Sept. 19, 1950 D. I. BLOCK 2,523,089

COIN STACKING AND PACKAGING DEVICE

Filed Oct. 22, 1947

Fig. 1

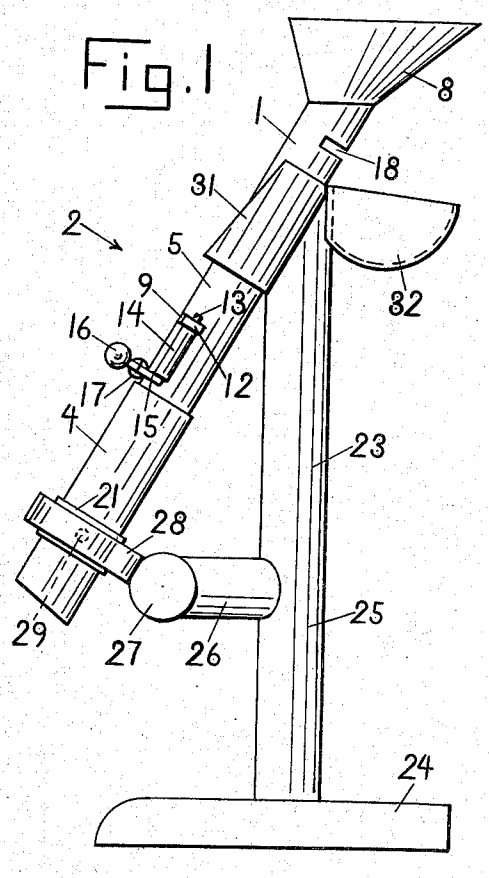


Fig. 2

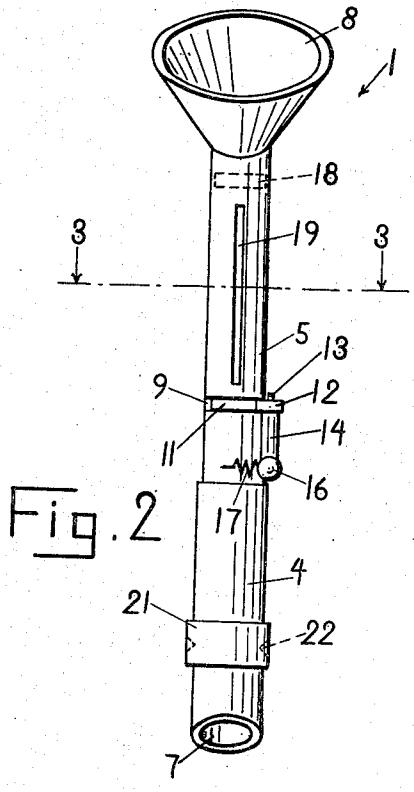


Fig. 3

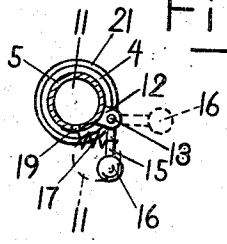
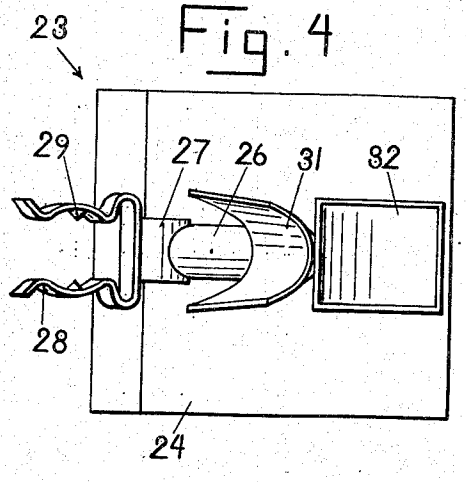


Fig. 4



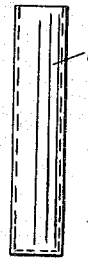


Fig. 5

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COIN STACKING AND PACKAGING DEVICE

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3 Claims. (Cl. 133—1)

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My invention relates to devices for stacking, counting and packaging coins, and one of its objects is to fill a predetermined number of coins into a suitable receptacle or wrapper, for example, into a roll of paper, quickly and accurately.

Other objects are to facilitate the stacking of coins in a column, to provide a tubular chute or coin tube with a funnel adapted to guide coins into the tube, to make the coin tube turnable around a horizontal axis and, thereby, to provide the coin tube with an adjustable direction or inclination whereby the coin tube can be positioned vertically or almost vertically for the reception of the coins and can be tilted in order to discard excessive coins.

Further objects are to provide a stop in the coin tube whereby the filled in coins will come to rest on this stop, to provide the coin tube with a lateral slot positioned at a definite level over this stop whereby, when the tube is tilted to the side of this slot, excessive coins will drop through the slot and, thereby, the number of coins piled up over the stop will be restricted to a predetermined amount, and to provide a receptacle under this slot for the reception of the discarded coins whereby the excessive coins are stored in a position convenient for future handling.

Still other objects are to facilitate the insertion of the coin column into a suitable wrapper, for example, into a paper roll, to provide the coin tube with a continuation extending under the stop, to adapt this continuation for the insertion of a tubular wrapper, and to make the stop temporarily removable whereby, upon removal of the stop, the coin column will slide into the wrapper and can be removed from the coin tube in enveloped condition.

Still further objects are to use the device alternatingly for different species, to provide coin tubes adapted for certain types of coins, and make these coin tubes exchangeable.

Still another objects are to obtain these results quickly and reliably, and to provide a coin counting and packaging device which is simple and can be easily operated and inexpensively manufactured.

Still other objects and advantages will appear from the following description of an exemplifying embodiment of my invention, from the appended claims and from the accompanying drawing in which:

Fig. 1 shows a side view of an illustrative embodiment of my invention, the coin tube being represented in tilted position.

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Fig. 2 shows the coin tube without its support, seen in the direction of the arrow 2 in Fig. 1.

Fig. 3 shows a cross-section of the coin tube, taken along the line 3—3 in Fig. 2.

Fig. 4 shows a top view of the support without the coin tube.

Fig. 5 shows a side view of a paper roll which may be used in connection with the device shown in Figs. 1 to 4.

Referring to the drawing, numeral 1 indicates a coin tube which is adapted for the reception of a definite and uniform type of coins by an inner diameter equal to or slightly larger than the diameter of a coin of this type. The lower portion 4 of the coin tube is a little wider than the main portion 5 whereby a thin-walled cylindrical wrapper or paper roll 6 (Fig. 5) can be inserted in the tube portion 4 from its bottom opening 7 in a position where the inner space of the wrapper 6 forms a continuation of the channel of the tube's main portion 5. The upper end of the coin tube is provided with a funnel 8.

The tube portion 5 has an arc-shaped slot or opening 9 through which a disk 11 can move out of and into the coin tube. In the position shown in full lines, the disk 11 spans the inner cross-section of the coin tube and forms a stop for coins dropping in the tube. A short arm 12 is affixed to the disk 11 and to a hinge pin 13 which is turnable in a cylindrical projection 14 of the coin tube. An arm 15 is affixed to the lower end of the hinge pin 13 and is provided with a knob 16 serving as a handle for moving the disk. A spiral spring 17 has one end affixed, for example, soldered, to the outside of the coin tube and has another end affixed to the arm 15. The spring 17 is tensed when the disk 11 is turned out of the tube, and urges the disk back into the tube.

A lateral slot 18 is provided in the coin tube at a definite distance over the stop disk 11 and a short distance under the funnel 8. The distance between the upper side of the disk 11 and the lower rim of the slot 18 is equal to the height of a coin column comprising as many coins as are to be wrapped in one roll.

A longitudinal slot 19 may be provided in the wall of the coin tube. This slot allows to see the coins stacked over the stop disk 11.

The lower portion 4 of the coin tube has a thickened zone 21 provided with two conical recesses 22. These recesses are positioned diametrically oppositely to each other and serve to hinge the coin tube as will be described later.

A support or pedestal 23 comprises a foot 24, a vertical post 25 and a horizontal arm 26 extend-

ing from the post 25. The arm 26 terminates in a crossing bar 27 to which a resilient clamp 28 is affixed. This clamp has two arms which are so spaced and curved that the coin tube 1 or its portion 21 can be positioned within the clamp 28. The inner sides of the clamp carry two conical projections 29 which face each other and engage the recesses 22 of the coin tube. Thereby the coin tube 1 is hinged to the support 23.

The upper end of the post 25 carries a cradle 31 and a receptacle 32. The cradle 31 is affixed to the same side of the post 25 as the arm 26 and serves as a support for the coin tube in the tilted position shown in Fig. 1. The receptacle 32 is positioned at the opposite side of the post and has an open upper side located under the slot 18 when the tube 1 is in the shown tilted position.

The described device is used in the following manner:

A quantity of coins of that type for which the coin tube 1 is adapted is dropped into the funnel 8 without counting this quantity until the tube portion over the stop disk 11 is filled or almost filled with a sequence of these coins. Preferably, the coin tube is held in about vertical position during this operation whereby the proper arrangement of the coins in the tube is facilitated and the sequence of coins will form a column of horizontally placed pieces. Then, the tube 1 is tilted into the position shown in Fig. 1 and comes to rest on the cradle 31. A predetermined number of coins corresponding to the height of a column reaching up to the slot 18 remains in the tube while excessive coins escape through the slot 18 and drop into the receptacle 32.

Then, the wrapper 6 is inserted through the opening 7 in the tube portion 4, and the handle 16 is turned into the position shown in dotted lines in Fig. 3. Thereby, the disk 11 is removed from the tube's channel and is turned out of the tube into the position shown in dotted lines in Fig. 3. The removal of this stop permits the coin column to drop and to slide down into the inserted wrapper 6. When the wrapper has received the coins, it is taken out of the coin tube through the opening 7. Then the open end of wrapper is closed. Thereby a coin roll containing a predetermined amount of coins is obtained.

In order to make rolls of coins of another type or of another number, the coin tube 1 is exchanged with a similar coin tube adapted for this other type or this other number by corresponding diametrical and longitudinal measures. The exchange of the tube is facilitated by the resiliency of the clamp 28 which releases the tube from engagement with the projections 29 when some force is applied, and which makes the same projections snap into the recesses 22 of a coin tube when the tube is pressed into the clamp.

I desire it understood that my invention is not confined to the particular embodiment shown and described, the same being merely illustrative, and that my invention may be carried out in other ways without departing from the spirit of my invention as it is obvious that the particular embodiment shown and described is only one of the many that may be employed to attain the objects of my invention.

Having described the nature of my invention, what I claim and desire to protect by Letters Patent is:

1. A coin stacking device comprising a support, two resilient clamping arms extending from said support in a fixed lateral direction, a coin tube exchangeably inserted between said arms and engaging the same hingedly so that said tube is turnable between a vertical and a tilted position, a cradle affixed to the upper end of said support in a position where said cradle supports said tube in said tilted position, said tube having a lateral slot which, in said tilted position of the tube, is obliquely downwardly directed, and a removable stop positioned in said tube at a definite distance under said slot.

2. A coin stacking device comprising a support, two resilient clamping arms extending from said support in a fixed lateral direction, two horizontally extending co-axial projections affixed to facing sides of said arms and having a resiliently adjustable distance from each other, a coin tube exchangeably and hingedly held between said projections whereby said tube is turnable between a vertical and a tilted position, a cradle affixed to the upper end of said support in a position where said cradle supports said tube in said tilted position, said tube having a lateral slot which, in said tilted position of the tube, is obliquely downwardly directed, and a removable stop positioned in said tube at a definite distance under said slot.

3. A coin stacking device comprising a support, two resilient clamping arms extending from said support in a fixed lateral direction, a coin tube exchangeably inserted between said arms and engaging the same hingedly so that said tube is turnable between a vertical and a tilted position, a cradle affixed to the upper end of said support in a position where said cradle supports said tube in said tilted position, said tube having a lateral slot which, in said tilted position of the tube, is obliquely downwardly directed, a receptacle affixed to the upper end of said support adjacent to said cradle and having a broad open upper side positioned under said slot when said tube is in said tilted position, and a removable stop positioned in said tube at a definite distance under said slot.

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