper and rear edges, a substantially arcuate wall connecting the forward portions of said side walls and provided with a substantially vertical slot having a narrower upper portion and a widened section adjacent to its lower end, a depending chamber having a downwardly directed discharge opening and defined by said side walls and by forward and rear walls, the forward wall of said chamber being a continuation of said forward arcuate wall, the inner surfaces of said side walls being provided with parallel arcuate tracks, a crosshead movable along said tracks, and a manually actuatable bar extending rotatably through said crosshead and provided upon its rearmost end with a key and with door-engageable means, said bar being revolvable in the lower portion only of said slot and having a narrowed portion which when positioned in the upper portion of said slot is prevented from turning, whereby when said head is operatively positioned with respect to a coin-controlled apparatus and said bar is in its lowermost rearward position said key is engageable with and

operative to unfasten said door as said bar is rotated in the widened lower section of said slot, and said bar with its engageable means connected to the door being then operative as its narrow upper portion is moved into the narrower section of said slot to raise a pivotally mounted door of said apparatus to an upper open position substantially spanning the space between said side walls, and permitting coins within said chamber to fall therefrom and through said discharge opening, and said bar while in said narrower slot section being prevented from rotation and release from said door.

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