April 29, 1952 J. S. GASSAWAY 2,594,907

COIN DISPENSER

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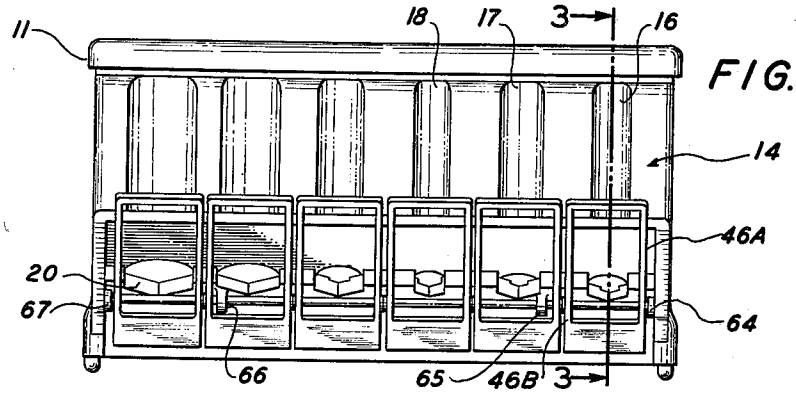


FIG. 1.

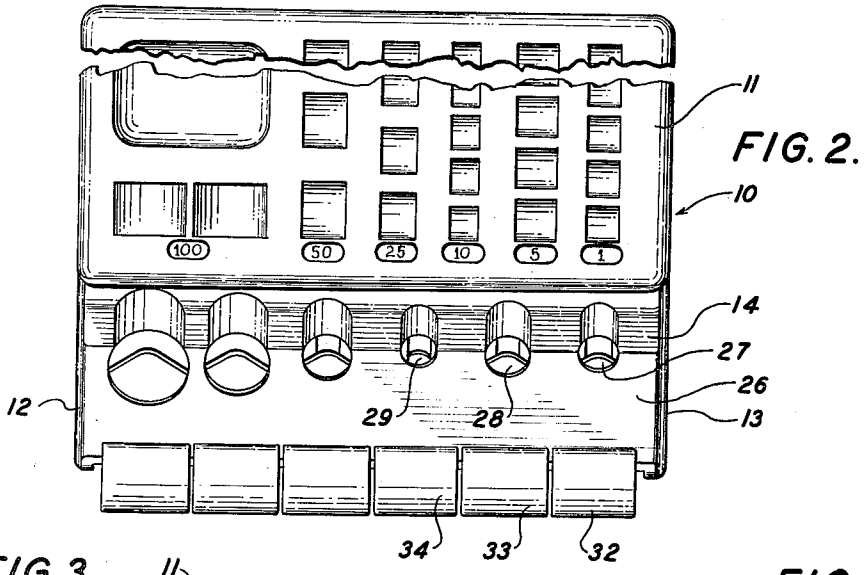


FIG. 2.

FIG. 3.

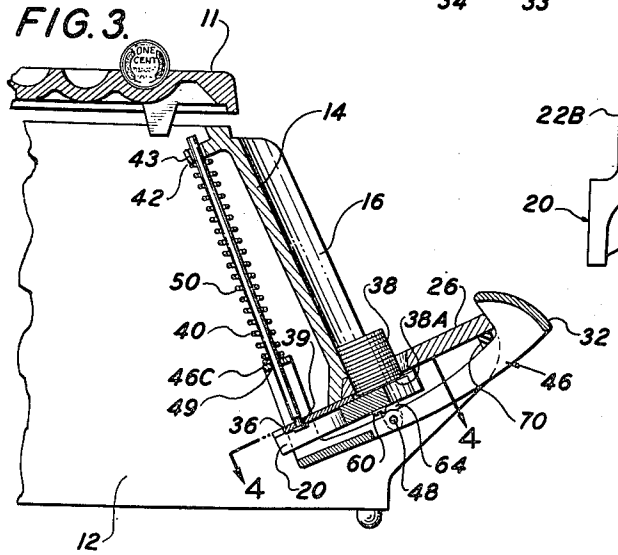
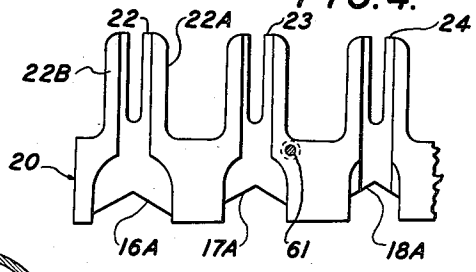


FIG. 4.



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COIN DISPENSER

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2 Claims. (Cl. 133—5)

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This invention relates to coin changers and more particularly to coin changers of the type used by bank tellers and the like.

A conventional coin changer comprises a metal framework having a plurality of sloping coin retaining chutes at one end. The chutes are generally of different sizes to accommodate pennies, nickels, dimes, etc., and are provided at their lower ends with dispensing means for discharging one coin at a time. The framework of the coin changer must be sufficiently heavy and so balanced as to prevent the weight of the stacked coins in the operation of the dispenser from tipping the apparatus.

The greatest objection of existing changers of this type is the complexity of the dispensing mechanism and consequent high cost. Additionally, the only storage place provided is a flat upper plate grooved to receive the various coins. I have now developed a coin changer which provides improvements over the presently existing changers, in appearance, convenience, and simplicity of construction.

The coin changer of the present invention comprises a box type housing having several coin grooves on one end thereof and dispensing means associated with each groove. The dispensing means includes a tongue traveling in a slot or track opening into the lower end of the chute. An elongated rod is linked at one end to the inner end of the tongue and at the other to the inside of the front face of the housing. Lever means, operable from the front of the housing provide means for pivoting the rod to oscillate the tongue in its track. With each forward stroke of the tongue a coin is pushed from the bottom of the stack outwardly to fall through a hole provided therefor.

The invention will be more clearly understood from the following detailed description thereof taken in relation to the accompanying drawing, in which:

Fig. 1 is a front elevation of the coin changer of the invention;

Fig. 2 is a plan view of the coin changer;

Fig. 3 is a sectional elevation taken on the line 3—3 of Fig. 1; and

Fig. 4 is a plan view taken on the line 4—4 of Fig. 3.

The coin changer of the invention as illustrated in the drawing comprises a housing 10 having a removable cover 11, sides 12, 13, and a sloping front face 14, the front face 14 is provided with a plurality of parallel grooves 16, 17, 18, etc. to accommodate pennies, nickels, dimes, etc. The

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grooves are open at their upper end to receive replacement coins. A member 20 supports a dispensing mechanism associated with each groove and also forms a bottom on the several grooves to support stacks of coins therein. The member 20 is affixed to the lower edge of the face 14 by screws 60, 61, etc., and extends outwardly to support the coins in the chutes and inwardly to form a separate track opening into each chute adjacent the bottom. Referring to Fig. 4, a section of the member 20 is shown including the tracks 22, 23, 24 communicating with the webs 16A, 17A, 18A forming the bottoms of the chutes 16, 17, 18, respectively.

A shelf 26 is mounted above the member 20 and extends outwardly from the face 14 and substantially at right angles thereto. The shelf is provided with semi-circular notches 27, 28, 29, etc. along its inner edge in line with the several grooves 16, 17, 18, etc. and of substantially the same size as the coins that are supported in the grooves. The notches in effect, define a hole with the respective chutes of substantially the size of the coins resting in the chute. The shelf 26 is mounted above the member 20 with several webs 16A, 17A, etc. lying beneath the shelf a distance slightly greater than the thickness of the particular coins supported by the several webs. Thus the shelf serves to prevent ejection of more than one coin on each stroke of the tongue.

Each of the coin chutes has associated therewith a dispensing mechanism operated by finger tabs 32, 33, 34, etc. The dispensing mechanisms of each of the several coin chutes are identical and description of one, as illustrated in Fig. 3, will serve to describe each of the several mechanisms. A tongue 36 is slidable in the track 22 in the member 20 and in the retracted position shown in Fig. 3 is out of the path of the coins 38 resting in the chute 16. One edge of the tongue 36 is grooved at 39 adjacent the rear end of the tongue to receive a rod which is held in the tongue between the extending legs 22A, 22B of the track.

A lip 42 projects inwardly from end to end of the front 14 adjacent its upper edge. The lip 42 is provided with a series of spaced holes aligned with the several tracks in the member 20. The upper ends of the several rods extend through the holes in the lip. Thus as shown in Fig. 3, the upper end of rod 40 projects through a hole 43 in the lip, the hole being sufficiently large as compared to the rod to allow the rod to

pivot through the angle necessary to actuate the tongue.

A yoke 46 having two arms 46A and 46B extending beneath the member 20 is journaled on a pin suspended beneath the member 20 on hangers 64, 65, 66, 67 depending therefrom. Each of the dispensing means is provided with an identical yoke type arrangement and each is journaled on the same pin 48. The forward end of the yoke 46 is provided with a finger tab 32 which extends between the arms 46A, 46B of the yoke and lies adjacent the front edge of the shelf 26. A rubber bumper 70 is affixed to the under face of shelf 26 against which the forward end of the several yokes abut when in the release position.

The inner end of the yoke 46 extends upwardly, the two legs 46A, 46B lying on either side of the track 22, being connected at their upper ends by a cross member 46C. The rod 40 extending between the tongue 36 and the lip 42 passes through a hole 49 in the cross member 46C. A helical spring 50 is disposed around the rod 40 and is confined between the cross member 46C of the yoke and the lip 42.

The operation of the coin changer can be easily undersood from reference to the drawing and the foregoing description. With particular reference to Fig. 3, when the tab 32 is depressed the inner upwardly extending yoke pivots toward the face 14 pivoting the rod 40 with it. The rod acts on the tongue to force the tongue outwardly along the track to push the bottom coin 38A outwardly beneath the shelf 26 and free of the stop 16A so that it falls between the legs 46A, 46B of the yoke conveniently into the hands of the operator. The spring 50 forces the yoke to return to the position shown in Fig. 3 thereby retracting the tongue. At this point the coins in the chute 16 will drop and rest on the stop 16A.

Some of the tracks may be countersunk below the level of the stop webs to accommodate a tongue thicker than the coins it discharges and to avoid discharge of two coins at each stroke. In the illustration, the track 24 is countersunk in the web 18A whereby the associated tongue (not shown) may be thicker than the dimes disposed in the chute 18.

A feature of the invention is the simplicity of construction thereof which results in lower manufacturing costs. It will be seen that there are only four moving parts in each of the dispenser mechanisms, namely the yoke 46, the rod 40, the tongue 36 and the spring 50. Furthermore, each of the moving parts is held in the illustrated relationship by the member 20 which is the only part affixed to the housing. The member 20 is affixed to the under edge of the front 14 by two or more screws 60, 61, etc. The rod 40 and its counterpart in the other dispensing mechanisms is loosely cleated in the groove 39 of the tongue 36 the latter being inserted in the track 32. As above mentioned, the legs 22A, 22B of the track hold the rod 40 in the tongue. Before the tongue is mounted in the track the rod 40 is inserted through the hole

49 in the transverse member 46C of the yoke and through the lip 42. The tongue is then inserted in the track 22 and the entire assembly is secured to the housing by the pin 48 journaled through hangers forming a part of the member 20 .

The companion dispensing means associated with each of the several chutes are similarly assembled and the pin 48 is journaled through the several yokes to hold the entire assembly to the member 20. Not only does the simplicity of construction and assembly save manufacturing costs, it also makes the replacement of worn parts a minor operation.

I claim:

1. A coin changer comprising a housing, a plurality of parallel inclined grooves in one side of the housing for holding coins, a base member affixed to the under edge of said side of the housing and forming a bottom for each groove to support coins in the grooves, a separate tongue mounted on the base member behind each groove and slidable across the bottom of the groove, retaining means extending inwardly from the inner face of said side above the base member, a separate rod engaging the inner end of each tongue and extending upwardly through the retaining means, a pivot pin suspended from the base member, a separate lever arm pivotally mounted on the pivot pin below each groove and extending outwardly and inwardly therefrom, each lever arm comprising a pair of parallel side pieces mounted on the pin, the inner ends of the side pieces turning upwardly on the inside of the housing, a first cross member connecting the inner ends of the side pieces and having a central hole therethrough, the corresponding one of said rods extending through the first cross member intermediate the tongue and the retaining means, and a second cross member joining the forward ends of said side pieces and forming a finger tab whereby the forward end of the lever may be depressed by pressure on the tab.

2. Apparatus according to claim 1 wherein a helical spring is mounted on the first rod and the under side of the retaining means, the spring being depressed by rotation of the rod resulting from depression of the finger tab.

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