UNITED STATES PATENT OFFICE.

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COIN WRAPPING AND COUNTING DEVICE.

1,274,615.


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To all whom it may concern:

Be it known that I, ALEXANDER B. SHERWOOD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Coin Wrapping and Counting Devices, of which the following is a specification.

My invention relates to a device for providing wrapped rolls, or stacks, of coins of uniform diameter, or denomination, and each containing a predetermined number of the coins, which is the capacity of each operation of the device, which in that sense counts the coins in every package.

My object is to facilitate the operation of producing the ordinary cylindrical packages of coins by those who, in the course of their business, accumulate them in large numbers and customarily wrap them in rolls, each representing a given aggregate amount of money, for convenience in handling.

The construction and operation of my device are hereinafter described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view showing the device of my invention in a preferred form of its embodiment; Fig. 2 is a plan view of the base portion of the device with the parts thereon removed; Fig. 3 is an enlarged section on line 3—3, Fig. 1, showing that coin has been fed into it in a stack and the cap, shown in Fig. 4, raised; Fig. 5 is a view like that presented in Fig. 3 but with the cap removed and the stack of coins lowered in the tubular paper wrapper preparatory to folding its projecting end; Fig. 6 is a view mainly in vertical section, but showing the tubular paper wrapper partly broken and in elevation, with the tubular parts of the device removed from their supporting base and the wrapped stack in its tube partly pushed out of the outer tube; Fig. 7 shows the members of the device illustrated in Fig. 9 inverted to discharge the tube-inclosed wrapped stack from the outer tube, and Fig. 8 is a broken sectional view showing the stack thus discharged; Fig. 9 is a view in elevation of the longitudinally-split coin-stacking tube containing a tubularly rolled paper wrapper; Fig. 10 is an end view of the same, but showing an adhesive flap on the wrapper projecting through the slot in the stacking tube, and Fig. 11 is a perspective view of the completed wrapped package of coins.

A tube 12 is provided in one end with, or has formed therein, a head 13 reduced in diameter throughout a given length of its inner end-portions to provide a circumferential shoulder 14. This head has an opening 15 extending centrally through it for a headed push-rod 16. The tube seats on a base 17, through an opening 18 in which the rod 16 extends at its lower end; and the base is provided on its upper face with a tube-elevating seat, shown in its preferred form of a pair of curved arms 19, 19 pivoted at adjacent ends to the base to adapt them to be spread apart or brought together toward their opposite ends for purposes hereinafter explained. A relatively short open-ended tube 20, which is best formed of sheet-steel and is preferably split throughout its length for purposes hereinafter explained, fits withdrawably in the outer tube 12 and is adapted to seat at its inner end about the reduced section of the head 13 against the shoulder 14. An open-ended tubular cap 21, having an end-enlargement forming an annular shoulder 22, fits removably over the upper end of the tube 12, against the extremity of which it seats at the shoulder 22; and a coin-clute or trough 23 is connected, as represented or in any suitable manner, with the cap to incline downwardly toward its upper or inlet end.

The internal diameter of the tube 20 corresponds approximately with that of the stack of particular coins to be formed and wrapped. Thus if a stack is to be composed of twenty half-dollar or forty quarter-dollar coins to aggregate ten dollars in value, or a given number of dimes or of nickels or pennies, each to aggregate a predetermined sum, the internal diameter of the tube 20 will be approximately that of the denomination of coin to be wrapped.

To use the device, the empty tube 20 may be taken out into the hand of the operator, who rolls into tubular form and of a diameter to be readily inserted endwise into the tube, a rectangular sheet of paper of suitable width for wrapping in a desired number of layers a stack of coins 25 of 20 given denomination, the sheet being of a length sufficiently greater than that of such stack to project at its ends beyond those of the latter for affording tubular end-portions to be folded over and upon the stack-ends. This tubular wrapper is then inserted into the open-ended tube 20 at one end thereof.
to extend coincidentally with its opposite end, and the tube is inserted at its last-named end into the tube 12 to rest against the head-shoulder 14 and envelop the reduced head-end of the push-rod 16, the length of this reduced section corresponding with that to be provided of a folding end of the tubular wrapper 24. It will be understood that the parts are now in their normal positions illustrated in Figs. 1 and 3, wherein the seat 19 on the base 17, for elevating the tube 12 as and for the purpose hereinafter described, embraces the lower end portion of that tube, and the push-rod 16 is flush at its lower end with the bottom of the base, both resting on a table or other surface indicated at 20 in Fig. 3. In that position of the parts, the push-rod head is at an elevation in the paper tube 24 corresponding with a section of the latter twice the length of each end of the wrapper required for folding over an end of the stack.

In this connection it may be explained that, if desired, one edge-portion of the wrapper sheet may be provided with an adhesive coating, as represented at 25, in Fig. 10, and that this coated portion may, in adjusting the tubular wrapper in the tube 20, be caused to project, as a sealing-flap, through the slot in that tube, as illustrated in the last-named figure, thereby to enable the adhesive surface to be moistened and cemented to seal the package as hereinafter described.

With the wrapper-containing tube introduced into place, as described, the tubular paper wrapper protrudes at its upper end beyond that of the tube 20 to twice the extent for folding against the upper end of a coin-stack of the predetermined length. The operator then adjusts into place on the tube 12 the cap 21 carrying the chute 23 (if provided, as it may or may not be), when the device is ready to have coins, all of the same denomination, fed to it. By introducing such coins into the chute, they enter the tubular wrapper, striking its wall more or less lightly but with sufficient momentum to cause resilient action of the tube 20 and resultant righting of the coins to stack one flatwise upon the other; and the resilient tube tends to hug the paper tube and tighten its spirally wound layers about the coins.

The same stack-formation ensues whether coins be fed in succession one at a time or in bunches of two or more.

When the operator estimates that the coin-stack in the tubular wrapper extends to the latter’s outer end from the stack-supporting push-rod head in the position represented in Fig. 3, which extent corresponds with the predetermined height for the stack, he removes the cap; and if an excess of the fed coins is found extending beyond the outer end of the tubular wrapper, he removes the excess. He next raises the outer tube 12 to enable the arm 19 to be turned toward each other underneath the head 18, to elevate the outer tube to the extent of the height of this supplemental seat, thereby bringing the inner end of the reduced section of the head up to the push-rod head. Thus elevating the tube 12 raises with it the paper tube beyond the upper end of the coin-stack to an extent corresponding with the height of the supplemental seat 19, which produces an unfilled length of the paper tube sufficient for folding, and this section of the wrapper is then folded, as indicated by dotted representation in Fig. 5, the fold also being shown in Figs. 6 and 11. The operator then lifts the tube 12 and its contents off the base 17, but holds the push-rod against dropping, as indicated by a finger in Fig. 6, to sustain the coin-stack in place, and inverts the whole to the position of the members shown in Fig. 7 to enable the tube 20 with the wrapped-stack therein to discharge or be withdrawn, with the folded end of the wrapper lowermost, as represented in Fig. 8, when the open-end section of the wrapper is folded, and the complete package represented in Fig. 11 is pulled out of its forming tube 20; or this may be done before closing the open end of the package. If the gummed flap be provided at 27, as hereinbefore mentioned, the operator may moisten it, before or after the wrapped stack is taken out of its forming tube, and stick it to the body of the wrapper to seal the package. A pin 28 extending transversely in proper position through the push-rod stops it against dropping out when the tube 12 is inverted.

By the use of my device the operation of providing the usual wrapped rolls of coins may be performed expeditiously without requiring the exercise of skill and since the capacity of the device is limited to the number of coins aggregating a predetermined amount, each package produced by it must truly represent the value of that amount, so that the device unavoidably counts the coins in the packages it turns out.

I realize that considerable variation is possible in the details of construction herein shown and described, and I do not intend by illustrating a single specific or preferred embodiment of my invention to be limited thereto, but that my intention in the following claims to claim protection for all the novelty there may be in my invention as fully as the state of the art will permit.

It may furthermore be mentioned that my device is equally useful for stacking disks of any kind other than coins, such as game-chips and candy and medicinal lozenges, enabling the latter to be packed in a sanitary manner.
What I claim is—

1. In combination, a coin-stacking open-ended tubular receiver for a coin-wrapping tube, an outer tube in which said receiver is removably insertible, provided with an end-head having an opening through it and a shoulder-forming circumferentially reduced inner-end portion about which said receiver seats while coins are fed into one end of a wrapper in said receiver and stacked therein, a push-rod in said opening, extending into one end of said receiver to there support a stack of coins fed into the wrapper through its opposite end, a base containing an opening and on which said outer tube seats with the push-rod extending into the opening therein, and a raised seat on said base for supporting said outer tube in elevated position with the push-rod extending in said base-opening.

2. In combination, a base containing an opening, a pair of raised-seat forming arms pivotally supported on the base to extend adjustable about said opening, an outer tube provided with an end-head having an opening through it and a shoulder-forming circumferentially reduced inner-end portion, a push-rod in said head-opening, said outer tube removably seating at its head-end on the base between said arms with the push-rod projecting into the base-opening and in elevated position on said arms by adjusting them to extend under said head, the push-rod remaining in said base-opening in the elevated position of the outer tube, and a coin-stacking open-ended tubular receiver for a coin-wrapping tube, removably insertible into said outer tube to seat therein about its reduced head-portion and into which the push-rod projects.

3. In combination, a base containing an opening, an adjustable raised seat on the base, an outer tube provided with an end-head having an opening through it and a shoulder-forming circumferentially reduced inner-end portion, a headed push-rod in said head-opening, said outer tube being seatable at its head end on said base and in elevated position on said raised seat with the push-rod projecting into the base-opening, a coin-stacking open-ended tubular receiver for a coin-wrapping tube, removably insertible into said outer tube to seat therein about its reduced head-portion and into which the push-rod head extends, and a tubular cap removably supported on the upper end of said outer tube and through which coins to be stacked and wrapped in said receiver are fed.

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