

## [54] COIN WRAPPING DEVICE

[76] Inventor: **Patrick Steven Dorman, 37  
Exhibition St., Truro, Nova Scotia,  
Canada**

[22] Filed: May 8, 1972

[21] Appl. No.: 251,058

[30] **Foreign Application Priority Data**

Feb. 9, 1972      Canada ..... 134284

[52] U.S. Cl. .... 53/213

[51] **Int. Cl.**..... **B65b 11/04**

[58] **Field of Search**..... 53/212, 213

[56] **References Cited**

## UNITED STATES PATENTS

|           |         |                |        |
|-----------|---------|----------------|--------|
| 2,612,739 | 10/1952 | Schwalbe ..... | 53/213 |
| 1,628,240 | 5/1927  | Gillette ..... | 53/213 |

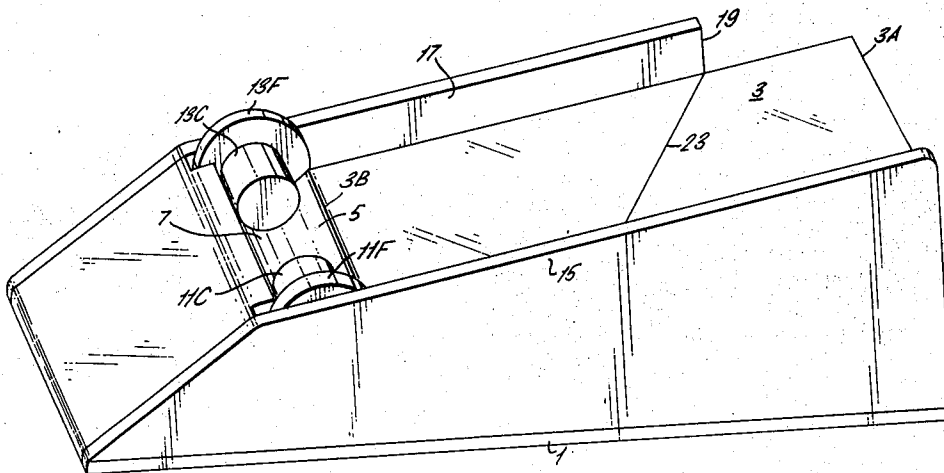
**Primary Examiner—Travis S. McGehee**

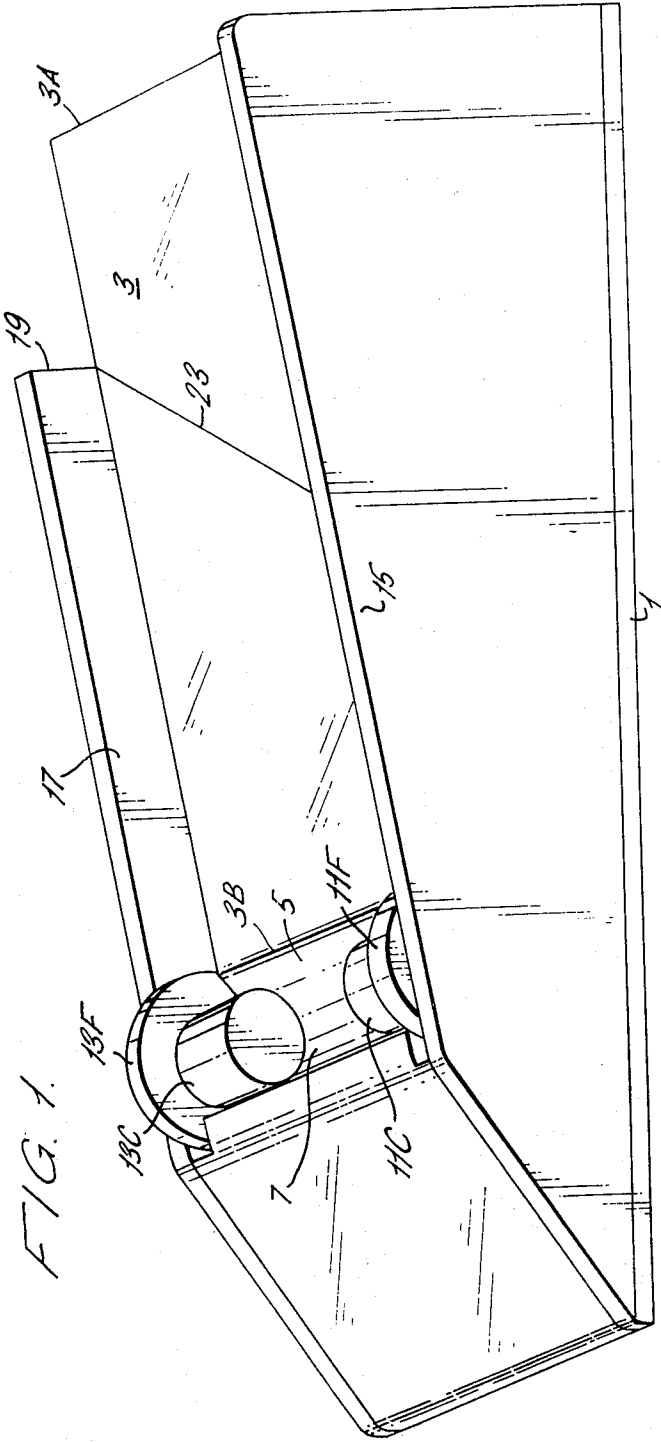
**Attorney—Ladas, Parry, Von Gehr, Goldsmith & Deschamps**

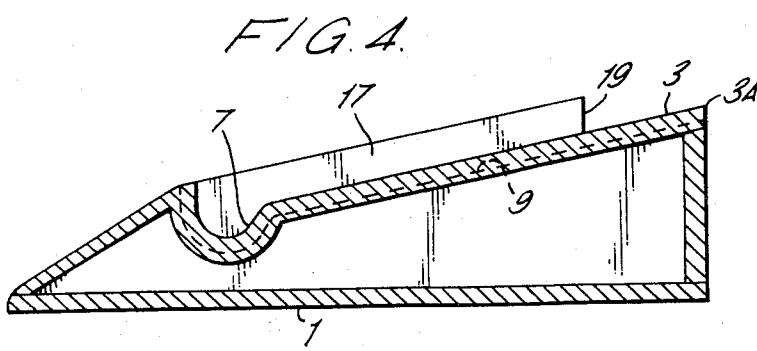
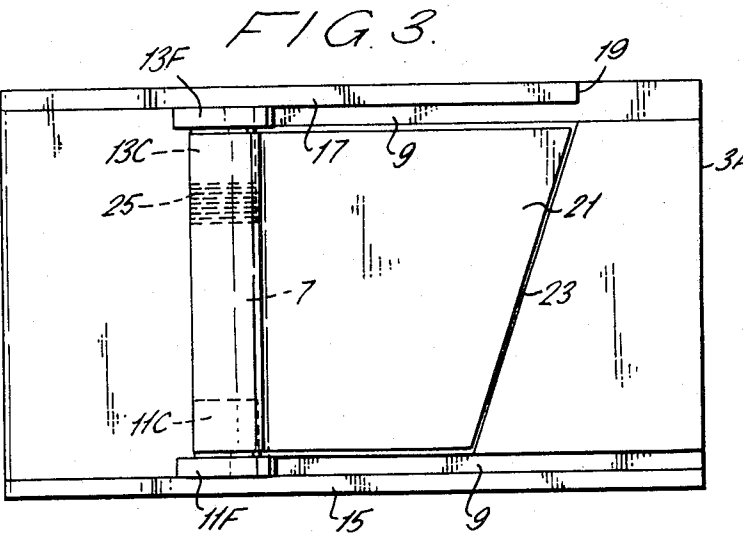
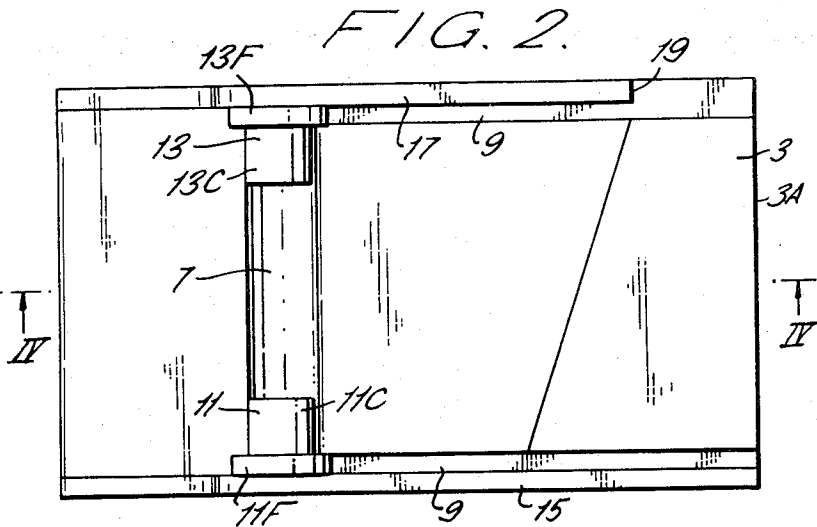
[57] **ABSTRACT**

A coin wrapping device comprises a flat surface of a width greater than the length of a desired pack of coins and merging into a depression having a part-cylindrical surface. A sheet of coin wrapping material is laid on these surfaces and over a stack of coins arranged on their sides in the depression, at each end of which is provided a roller which can roll in contact with the part-cylindrical surface and the flat surface during a coin wrapping operation in which the stack of coins and the rollers move together out of the depression and along the flat surface. Outward movement of the two rollers is prevented, so that the number of coins of a given denomination which can be inserted into the depression between the two rollers is determined by the dimensions of the rollers.

**9 Claims, 4 Drawing Figures**







## COIN WRAPPING DEVICE

This invention relates to a device which facilitates the assembly of predetermined numbers of coins into tubular packs, such as are used in banks.

It is common practice in banks to handle coins in tubular packs each containing a predetermined number of coins of the same denomination. Standard packs used in Canada for example are:

40 — 25 cent coins — value \$10.00

50 — 10 cent coins — value \$ 5.00

40 — 5 cent coins — value \$ 2.00

50 — 1 cent coins — value \$ 0.50

A number of machines or devices have been proposed in the past for facilitating the wrapping of coins in this manner. An object of the present invention is the provision of a simple device which enables the proper and accurate packing of coins both quickly and without the need for significant manual dexterity.

According to the present invention, a coin wrapping device comprises a flat surface of a width greater than the length of a desired pack of coins, said surface merging at one end into a trough-like depression extending across the surface and having a part-cylindrical surface with a radius of curvature at least equal to that of the coins it is required to wrap, the combined length of the flat surface and the part-cylindrical surface being such as to receive a sheet of coin wrapping material both on said surface, round the trough-like depression and over a stack of coins arranged on their sides in the trough-like depression, each side of the flat surface and each end of the trough-like depression being provided with a groove to accommodate a flange on a loose flanged roller, the depth of said grooves being sufficient to ensure that a cylindrical surface on each roller can roll in contact with the part-cylindrical surface and the flat surface during a coin wrapping operation in which the stack of coins and the rollers move together out of the depression and along said flat surface, and means preventing outward movement of said two rollers whereby the number of coins of a given denomination inserted into the depression between the two rollers is determined by the dimensions of the cylindrical surfaces on the rollers, and whereby two side edge parts of the sheet of coin wrapping material extend round the cylindrical surfaces of the rollers during a coin wrapping operation.

The invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIG. 1 is a perspective drawing of a coin wrapping device in accordance with the present invention;

FIG. 2 is a plan view of the device of FIG. 1;

FIG. 3 is a plan view similar to FIG. 2 but showing the arrangement of the parts of the device at the beginning of a coin wrapping operation; and

FIG. 4 is a section side elevation taken on the line IV—IV of FIG. 2.

The embodiment of the invention shown in FIG. 1 is fabricated from wood, but a commercially acceptable embodiment of the device may be fabricated from moulded plastic material. The physical features of the device will therefore be described rather than its mode of construction which in the case of the embodiment of FIG. 1 is constructed from thin sheets of wood.

The coin wrapping device has a flat base 1 by which the device is normally supported in use on a horizontal

surface, such as a desk or a bank counter. A short distance above base 1 is provided a flat surface 3 having a width somewhat greater than the length of the desired pack of coins, the surface being inclined downwardly from an upper end 3A towards a lower end 3B at which the surface merges smoothly into a part-cylindrical surface 5 thus forming a trough-like depression 7 extending across the width of the surface 3. The radius of curvature of the surface 3 is equal to or slightly greater than the radius of the coins which it is desired to wrap.

Each side of the surface 3, and each end of the depression 7, is provided with a groove 9, and two flanged rollers 11 and 13 are arranged respectively at opposite ends of the depression 7 with their flanged ends 11F and 13F respectively accommodated in these grooves 9 so that the cylindrical surfaces 11C and 13C of the two rollers can rest on and roll along the surface of the depression 7 and the flat surface 3. The depth of the grooves 9 is therefore made slightly greater than the difference in radius between the parts 11F and 11C (and similarly of parts 13F and 13C).

In order that the two rollers 11 and 13 may be held against endwise outward movement, two retaining walls 15 and 17 are provided each of which respectively defines one side of a groove 9. The retaining wall 15 extends from the region of the depression 7 up to the upper end 3A of surface 3, but the retaining wall 17 terminates in a vertical edge 19 at a location on the flat surface 3 where, in use, an upper edge of a sheet 21 of wrapping material is located. As will be seen in FIG. 3, the sheet 21 is of such a length that it can be placed to extend from an inclined limit graduation 23 scored in the flat surface 3, down the surface 3 and round the surface of the depression 7. In FIG. 3, it is indicated that this end of the sheet 21 is wrapped over the top of the stack of coins 25 positioned in the depression 7.

The number of coins 25 which can be entered between the inner ends of the two rollers is determined by the lengths of the parts 11C and 13C of the two rollers and by the distance between the retaining walls 15 and 17. The dimensions used are therefore related to the number of coins which it is desired to pack into a package in the machine.

In use of the device shown, a sheet of standard wrapping paper 21 is arranged on the device with its upper edge aligned with the graduation 23 as shown in FIG. 3. The two rollers 11 and 13 are then placed in the depression 7 with their cylindrical parts 11C and 13C and their flanges 11F and 13F in the grooves 9. The width of the standard paper is slightly less than the width of the flat surface 3. Coins are now placed on edge in the depression 7 in face-to-face relationship until the space between the two rollers is filled, i.e. until a further coin cannot be inserted. Assuming that all the coins are of the same denomination, and that none are bent, the number of coins which fill the space is known, and it is not necessary for the operator to count the number of coins. The adjacent end of the sheet 21 is then brought over the top of the stack of coins, and held in place by the tips of the fingers of the operator while he rolls the stack of coins and the two rollers 11 and 13 up the flat surface 3.

Very little skill is needed to ensure that the end of the sheet 21 is trapped to ensure that the stack of coins is tightly wrapped. The rollers 11 and 13 automatically keep the coins tightly together and parallel to one another.

When the rolled pack is over the upper edge of the sheet 21, the complete pack consisting of the coins, the two rollers 11 and 13, and the sheet 21 is removed from the flat surface 3 and the fact that the side wall 17 terminates at edge 19 facilitates this operation. Since the two rollers are in the ends of the pack, there is no tendency for the coins to fall out or for the pack to lose its cylindrical shape.

One of the rollers is then removed, and the part of the sheet which was wrapped round that roller is folded over in three overlapping pleats, in the manner usually used to close the ends of such coin packs. The other roller is then removed, and the other end is similarly folded over. The pack is then complete, and the two rollers can be returned to their original positions for the wrapping of the next pack of coins.

It will be seen that the device described is very simple in construction and is very simple in use. By the use of pairs of rollers having different diameters for their cylindrical surfaces 11C and 13C, it is possible to use rollers which have a diameter equal to the diameter of the coins it is desired to wrap. By varying the length of the cylindrical parts 11C and 13C, it is possible to determine the space between the inner ends of the rollers and thus the number of coins of the denomination being wrapped which will be included in each wrap.

The device of the present invention is simple to manufacture on a commercial basis, and includes no parts which are liable to become damaged in use.

Accordingly the structure of the coin wrapping device of the present invention will prove useful and advantageous and a definite advance in the art.

I claim:

1. A coin wrapping device comprising:

- a. means defining a trough-like depression, said trough-like depression having a part-cylindrical surface with a radius of curvature at least equal to that of the coins it is required to wrap;
- b. means defining a rolling surface merging at one end thereof into one side of said trough-like depression, said rolling surface having a width greater than the length of a desired pack of the coins;
- c. a pair of rollers; and
- d. means for guiding said rollers for rolling movement along opposite sides of said rolling surface from said depression, said guide means being adapted to allow said rollers to roll in contact with said part-cylindrical surface and said rolling surface, whereby a sheet of coin wrapping material laid on said rolling surface and said part-cylindrical surface and over a stack of the coins disposed on their

sides in the depression can be wrapped around the stack by rolling the stack between said rollers along said rolling surface.

2. A coin wrapping device as claimed in claim 1, wherein said rolling surface is inclined downwardly towards said depression when the base of the device is placed on a horizontal support surface.

3. A coin wrapping device as claimed in claim 1, wherein said roller guide means comprise flanges on said rollers and means defining grooves for receiving said flanges at opposite sides of said rolling surface.

4. A coin wrapping device as claimed in claim 1, wherein said roller guide means at one side of said rolling surface terminate short of the end of said rolling surface remote from said depression to facilitate removal of the wrapped coins.

5. A coin wrapping device as claimed in claim 1, further comprising marking means on said rolling surface for indicating the correct positioning of the sheet of coin wrapping material before a wrapping operation commences.

6. A coin wrapping device as claimed in claim 1, wherein said roller guide means comprise a pair of vertical walls extending along opposite sides of said rolling surface.

7. A coin wrapping device comprising:

- a. means defining a coin receptacle trough for holding a plurality of coins in vertical face-to-face relationship;
- b. means defining a coin rolling surface extending upwardly inclined from one side of the coin receptacle trough;
- c. a pair of rollers disposable in the trough with the coins therebetween; and
- d. means for guiding said rollers for rolling movement from the trough along opposite sides of the rolling surface, whereby sheet wrapping material disposed on the rolling surface can be wrapped around the coins;
- e. said roller guide means comprising flanges on one of said rollers and said rolling surface and means defining grooves in the other thereof for guiding engagement with said flanges.

8. A coin wrapping device as claimed in claim 7, and further comprising a pair of upstanding side walls extending along opposite sides of the rolling surface.

9. A coin wrapping device as claimed in claim 8, wherein one of said side walls terminates before the end of the rolling surface remote from the trough.

\* \* \* \* \*

UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,783,586 Dated January 8, 1974

Inventor(s) Patrick Steven Dornan

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover sheet [76] "pPatrick Steven Dorman" should read -- Patrick Steven Dornan --.

Signed and sealed this 1st day of October 1974.

(SEAL)

Attest:

McCOY M. GIBSON JR.  
Attesting Officer

C. MARSHALL DANN  
Commissioner of Patents