

March 4, 1952

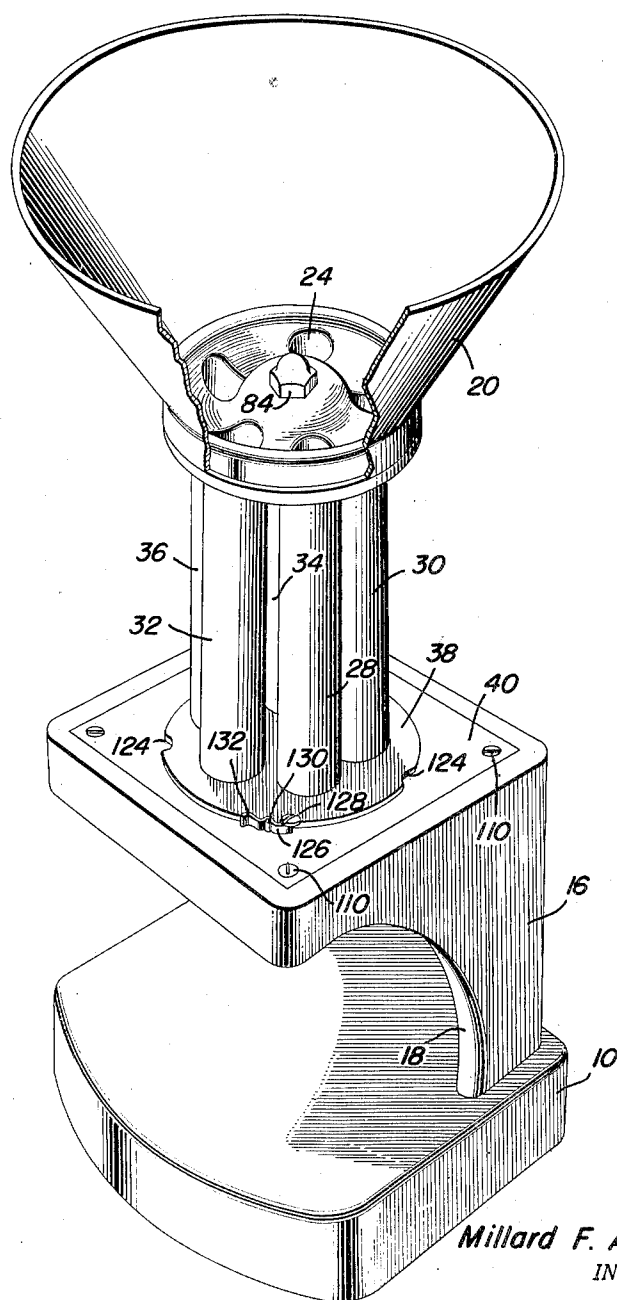
M. F. ARNETT
COIN DISPENSER

2,587,809

Filed Sept. 9, 1948

3 Sheets-Sheet 1

Fig. 1.



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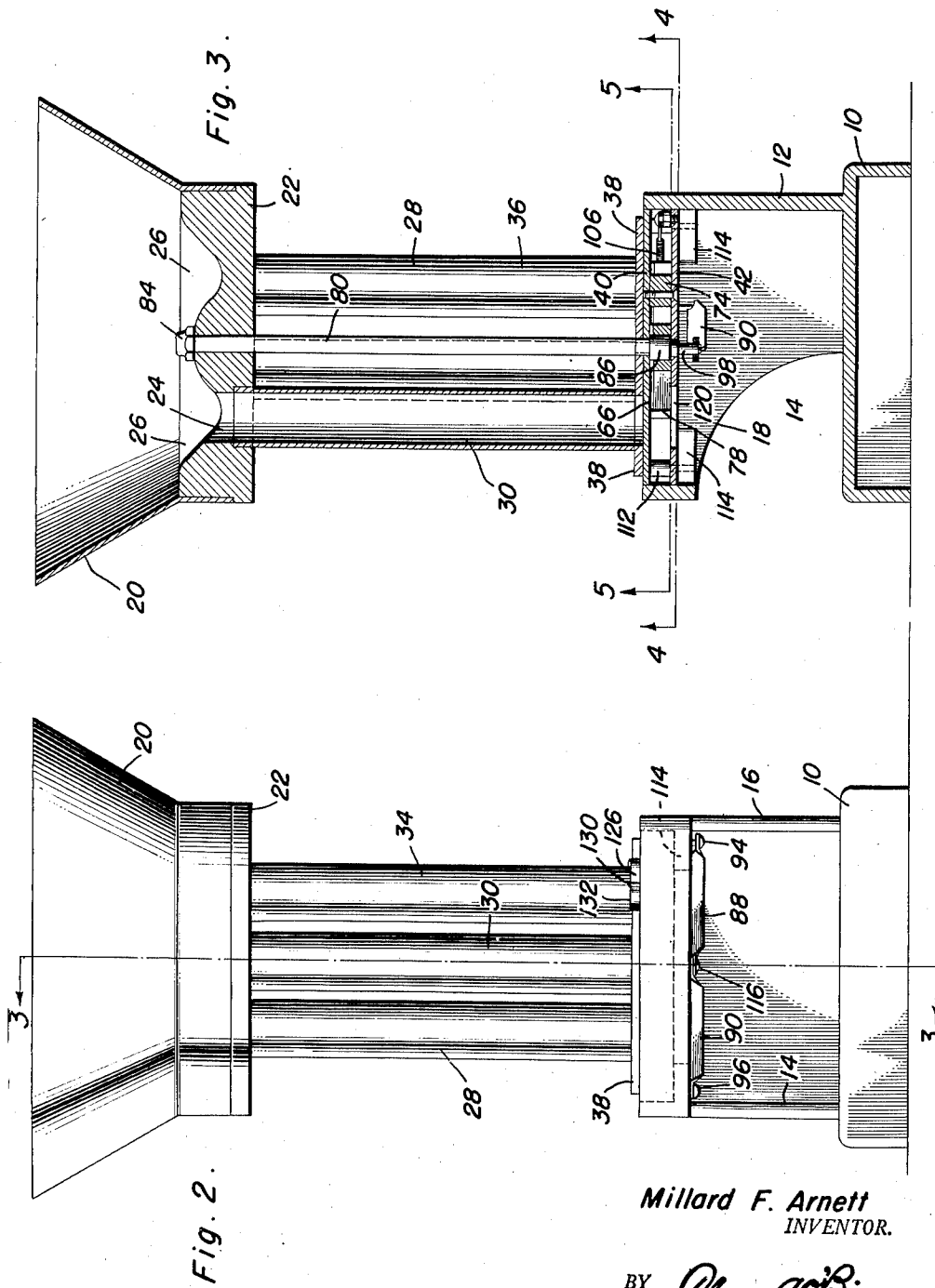
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Filed Sept. 9, 1948

3 Sheets-Sheet 2



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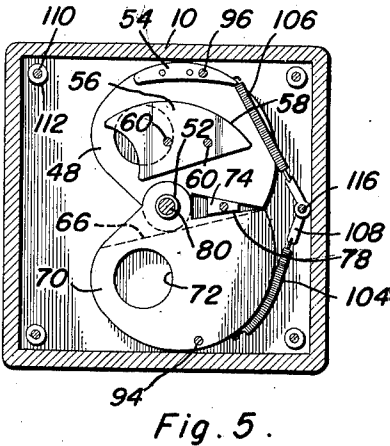
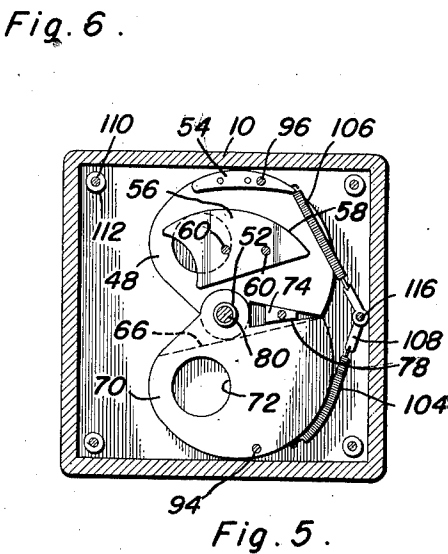
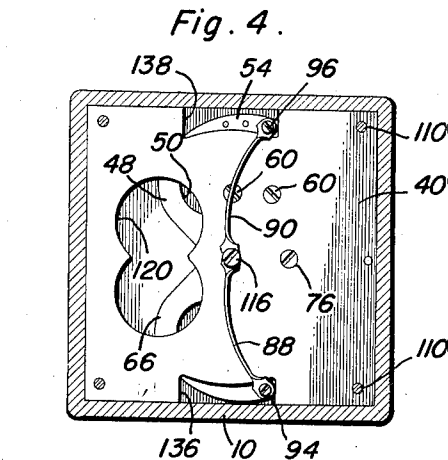
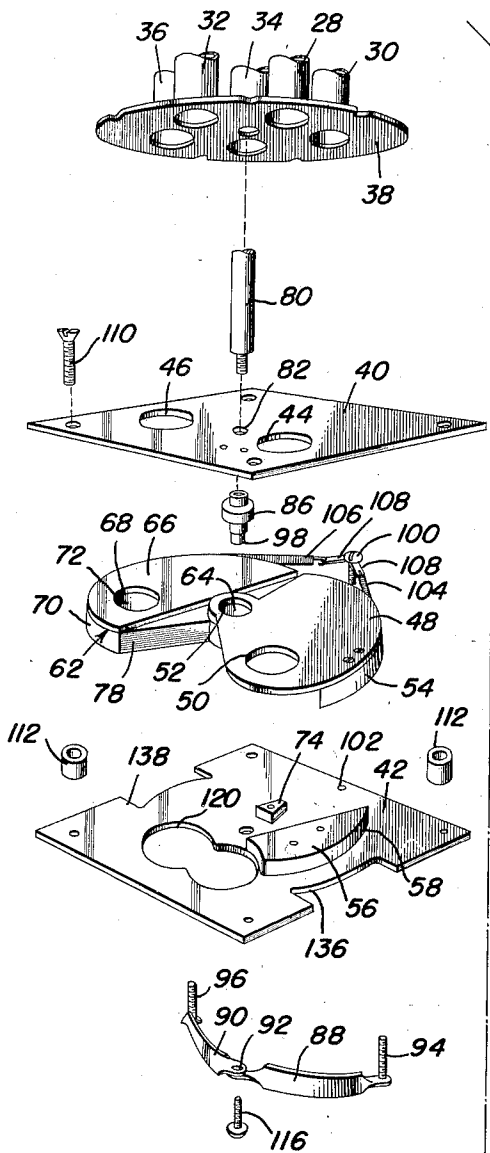
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Filed Sept. 9, 1948

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,587,809

COIN DISPENSER

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Application September 9, 1948, Serial No. 48,517

3 Claims. (Cl. 133—5)

1

This invention relates to novel and useful improvements in coin dispensers, of the type adapted to dispense a pre-selected number of coins upon a single manipulation.

An object of this invention is to dispense one or a number of coins by means of a structure which includes a base member having two pivotally operable coin ejectors mounted herein, a turret-type coin holder having a plurality of like coin tubes, which holder is mounted on the top face of the base member, the coin holder and the ejectors being rotatably mounted on a single shaft that extends from the bottom side of the base member completely through the base member and to a point spaced substantially above the top surface of said member.

Another object of this invention is to rotatably support a turret on a relatively stationary member, a central shaft extending through the turret and stationary member, with means attached to the relatively stationary member for dispensing a preselected number of coins from a selected tube in the turret, the selectivity of the tube being effected by means of rotation of the turret over an aperture in the relatively stationary member, which aperture also communicates with the coin-dispensing mechanism.

A still further object of this invention is to provide an improved base in association with the relatively stationary member with recesses in the sides thereof and a completely open front whereby access to the dispensing mechanism may be readily affected.

Another purpose of this invention is to provide an extremely simplified device of the character to be described which is devoid of complicated mechanism and which by minor adjustment may be made to dispense any number of coins by simply substituting thicker or thinner coin dispensing elements.

Ancillary objects and features of novelty will become apparent to those skilled in the art, in following the description of the preferred form of the invention, illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of the preferred form of the invention;

Figure 2 is a front view of the invention shown in Figure 1;

Figure 3 is a longitudinal sectional view taken substantially on a line 3—3 of Figure 2 and in the direction of the arrows;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 3 and in the direction of the arrows;

2

Figure 5 is a sectional view taken on a line 5—5 of Figure 3 and in the direction of the arrows, and

Figure 6 is an exploded perspective view of the parts forming the dispensing mechanism in the device.

It is one of the prime purposes of the invention to provide a device which is practical in its intended operation and which is inexpensive to manufacture.

Under certain operative conditions a device of the character to be described is extremely handy. In instances wherein coin receiving music sets, games of chance such as pin ball machines and the like are present, an individual in the establishment usually has many requests during the course of an evening for change of rather high denomination coins or bills. It is of course requested that a preselected denomination of coin be given, usually nickels. Accordingly, in order to obviate the necessity of counting out for example five coins over and over again during the course of the evening, the instant invention may be utilized to dispense five coins per operation. Any number of coins may be dispensed in accordance with the prerogative of the maker of the invention.

In the instant case there is disclosed two dispensing mechanisms for issuing two different numbers of coins. Of course, any practical number of dispensing mechanisms may be used as desired. For reasons of economy the preferential number of dispensing mechanisms is two.

The broad structural makeup of the present device includes a coin dispenser with a turret-type coin holder and a hopper communicating therewith. Coins are simply indiscriminately thrown or placed in the hopper and by gravity they seek the lower level which happens in this instance to be a number of coin tubes associated with the turret. There are two pivotally operable coin dispensing mechanisms or ejectors relatively stationarily positioned beneath the turret-type coin holder and of course, the coin holder is rotatable with respect to the coin ejecting mechanisms.

Two of the tubes are simultaneously matched with the tube ejector mechanisms, the said two tubes being brought into registry with two openings in the relatively stationary support on which the coin holder is mounted and through which the coins are fed by gravity into coin receiving apertures of the coin ejectors or ejector mechanisms. Since the coin ejectors have elements of different thicknesses, to hold a different number

of coins, a preselected number of coins may be ejected. The different thickness elements are pivotally operable to bring the coins contained therein into registry with two discharge openings in the coin support portion or element which is positioned immediately below the ejectors or ejector mechanisms and through which the coins are dispensed into the same hand of an operator which is used for actuating the ejector mechanisms.

A base is constructed of such design that not only is the turret-type coin holder along with the ejector mechanisms supported but it is also supported in a manner so that the ejector mechanism may be easily and conveniently operated. The complete front of the base is open and recessed portions are provided in the sides of the base for ready access of the hand of an operator to the ejector mechanisms.

This base may be detachably associated with the remainder of the mechanism or if desired, may be formed as a single piece or rigidly secured thereto. This is but a matter of expediency.

The said base includes a bottom 10 with a back wall 12 attached thereto and side walls 14 and 16 respectively. The side walls have smoothly curved recesses 18 forming the front portions thereof and the front of the said base is completely open.

A turret-type magazine is associated with the said base and includes a hopper 20 which is seated upon an upper plate 22 which has a number of apertures 24 therein. These apertures have smoothly curved guide walls 26 forming sub-hoppers within the main hopper 20. A number of coins which are poured indiscriminately in the hopper 20 will follow the contour of the smoothly curved walls 26 for subsequent depositing in one or more of the five tubes 28, 30, 32, 34, and 36.

The said tubes extend partially within the apertures 24 an amount which is sufficient to provide a firm bearing surface. The opposite ends of each of the tubes are attached by any suitable means to a disk-like plate 38 which has complementary apertures therein. Thus, a through passage is supplied from the hopper 20 to the plate or disk 38 through all of the said tubes.

An ejector mechanism is seated on the support and also supports the said tubes and pertinent mechanism. This ejector mechanism includes a pair of spaced plates 40 and 42 respectively, the plate 40 being the upper plate and having a variety of apertures therein. Two of the said apertures 44 and 46 respectively are adapted to communicate with two of the apertures in the disk-like plate 38 simultaneously. By this means potential discharge of coins from any two successive tubes is permitted through the apertures 44 and 46.

Means for ejecting one or more coins is swingingly mounted between the plates 40 and 42 and includes the following structure:

A relatively thin coin receiving plate 48 with a coin receiving opening 50 therein is provided with a bearing 52 spaced from the coin receiving opening 50. A stop 54 having a smoothly curved inner surface is attached to the coin receiving plate 48 and this stop engages the complementary stop 56 having a smoothly curved side wall 58 when the plate is pivotally operated. The last mentioned stop 56 is attached firmly to the lower plate 42 by means of screws or the like as seen at 60.

A relatively thicker plate generally indicated

at 62 is provided in juxtaposition to the said plate 48 and serves the same general purpose. The makeup of the thicker plate may include one plate 66 which is identical to said plate 48 and which has a coin receiving opening 68 therein. A shim 70 may be firmly attached to the under-surface of the said plate 66 and has a communication with the aperture 68. The said shim 70 has the bearing 64 therein which is positioned directly below the bearing 52. A stop 74 is attached by means of a screw 76 to the lower plate 42 and is engaged by the flat surface 78 of the shim 70 upon pivotal movement thereof, in order to limit the travel relative to pivotal movement as will be described subsequently.

In order to mount the pivotal coin ejector plates 48 and 62 respectively, a shaft 80 extends through central apertures in the hopper plate 22, and an aperture 82 in the upper plate 40 of the coin ejector or dispenser mechanism. The said shaft has reduced end portions in order to accommodate a nut 84 at one end thereof and in order to accommodate a bearing cluster 86 at the other end thereof. This bearing cluster is received in the bearings 52 and 64 thereby pivotally journaling the coin dispenser plates 48 and 62 beneath the said plate 40 and above the said plate 42.

Means for actuating the said coin dispenser plates 48 and 62 respectively is provided. The preferable means consists of smoothly curved arcuate arms 88 and 90 respectively which have flattened end portions and apertures 92 provided therein. At the opposite ends of the curved arms 88 and 90 there is supplied screws 94 and 96 respectively which may be substituted by any suitable equivalent. The said screw 96 is threadedly attached to the shim 78 while the said screw 94 is threadedly attached to the stop 54. The smoothly contoured or surfaced bearing cluster 86 has a lowermost reduced portion 98 which seats the said arms 88 and 90 respectively through the medium of utilization of the apertures 92 as bearings. It is seen from inspection of Figure 3 that the said arms are journaled beneath the plate 42 and may be used for manual manipulation in discharging coins. An anchoring screw 100 is attached in the aperture 102 of the plate 42 and has a pair of springs 104 and 106 respectively attached thereto through the medium of small links 108 or any other suitable equivalent means. Of course, if it is found desirable the said springs 104 and 106 may be attached directly to the anchoring screw 100.

The opposite ends of the said springs 104 and 106 respectively are secured to the shim 78 and to the stop 54 respectively thereby resiliently biasing the coin receiving plates in a pivotal manner, until acted upon by an external force such as the fingers of an operator pulling the arcuate operating arms 88 and 90 respectively.

In order to assemble the coin dispensing mechanism screws 110 extend through both plates 40 and 42 respectively and a suitable collar 112 may be interposed between the plates serving the purpose of spacer members for each screw. In this instance there are four utilized, one at each corner of both of the said plates 40 and 42. Further, the said screws may be of sufficient length to extend through both plates and terminate in suitable perches or brackets 114 which are placed at the corners of the base support thereby securing the assembled device to the support.

In order that the shaft 80 and bearing cluster 84 may be maintained in assembled form, a small

5

screw or the like 116 may attach to the lower portion 98 of the said cluster 86. This is however, a matter of expediency and other common expedients may be resorted to such as soldering, spot welding etc.

As stated hereinbefore the said shaft 80 extends through the turret-type magazine, the plates 38 and the hopper bottom or upper plate of the turret-type magazine being immovable relative to each other through the medium of the tubes. Accordingly, all the tubes and the associated mechanism may be turned bodily in a rotated manner about the shaft 80 as an axis. This turning will allow successive pairs of tubes to be matched with the apertures 44 and 46 and consequently the apertures 50 and 68 in dispensing coins. Accordingly, when certain of the magazines have been exhausted of the contents, the entire magazine is simply rotated an appropriate amount thereby aligning other full tubes. The rather large opening 120 provided in the bottom plate 42 matches with the apertures 50 and 68 (and consequently 72) only in one pivotal position of the said plates 48 and 62. Normally, the said apertures 44, 50 and 46, 68 are aligned with the tube openings to allow the predetermined number of coins to fill these apertures. Accordingly the dispenser mechanism is constantly charged. Upon pivotal movement of the plate 48, the single coin (in this instance) is slid forward, riding on the stop 56 until the opening 50 matches sufficiently with the opening 120, at which time the single coin is dispensed.

The coins charging the apertures 68 and 72 normally rest on the material of the lower plate 42 until such time that they are urged by means of pivotal movement of the plate 62 into discharging relation with the opening 120.

It will be noted that the opening 120 is common to both discharging or coin ejecting units for convenience of reception of the coins into the hands of an operator. The specific location of the operating arms 88 and 90 is of importance, as the movement of the arms may be effected by means of the fingers while the hand of an operator is normally cupped substantially immediately below the aperture 120 in order to receive the coins which have been ejected therein.

By varying the size of the shim 78, any specific number within practical limits of coins may be discharged. The preferable arrangement is to discharge two and five coins as this number is equal to one dime or one quarter. This is of course, a matter of expediency and desire of the manufacturer.

As stated above the turret-type magazine may be rotated about the central shaft 80 for matching selected tubes with the various coin receiving openings. In order to anchor the said turret-type magazine in selected positions so that the tubes will match or be in direct communication with the openings 44 and 46, small recesses 124 may be spaced about the periphery of the plate 38 for accommodation of a spring latch 126. This spring latch is attached by means of a screw 128 or the like to the said plate 40 and extends around a binding post 130 so that the curved or arcuate terminal portion 142 may be resiliently biased into the recesses. By proper positioning of the spring latch with relation to the turret-type magazine, it serves as an indicator to ascertain at which position the tubes are aligned with the coin receiving openings.

In order to limit the travel of the arms 88 and 90 respectively, the dispenser plates 48 and 62 re-

6

spectively strike the stops 56 and 74 respectively in pivotal movement in one direction, and in the other direction the said screws 94 and 96 engage the end edges of recesses 136 and 138 respectively which are provided in the sides of the said plate 42. Hence, only a predetermined amount of movement is allowed, which amount is proper for correct dispensing of either a single coin or any number of coins by the aforementioned pertinent mechanism.

It is apparent that variations may be made without departing from the spirit of the invention.

Having described the invention what is claimed as new is:

1. A coin dispenser comprising: a flat hollow base member of substantially square plan form and relatively small height compared to its plan dimensions having a single straight centrally disposed mounting shaft extending from bottom to top therethrough, said shaft being perpendicular to and projecting a substantial distance above the top face of the said base member; two pivotally operable coin ejectors of unequal thicknesses each having a coin receiving aperture and a mounting aperture therein and a finger lever projecting downwardly from its lower face, said coin ejectors being mounted within the said hollow base member with the aforesaid mounting shaft extending through their mounting apertures; and a turret type coin holder formed of a disk-like bottom member having a shaft opening through its center perpendicular to the faces of the said bottom member and a plurality of like coin tubes mounted on said bottom member perpendicular to the faces thereof with their centers equally spaced on the circumference of a circle concentric with the shaft opening of the said bottom member, said coin holder being mounted on the top face of the said base member with the shaft opening of its disk-like member rotatable on the projecting portion of the aforesaid mounting shaft; said base member comprising a substantially square turret support plate forming its top, a coin support plate of the same size and configuration as the turret support plate forming the bottom of said base member, and two spacers each of a height slightly greater than the thickness of the coin ejector of greater thickness disposed between the said plates at their front and rear edges and maintaining the first named plate in spaced superposed parallel relation to the second named plate, said turret support plate having therethrough two coin inlet openings equally distant from its front edge and further disposed to be in simultaneous registry with two non-adjacent coin tubes of the said coin holder, said coin ejectors being normally held in registry with the above coin inlet openings by tension springs, there being an apertured filler plate above the coin ejector of greater thickness to make a continuous closed passage from the lower end of the coin tube to the last named coin ejector, said coin support plate having therethrough two arcuate finger lever slots through which the downwardly projecting finger levers of the said coin ejectors extend, and two coin discharge openings equally distant from its front edge and closer thereto than the coin inlet openings are to the front edge of the turret support plate, said coin discharge openings being so positioned that they will be in registry with the coin receiving apertures of the aforesaid coin ejectors when the coin ejectors are at the forward end of their paths of rotation.

2. A coin dispenser comprising a base member

7

having a pair of pivotally operable coin ejectors mounted therein and each ejector having an ejector opening, said base member including a first and a second superposed plate forming a pair of spaced plates said first plate having coin receiving openings therein normally communicated with the openings in the coin ejectors, the second of said plates having a discharge opening which is normally non-aligned with the ejector openings, a stop attached to said second plate having one of said coin ejectors slidably received thereon, the opening in the said one of said coin ejector mechanisms being normally positioned directly above said stop and slidable thereon in order to seat coins on the stop until released through the discharge opening, the other of said pair of coin ejectors being disposed between said pair of plates for movement to register with the discharge opening and one of the openings in the first plate, a turret type coin holder, means extending through said coin holder and journaled in at least one of said base plates for rotatably supporting said coin holder, said coin holder including a plurality of tubes for storing coins, and at least two of said plurality of tubes being

8

aligned with the openings in the first base plate to gravity-feed coins into said coin-receiving openings.

3. The combination of claim 2 and resilient means mounted on said first plate and operatively connected with said coin holder for releasably retaining a selected one of said tubes in alignment with the apertures in said first plate.

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