July 10, 1934. E. LEWIS 1,965,926

COIN SORTING AND COUNTING MACHINE

Filed Sept. 26, 1932

Fig. 1.

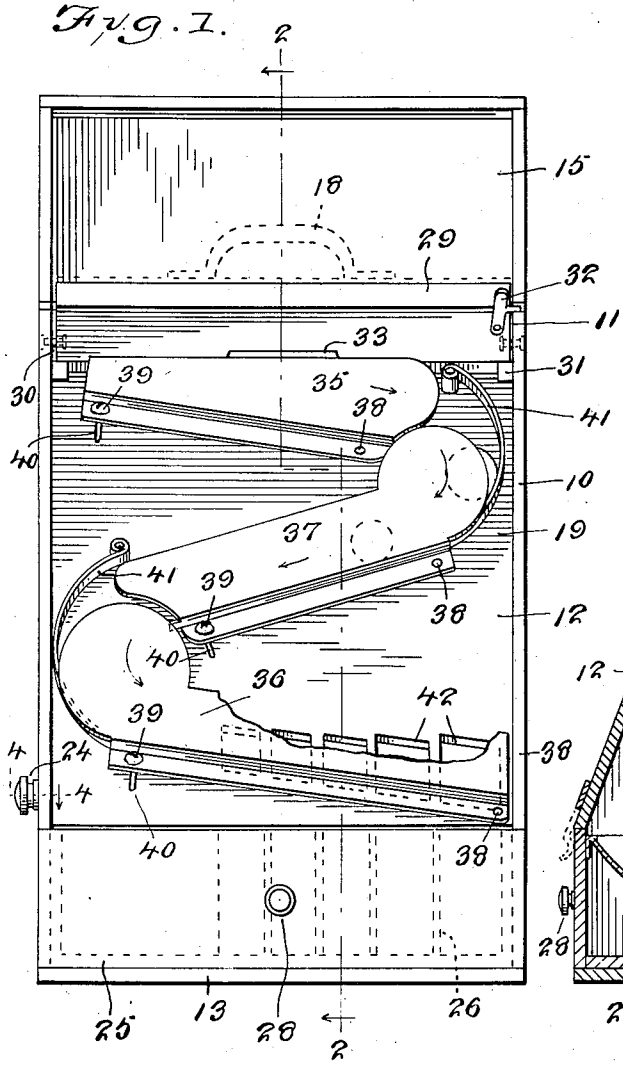


Fig. 2.

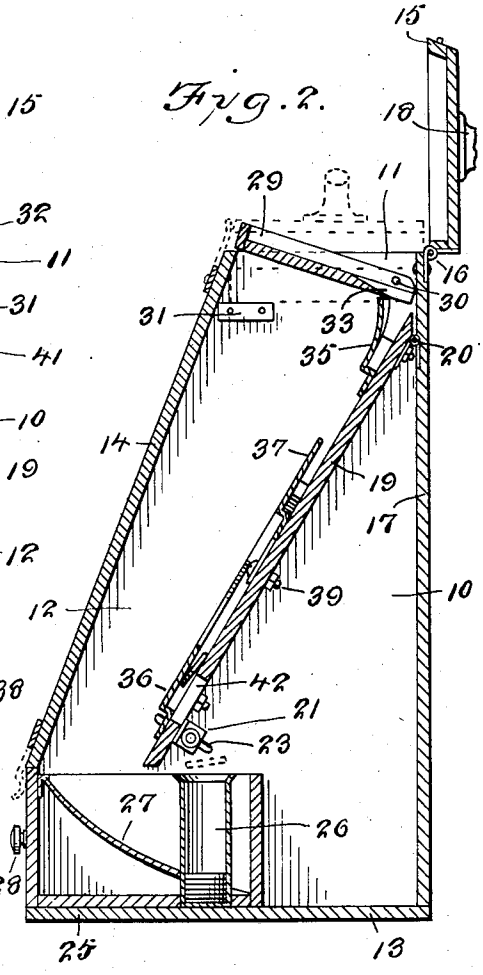


Fig. 3.

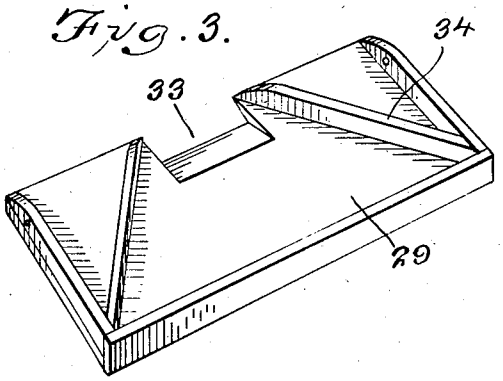
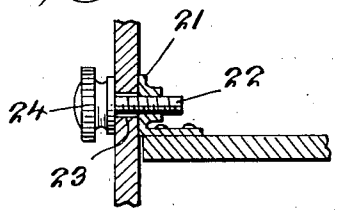


Fig. 4.



Eben Lewis
INVENTOR

BY Victor J. Evans & Co.
ATTORNEY

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COIN SORTING AND COUNTING MACHINE

Eben Lewis, Sioux Falls, S. Dak.

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1 Claim. (Cl. 133—3)

The invention relates to a coin sorting and counting machine.

The primary object of the invention is the provision of a machine of this character wherein coins of varying denominations can be fed into the machine so that under gravity action these coins will be segregated or sorted and deposited within receivers or depositories therefor, these serving to group the sorted coins into determined numbers so that each stack will be made up of a determined number of such coins and thus it can be determined the particular coin of the stack.

Another object of the invention is the provision of a machine of this character wherein the coins to be sorted and counted will be caused by gravity action to traverse runways, these being adjustable to regulate the rolling action of the coins in the operation of the machine and such rolling action causes the sorting or segregating of the coins of varying denominations and their deposit with accuracy in the number of each assortment, the machine in its entirety being of novel form for efficiency in the operation thereof without regard to the number of coins handled thereby.

A further object of the invention is the provision of a machine of this character wherein the mounting of the runways for the rolling action of coins introduced for the sorting thereof will eliminate any possibility of a choking action by the coins during their activity by gravity for assortment according to determined denominations thereof.

A still further object of the invention is the provision of a machine of this character wherein the sorting action is attained by gravity and such machine in its construction enables it to be marketed at a low price and to operate efficaciously and with the same degree of accuracy of more complicated or higher priced machines.

A still further object of the invention is the provision of a machine of this character which is extremely simple in construction, thoroughly reliable and efficient in its purpose, strong, durable, readily and easily adjusted, susceptible of enabling a count at a glance of the coins in their assorted condition, and also inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is an elevation of the machine constructed in accordance with the invention showing the front panel thereof removed and the cover or lid in raised position.

Figure 2 is a sectional view on the line 2—2 of Figure 1 looking in the direction of the arrows.

Figure 3 is a perspective view of the coin till.

Figure 4 is a sectional view on the line 4—4 of Figure 1 looking in the direction of the arrows.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, the machine comprises a body 10 having an open upper end 11 and front 12 respectively, this open front being extended from the open upper end to a point removed from the bottom 13 of said body and is forwardly inclined. Removably closing the open front 12 is a front panel 14, the same being fitted for removal in any desirable manner to the body. The open upper end 11 is normally closed by a hinged lid or cover 15, the hinge 16 connecting it to the back 17 of the body 10 for vertical swinging movement of said lid. It is preferable to have a hand hold 18 on the lid for the manual opening or closing of the same.

Arranged interiorly of the body 10 is a forwardly inclined tiltable partition which may be termed a shelf 19, the tilting being had through the medium of a hinge 20 connecting the shelf to the back 17 of the body. The shelf 19 is secured in an adjusted position by the use of a substantially L-shaped fitting 21 having threaded therein a set screw 22, the latter being passed through a slot 23 formed in one side wall of the body 10, the screw having a knurled head 24 outside of the body 10 so that the same can be manually turned for the loosening or tightening thereof and on loosening of this screw the shelf 19 can be adjusted to vary the angular disposition thereof within the body 10. Upon tightening the screw the shelf 19 will be fixed within the body.

Slidable through the front of the body 10 below the panel 14 and the shelf 19 is a coin drawer 25 having arranged therein vertical tubes or cylinders 26 constituting depositories for coins of varying denominations. These tubes or cylinders 26 are of an extent so that upon the filling thereof with the coins deposited therein an accurate count may be had of the contents of the respective tubes. This drawer 25 is also provided with an overflow pocket 27 for coins failing in

deposit within the tubes or cylinders 26. On pulling outwardly upon the drawer through a hand knob 28 access may be conveniently had to the respective tubes or cylinders 26 therein for the removal of the coins as contained within these tubes or cylinders.

Arranged within the upper open end 11 of the body 10 is a coin till or chute 29 which is swingingly supported within said body by pivots 30 so that on the lifting of this till or chute at its forward edge the same can be brought to a rearward inclination and normally the till or chute is lowered to horizontal position within the body 10 to be at rest upon brackets 31 interiorly of said body and in this position the lid 15 may be brought to closed position covering the upper open end 11 of the body. The lid when raised may be maintained in this position through a pivoted keeper 32 thereon engageable with one side edge of the upper open end 11 of the body 10 as is clearly shown in Figure 1 of the drawing.

The till or chute 29 is formed with a delivery opening 33 cut into the same centrally thereof from its rearmost edge and within the till or chute are rearwardly converging guide rails 34 which direct coins placed within the till or chute to the delivery opening 33 when said till or chute is rearwardly inclined in the position shown in Figure 2 of the drawing so that the coins placed will gravitate toward and be delivered through the opening 33 for a purpose presently described.

Carried by the shelf 19 are the upper, lower and intermediate runway sections or feeders 35, 36 and 37 respectively, the intermediate section or feeder 37 being reversed to the upper and lower sections or feeders 35 and 36. These sections or feeders 35, 36 and 37 each at one end is swingingly supported upon a pivot 38 while the opposite end is adjustably held by a fastening 39 engaged in the shelf 19 and working in a slot 40 formed therein. Thus it may be seen that these sections or feeders 35, 36 and 37 can be adjusted to alter the extent of incline thereof. The lower section 36 and intermediate section 37 carry curved resilient guide terminals 41 and the disposition of said sections or feeders upon the shelf 19 is such that the same intercommunicate with one another and the inner communicative points therebetween have the spring guides 41 arranged therewith. The shelf 19 and following the lower section or feeder 36 has formed therein varying sized sorting holes or openings 42, these being sized correspondingly to predetermined denominations of coins and will cause the sorting of the selected denomination of coins by discharging the same therethrough from the section or feeder 36, whence such sorted coins will fall or drop into the containers or cylinders 26 immediately beneath the respective holes or openings 42 in the shelf 19 and within the drawer 25. The till or chute 29 has its delivery opening 33 confronting the upper section or feeder 35 as is clearly apparent in Figures 1 and 2 of the drawing and coins tossed or placed therein of varying denomination will be caused to gravitate therefrom into the section or feeder 35, whence the said coins received therein will be caused to roll following the inclination of this section or feeder and under gravity action will travel therefrom through the intermediate section or feeder 37 and finally along the section or feeder 36 until the same reach the matched hole or opening 42 in the shelf 19 and thus by the disposition of the latter the coin matching the hole or opening 42 will drop therethrough into its container or cylinder 26 and when the same becomes filled this will convey to the user of the machine an accurate count of the coins therein, thus obviating the handling of the coins for counting purposes. If desirable, suitable wrappers may be placed within the containers or cylinders 26 for the wrapping of the sorted coins on deposit therein.

It should be apparent that the gravitation through rolling action of the coins within the runways causes the automatic sorting of the said coins when traveling in their rolling operation through the section or feeder 36 as only those coins matching the openings or holes 42 sized correspondingly thereto will drop through such holes or openings and become deposited in the containers or cylinders 26 in the drawer 25.

The gravity action of the machine can be regulated by adjustment of the sections or feeders 35, 36 and 37 and the spring guides 41 when contacting with the coins in their rolling travel control the speed of the coins traversing such sections or feeders and these coins are under perfect control due to the changed directional course of the same, they following a zigzag course from the till or chute 29 to the drawer 25.

The lid 15 of the body 10 when closed protects the runways for the coins so as to avoid any deposit of foreign matter therein which would have a tendency to obstruct the travel of said coins during the sorting operation of the machine from the chute to the drawer.

What is claimed is:

A coin sorting machine comprising a body, an adjustable partition arranged in the body and forwardly inclined, a plurality of coin runways on said partition and disposed one above the other in zigzag relation to each other, said partition having variably sized sorting holes therein and opening into the lowermost runway, terminal guides arranged with relation to the runways, to have the same intercommunicative with each other, and connections between the partition and runways to vary the zigzag relation thereof.

EBEN LEWIS.