

C. G. EMERSON ET AL
COIN PACKAGING MACHINE

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3 Sheets-Sheet 1



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3 Sheets-Sheet 2

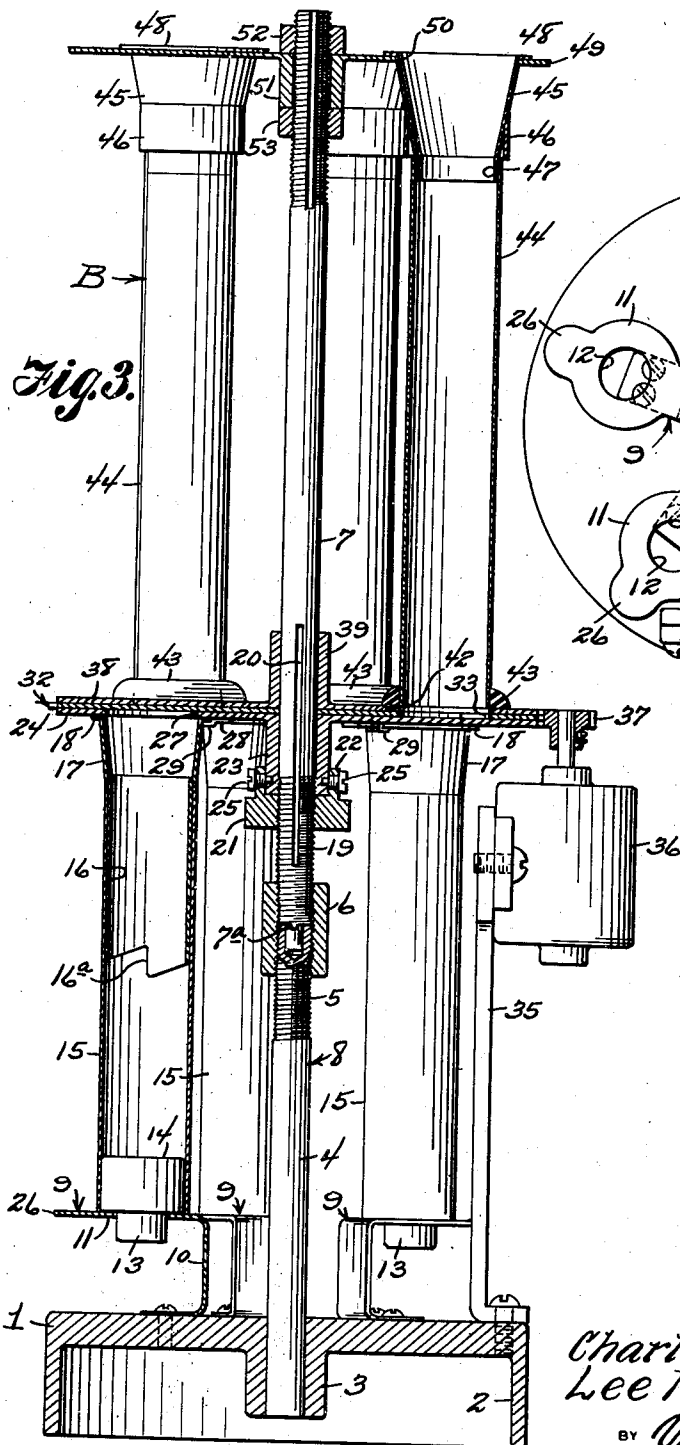


Fig. 4.

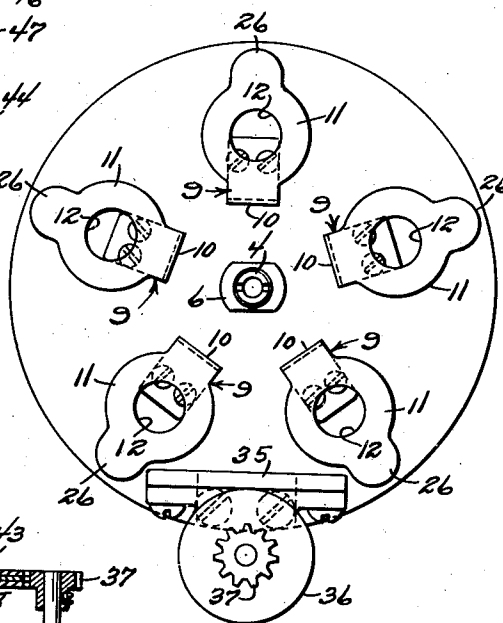
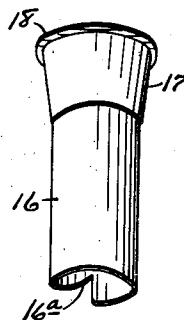


Fig. 10.



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Fig. 5.

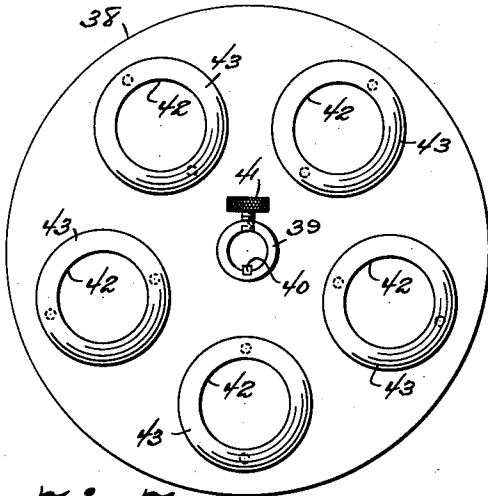


Fig. 6.

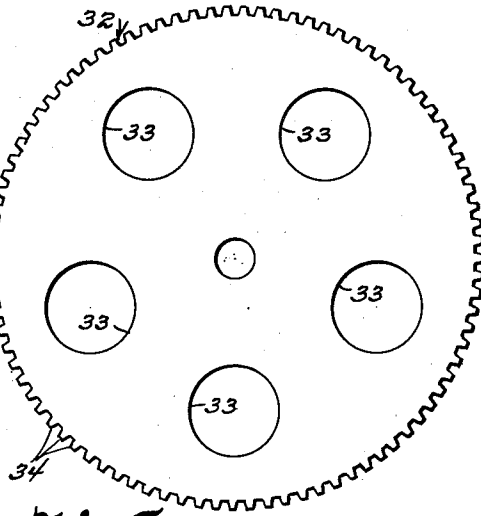


Fig. 7.

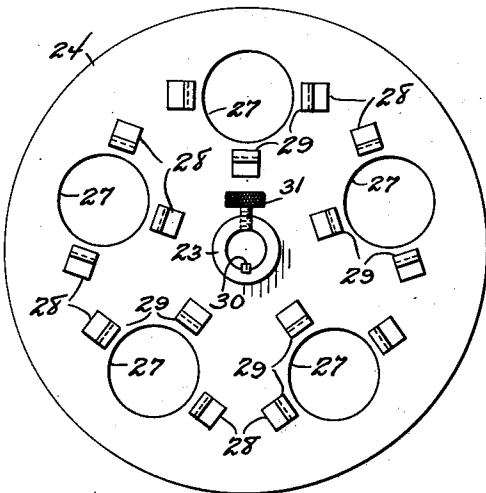


Fig. 8.

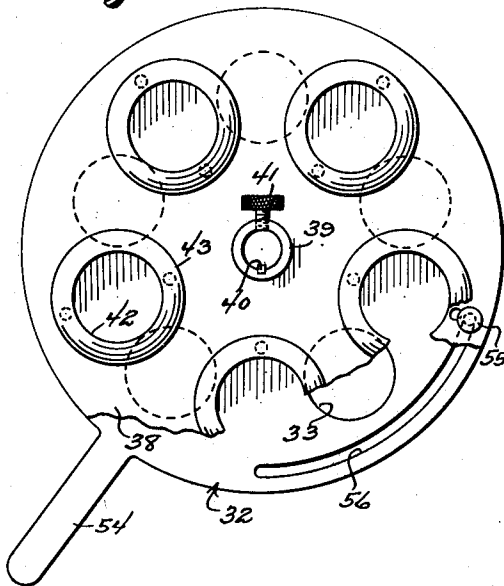
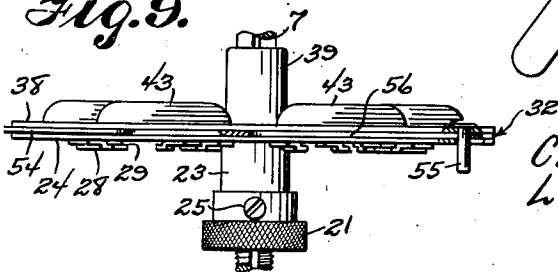


Fig. 9.



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COIN PACKAGING MACHINE

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Application June 13, 1944, Serial No. 540,045

1 Claim. (Cl. 226-14)

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Our invention, in its broad aspect, has to do with improvements in coin assembling and packaging devices, and is especially indicated for use in bank, motion picture theatres, and wherever else large numbers of small coins are handled.

Among the many advantages and objects of our invention, may be briefly outlined the following: (1), we provide means for assembling and guiding the coins to a packaging device which is simple and efficient in construction and operation; (2), we provide means whereby the entire device is supported on a single sectional support which may be quickly taken apart and reassembled when desired, and which most advantageously mounts all of the elements in their most effective relationship to each other; (3), we provide a novel and efficient packaging device wherein a plural number of packages are filled and detachably supported for removal of filled packages and substitution of empty ones to be filled; (4), by a system of discharging a single coin at a time in each package, the number of coins may be counted, and (5) a simple and effective motor drive mechanism is provided.

Other and equally important objects and advantages will be apparent from the following description taken with the accompanying drawings, but it is to be understood that the specific embodiment herein defined is for the purpose of imparting a clear understanding of the construction and operation of our invention and is not to be considered as limiting a broad interpretation of our inventive concept.

In the drawings wherein our invention is illustrated:

Figure 1 is a vertical side elevation of the assembly;

Figure 2 is a top plan view of our device.

Figure 3 is a vertical section (partly broken away) taken on the line 3-3 of Figure 2;

Figure 4 is a top plan view of the coin packaging section with the package retaining cylinders removed;

Figure 5 is a detail plan view of the base plate of the coin assembling section;

Figure 6 is a detail plan view of the coin distributor plate which has a toothed edge to be driven by the drive pinion of the motor;

Figure 7 is a detail plan view of the top plate of the coin packaging section and shows the cleats to retain the coin package retaining cylinders or tubes in place;

Figure 8 is a plan view, partly broken away of the base plate of the coin distributing section, and a hand operated coin distributor plate;

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Figure 9 is a detailed side view of the form of my hand operated coin distributor means as shown in Figure 8, and

Figure 10 is a perspective view of one of my coin package retaining cylinders with the spirally cut lower edge to insure easy insertion in a packaging wrapper.

In the drawings wherein like characters of reference are used to designate like or similar parts throughout the several views:

The numeral 1 designates the base which is circular in plan view, and is angularly flanged as at 2 to provide a footing. The base is formed with a centrally located boss 3 which is bored to vertically mount the first or base section 4 of the vertical support or spindle of my invention. The top of the base section is screw-threaded as at 5 to receive the threaded connecting sleeve 6 for the top section 7 of my vertical support 8. There is a keyed pin 1A fitting in an end bore in the lower section 4 to insure registry of the threads and registry of the tubes.

Mounted on the base are five uniformly spaced apart brackets 9. Each bracket has a horizontal foot, a vertical web 10, and a horizontal supporting arm 11 with an opening 12 therein to receive the cylindrical extension 13 of a cylindrical supporting block 14. The blocks 14 are removable from the brackets 9 and each carries in frictional engagement therewith an elongated, vertically positioned coin wrapper 15. Within each wrapper is designed to be received a coin packaging cylinder 16 of about one-half the length of the coin wrapper 15. The leading edge 16A of each cylinder 16 is spirally cut as shown in Figure 10 to facilitate insertion in the coin wrapper. At the top of each coin package retaining cylinder is an outwardly flared mouth part or funnel 17 which is annularly flanged as at 18.

The bottom end of the top section 7 of my vertical support 8 is threaded as at 19 and has a key way 20. A nut 21 is carried on threads 19 of section 7 and has an annular upwardly extending collar 22 spaced from section 7 in which is received the depending sleeve 23 of the top plate 24 of the coin packaging section assembly A. Suitable screws 25 are provided to hold the sleeve to the collar 22.

It will be noted that brackets 9 are formed of sheet metal and that there is a certain amount of spring action permitting the supporting arms 11 to be pressed down, and to facilitate so doing there is an extension 26 on each arm which may be pressed by the finger or the like.

The top plate 24 has five uniformly spaced

apart openings 27 therein of the same diameter as the diameter of the coin packaging cylinders 16 and registering therewith, and on the under side of the plate 24 are cleats 28—three for each opening 27 and arranged respectively, one adjacent the support section 7 and two diametrically opposed to each other at the sides of the openings, there being none in front.

The coin wrappers 15 have their lower ends supported by the brackets 9 and the upper ends of the packaging cylinders are held by the top plate 24 as shown in Figures 1 and 3. The cylinders 16 are disposed therein by pressing down the arms 11 so that the coin wrappers 15 may be slipped over the blocks 14; the tops of the cylinders 16 are then pushed in until the flanges 16 of funnels 17 are engaged and mounted by the cleats 28 and held in place by the overhanging lips 29 of such cleats.

As shown in Figures 3 and 7, the sleeve 23 of plate 24 is provided with a key way 30 registering with key way 20 to receive a key to hold the plate against rotation, and a thumb nut 31 is provided to prevent displacement of the plate.

Rotatably mounted on the top section 7 of the vertical support and engaging the top of plate 24 is a coin distributor plate 32 which has openings 33 registering with openings 27 in plate 24 and having the same diameters, and a gear toothed edge 34.

A vertical support 35 fixed to the base 1 carries a small electric motor 36 with a drive shaft and drive pinion 37 meshing with the toothed edge 34 of distributor plate 32 to rotate the same so that the openings 33 of plate 32 register selectively with openings 27 of plate 24 and the web part of plate 32 between openings 33 close the openings 27 of plate 24 when the sets of openings are not in registry.

Mounted on section 7 of the vertical support is the base plate 38 of coin assembling section B. Plate 38 is formed with an upwardly extending collar 39 with a key way 40 and thumb screw 41 to be assembled on section 7 in the same manner as plate 24 as shown in Figures 3 and 5. The plate 38 has openings 42 which are out of registry with openings 27 in plate 24, but at times are in registry with openings 33 in plate 32 and are of the same diameter as openings 33, and about each opening 42 is an annular retaining ring 43 for receiving and retaining the coin assembling cylinders 44. It will be noted by examining Figures 1 and 3 that the cylinders 44 are out of registry with the cylinders 16, interchange of coins from one cylinder to the other being attained by means of the plate 32. Each cylinder 44 has an outwardly flared mouth piece or funnel 45 formed with an annular apron 46 and an annular slightly tapered extension 47 frictionally fitting in cylinder 44 to cause the coins to enter the cylinder flat. The aprons 46 are outside the cylinders 44 and each mouth piece has an annular flange 48 upon the top plate 49 about the coin receiving openings 50. Openings 50 are the same size as the mouth pieces 45, and top plate 49 has a depending sleeve 51 to receive the screwthreaded upper end of top section 7 of the vertical standard. The sleeve 51 is keyed to the section, and nuts 52 and 53 top and bottom prevent its displacement or removal, and also permit of certain adjustment vertically of the support.

The distributor plate 32 is of a thickness which will nest a coin in openings 33 so that coins will not jam the plates, and the various openings are

of a size to accommodate a certain coin—as for instance, a five cent piece.

As shown in Figures 8 and 9, the coin distributing plate 32 may be rotated by hand, in which event an arm 54 is formed on the plate for engagement by the hand of the operator. An opening is provided in the base plate of the top section B and the top plate of the bottom section A to receive a headed pin 55 which works in the arcuate slot 56 in plate 32 to limit its movement. The movement giving the proper results is an oscillating movement of plate 32 within the limits defined by the arcuate slot 56.

Furthermore, it is to be noted that by adjusting the positions of nuts 52 and 53 and nut 21 on the vertical support 8 the position of plates 49, 38 and 24 can be adjusted with respect to each other to correlate the units A and B.

In operation, coins of a certain denomination, five cent pieces, for instance, are assembled in assembling cylinders 44 of unit B, when these are filled, or all of the coins at hand are assembled in the cylinders; the distributor plate 32 is rotated. The coins pass through the openings in base plate 36 into the openings 33 in distributor plate 32 whence they are fed one by one into packaging wrappers 15 on cylinders 16. Assuming that the assembling cylinders each have coins in them, one rotation of plate 32 will feed a coin into each of the tubes 16, so that if the denominations are five cent pieces, twenty rotations will fill each packaging tube with one dollar's worth of nickels, so that our invention also functions as a counter. When the packaging wrappers are full, they are withdrawn and empty wrappers engaged with cylinders 16 and blocks 14 to replace them.

From the foregoing, it is believed that the operation, construction and advantages of our invention are apparent, but in interpreting the scope of our invention, it is emphasized that reference should be had to the appended claim.

We claim:

In a coin packaging machine, the combination which comprises a base having a centrally disposed spindle extended upwardly therefrom, a distributing disk having equally spaced radially disposed coin receiving openings therethrough spaced above the base and rotatably mounted on the spindle with the openings therein centered on a circle concentric with the center of the spindle, coin wrapper supporting brackets having horizontally disposed flanges with openings therethrough spaced above the base, said brackets carried by the base and positioned with the openings of the flanges thereof aligned with the openings through the distributing disk with the said distributing disk in one position, cylindrical coin wrappers supporting blocks carried by the said brackets and having pins for positioning the blocks in the openings of the flanges of the brackets, said flanges being yieldable downwardly for ready removal of said coin wrappers from the blocks, funnels carrying downwardly extended cylinders suspended from the spindle and positioned below the openings in the said distributing disk, said funnels aligned with the openings of the flanges of the said brackets, a plurality of vertically disposed coin assembling cylinders having coin receiving funnels in the upper ends thereof carried by the spindle and extended upwardly from said disk, said coin assembling cylinders being staggered with relation to the funnels carrying the downwardly extended cylinders, said distributing disk being rotatable to have the

openings thereof in register with said coin assembling cylinders to receive coins therefrom and rotatable to aline the openings thereof with the coin wrappers to thereby drop the coins in said wrappers, and means for rotating the said distributing disk.

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