Dec. 16, 1958 R. T. ALLEN 2,864,386

COIN COUNTER AND WRAPPER

Filed Jan. 17, 1955 2 Sheets-Sheet 1

Fig. 1

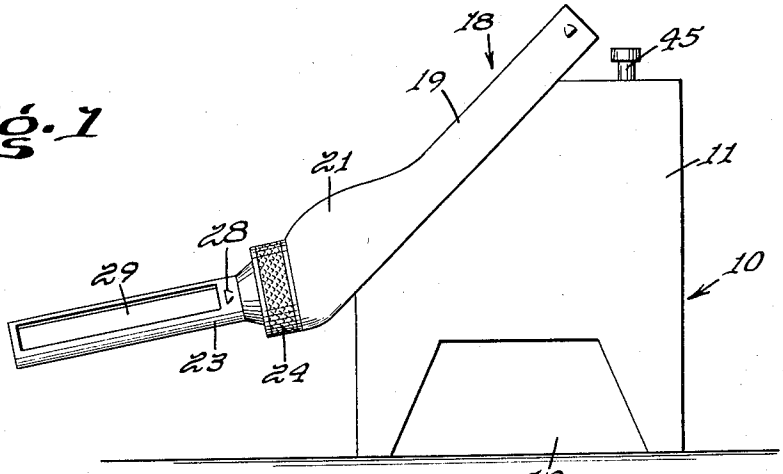


Fig. 2.

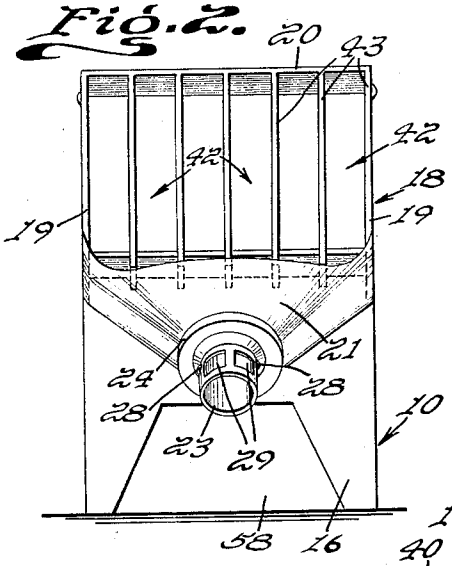


Fig. 3

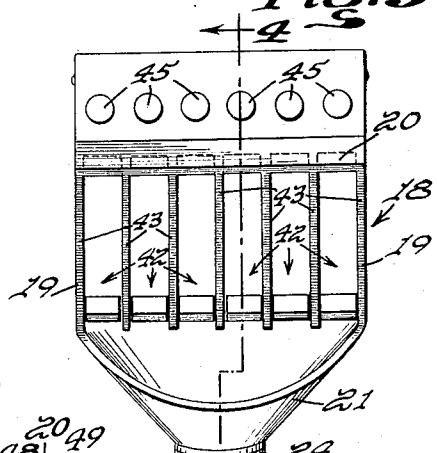
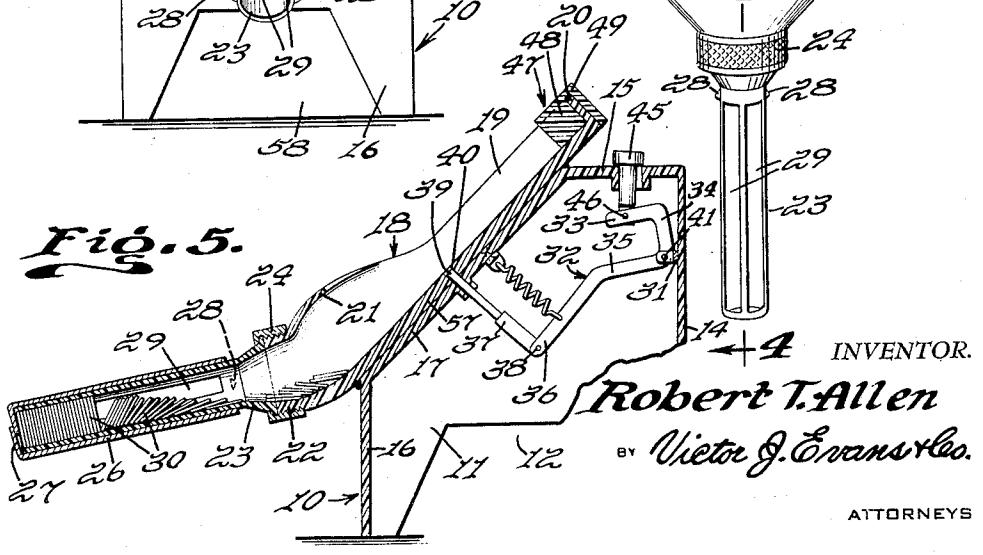


Fig. 5.



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COIN COUNTER AND WRAPPER

Filed Jan. 17, 1955 2 Sheets-Sheet 2

Fig. 12

Fig. 13

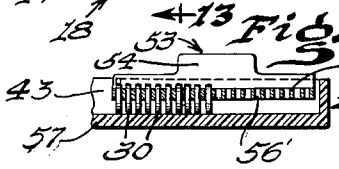


Fig. 4

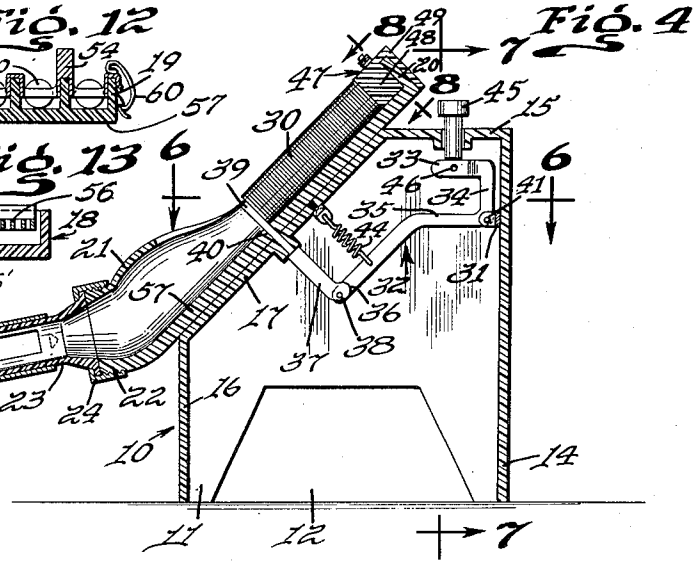


Fig. 6.

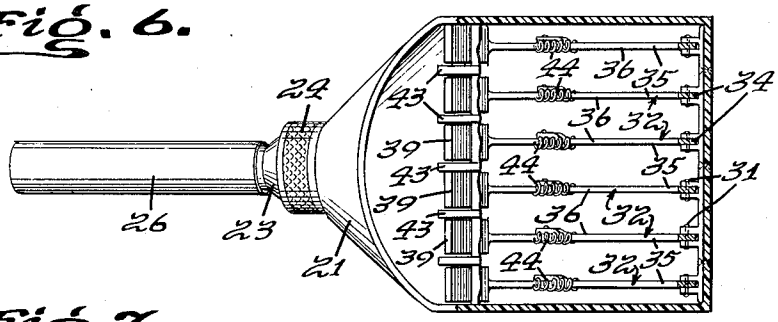


Fig. 7

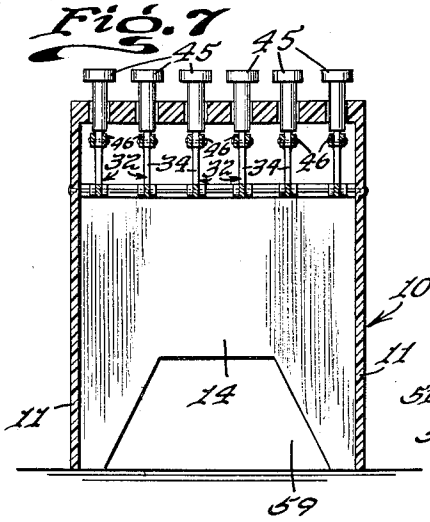


Fig. 8.

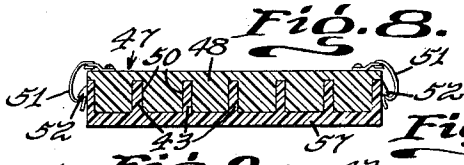


Fig. 10

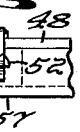
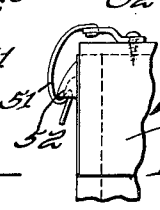


Fig. 9

Fig. 11



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COIN COUNTER AND WRAPPER

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1 Claim. (Cl. 133—8)

This invention relates to a coin handling mechanism, and more particularly to a coin counter and wrapper.

The object of the invention is to provide a machine which will count and wrap a plurality of coins such as pennies, nickels, dimes and quarters and the like.

Another object of the invention is to provide a mechanism which will facilitate the counting and wrapping of a certain number of coins from a stack of coins so that such coins can be readily wrapped to be more easily handled.

A further object of the invention is to provide a coin counting and wrapping mechanism which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a side elevational view of the coin counting and wrapping mechanism of the present invention.

Figure 2 is a front elevational view of the mechanism.

Figure 3 is a top plan view of the machine.

Figure 4 is a sectional view taken on the line 4—4 of Figure 3, and illustrating a block insert positioned on the rear of the casing or tray.

Figure 5 is a view similar to Figure 4, but illustrating the coin-retaining plates depressed to permit the coins to move from the compartments to the tube or guide member.

Figure 6 is a sectional view taken on the line 6—6 of Figure 4.

Figure 7 is a sectional view taken on the line 7—7 of Figure 4.

Figure 8 is a sectional view taken on the line 8—8 of Figure 4.

Figure 9 is a top plan view illustrating the block insert of Figure 8.

Figure 10 is a fragmentary elevational view illustrating the block insert of Figure 9, and taken at right angles to the view shown in Figure 9.

Figure 11 is an enlarged elevational view illustrating the clamping means holding the block insert to the casing or tray of Figures 8–10.

Figure 12 is a fragmentary sectional view illustrating a modification wherein a different type of insert, such as a coin-counting insert, can be mounted on the device.

Figure 13 is a sectional view taken on the line 13—13 of Figure 12.

Referring in detail to the drawings, the numeral 10 designates a hollow housing which can be made of any suitable material, and the housing 10 includes spaced parallel vertically disposed side walls 11 which are each provided with a cutout 12 whereby access can be gained to the interior of the housing. The housing 10 further includes a vertically disposed back wall 14, and a horizontally disposed top wall 15, Figure 4. There is further provided a front wall which includes a lower vertical portion 16 and an upper inclined portion 17.

Mounted on the inclined portion 17 of the wall of the housing is an inclined casing or coin tray which is indicated generally by the numeral 18, Figure 3. The casing or tray 18 includes spaced parallel side members 19 and a back member 20. The lower portion of the casing is shaped to define a funnel-like body member or hopper 21 which has a threaded neck 22 on its lower end. A tube 23 is arranged contiguous to the neck 22, and the tube or guide member 23 is detachably connected to the neck 22 by means of a locknut 24, Figure 5. A wrapper 26 of tubular shape is mounted on the tube 23, and one end 27 of the wrapper 26 may be closed. The end of the wrapper 26 is adapted to abut ears or lugs which extend outwardly from the guide 23. The guide or tube 23 is further provided with elongated cutouts, openings or perforations 29 whereby suitable elements such as a pencil can be inserted through the cutouts 29 in the event that the coins such as the coins 30 become stuck so that such a pencil could be used for freeing any obstruction.

Extending inwardly from the back wall 14 is a plurality of lugs 31, and brackets 32 are pivotally connected to the lugs 31 by means of pins 41. Each of the brackets 32 includes a first portion 33, and a second portion 34 which is arranged at right angles with respect to the first portion 33. A third portion 35 extends from the portion 34, and there is a fourth portion 36 which is arranged angularly with respect to the portion 35. A link 37 is pivotally connected to the fourth portion 36 by means of a pin 38, and each of the links 37 has a coin-retaining plate 39 secured thereto. The movable plates 39 are adapted to project through openings 40 so as to selectively block the chutes or passageways 42 which have the coins arranged therein, as shown in Figure 4 for example. The passageways 42 or compartments 42 are defined by a plurality of spaced parallel ribs 43 which may be formed integral with the casing.

A means is provided for normally urging the plates 39 to their closed or blocking position as shown in Figure 4, and this means comprises coil springs 44 which extend between the portions 36 of the brackets 32 and the inclined portion 17 of the wall of the housing. For moving the plates 39 downwardly through the openings 40, a plurality of buttons or plungers 45 are slidably mounted in the top wall 15 of the housing, and the plungers 45 are pivotally connected to the first portion 33 of the bracket by means of pins 46.

At times an insert 47 may be mounted in the upper portion of the casing 18 so as to permit a predetermined number of coins to be arranged in the compartments 42. Thus, the insert 47 includes a base 48 which is provided with a slot 49 that receives the back 20 of the casing 18. The insert 47 is detachably connected to the casing, and the base 48 of the insert is provided with a plurality of spaced parallel grooves or slots 50 which receive therein the upper portions of the ribs 43. For maintaining the insert in its proper place, spring members 51 extend from the insert and engage lips or shoulders 52 which may be formed integral with the sides 19 of the casing 18. By disengaging the spring members 51 from the lips 52, the insert 47 can be removed when desired.

A different type of insert illustrated in Figures 12 and 13, and indicated by the numeral 53 can be used if desired. The coin-counting insert 53 is a removable unit comprising flat spacer strips 56 disposable in compartments 42 and, when resting therein, being raised somewhat above the inner surface of bottom 57. These strips are interconnected by raised rib strips 55 which snugly engage the upper edges of ribs 43. Two of these rib strips 55 are provided with higher raised portions 54 which serve as handles to facilitate lifting out of coin counting insert 53. Spacer strips 56 are provided with longitudinally-arranged series of slots 56' into which individual

coins 30 may be inserted loosely for counting, after which operation insert 53 may be lifted out of the compartments. thereby allowing the counted coins to rest therein as in Fig. 4, ready for wrapping in tube 26. Clips or clamps 60 attached to the sides of insert 53 enable firm attachment thereof to sides 19 of casing 18 when coins are to be counted.

The bottom of the casing or tray 18 is indicated by the numeral 57, and the casing 18 may be secured to the portion 17 of the front wall in any suitable manner. The portion 33 of the bracket 32 may be bifurcated for receiving the lower end of the plunger 45. The front wall of the housing may be provided with a cutout 58, and the rear wall 14 may be provided with a cutout 59 and these cutouts all permit access to be gained to the interior of the housing. In Figure 4 the tube or wrapper 26 which may be made of any suitable material such as paper, is shown before the end is folded as at 27.

From the foregoing it is apparent that there has been provided a mechanism which is especially suitable for use in counting and wrapping a plurality of coins such as pennies, nickels, dimes, quarters and the like. In use a plurality of coins 30 can be positioned in the compartments 42 defined between the ribs 43. The plates 39 are in the raised position as shown in Figure 4, and the plates 39 are held in this raised position by means of the springs 44. After the desired number of coins 30 are in the compartments above the plates 39, and with the tube 26 initially positioned on the guide 23 and then having its end folded over as at 27, the plunger or plungers 45 can be manually depressed. This downward movement of the plungers 45 causes pivotal movement of the brackets 32 about the pins 41 whereby the coil spring 44 will be extended and the plate 39 will be retracted or lowered. Thus, the coins 30 held up by the plate 39 will be permitted to drop down into the funnel shaped body member 21 and these coins will then enter the tube 23. Then, when the wrapper 26 is removed from the tube the coins will move down the inclined tube 23 into the wrapper. The space in the compartments 42 above the plates 39 are of such a size so that a predetermined quantity of coins can be positioned therein and subsequently filled in a wrapper 26. If desired, a block insert such as the insert 47 can be mounted in the upper end of the casing 48 so that coins of smaller denominations such as dimes will occupy the space between the base 48 and the plates 39. Or, the insert 53 can be mounted in the casing and a plurality of coins 30 which may also be dimes, can be positioned between the strips 55 so that when the coin-counting insert 53 is raised by means of the handle portions 54, the proper number of coins will be in the compartments. When pressure on the plungers 45 are released, the coil springs 44 will return the parts to their normal position as shown in Figure 4.

The projections 28 are adapted to be abutted by an end of the wrapper 26 to help align the wrapper on the tube 23. By means of the present invention a predetermined number of coins can be loaded into the wrapper, as for example fifty cents in pennies can be selectively discharged from any of the compartments 42 by depressing the proper plunger 45. The spring clamps 51 can be used for holding the insert 47 in place, and similar spring clamps 60 can be used for helping to hold the insert 53 in its proper position. The device of the present invention is simple and easy to manufacture and is ruggedly constructed. The block insert 47 or the coin-counting insert 53 is especially suitable for insuring that the proper number of coins will be dispensed, since certain coins often vary in thickness and these inserts will cause the distance between the plates 39 and the inserts to be constant, so that the proper number of coins will be dispensed. The coin-counting insert 53 may have slots as shown in Figures 12 and 13 for the exact number of coins so that when this insert is lifted up, the coins will be positioned behind the plate or plates.

With the present invention coins such as pennies, nickels and dimes can be wrapped more speedily in wrappers such as the wrappers 26. The coins are initially deposited in the slots or compartments 42 and if the coins are nickels or pennies, the distance between the sliding plates 39 and the back of the casing is the same. However, if the coins are dimes, the block insert 47 or the coin-counting insert 53 can be used to take up the extra space resulting from the thin dimes. Different sizes of guides or tubes 23 can be interchangeably mounted by means of the locknut 24, and the diameter of these tubes is such that the coins will move therethrough. The coin wrapper 26 is slipped over the tube 22 until the end of the wrapper hits the projections 28. Then the remainder of the wrapper is folded over as at 27 then the proper button or plunger 45 is depressed to cause the coins in the proper compartment to dispense its coins down into the tube 23. Then, the wrapper 26 is withdrawn and as the wrapper is pulled off, the coins will continue to fall into the wrapper and after the tube is empty and the wrapper is off the guide, the remaining portion of the wrapper 26 is folded over to complete the operation.

I claim:

In a coin counting and wrapping mechanism comprising a stand on which is mounted an inclined coin-holding tray divided into compartments by spaced, longitudinally-disposed ribs and including a common hopper into which counted coins may be discharged from said compartments, and a wrapping tube into which said coins are deposited from said hopper in condition for wrapping, the improvement comprising an individual flat coin-retaining plate disposed at the lower portion of each compartment and of dimensions adequate to hold a stack of coins deposited flat thereon and constructed and arranged to be withdrawn under said tray at right angles thereto for effecting discharge of said coins into said hopper, individual pressure actuating means disposed on said stand above each compartment, individual plate withdrawal means connected with and actuated by the corresponding pressure actuating means in a manner to effect said withdrawal of the plate when said pressure actuating means is actuated by pressure for the discharge of coins from the desired compartment individual retracting means constructed and arranged to effect retraction of each plate into coin-holding position after said discharge, said tray being constructed and arranged to effect counted stacking of the coins thereon in longitudinally-disposed rows, said tube being detachable from said hopper, and a removable coin counting insert adapted to fit over the compartments and comprising an elevated strip disposed in each compartment, each strip carrying a longitudinally-disposed series of predetermined number of slots, each slot being made to accommodate loosely one coin adapted for that compartment, and said strips in said compartments being joined by strips fitting over said ribs, whereupon, upon filling said slots with coins and lifting said insert free of said coins, the coins will remain stacked in counted relation in the compartments.

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