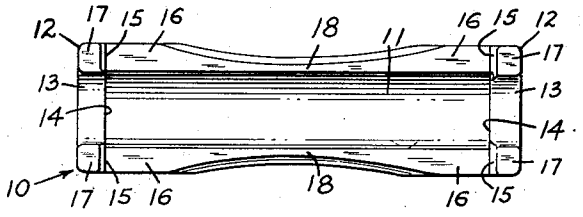
May 11, 1948. C. H. HAGOPIAN 2,441,486

COIN STACKER

Filed Nov. 12, 1946

FIG. 1.



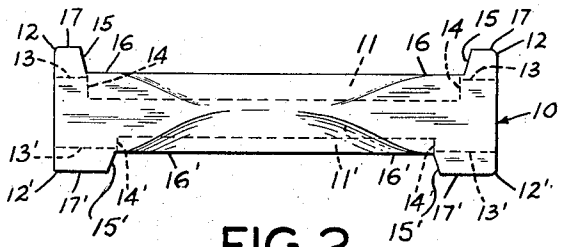


FIG. 2.

FIG. 4.

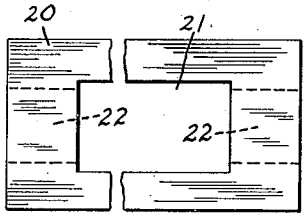
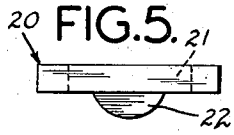


FIG. 5.



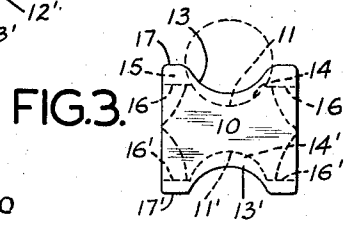


FIG. 3.

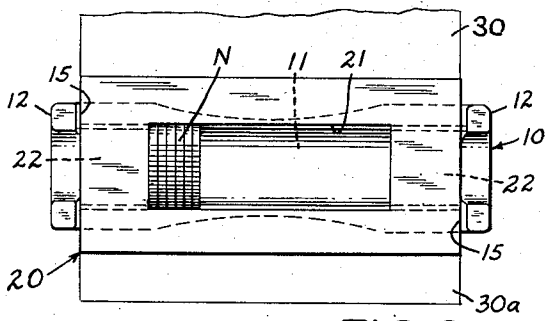


FIG. 6.

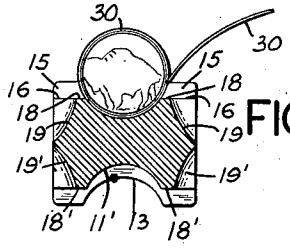


FIG. 8.

FIG. 9.

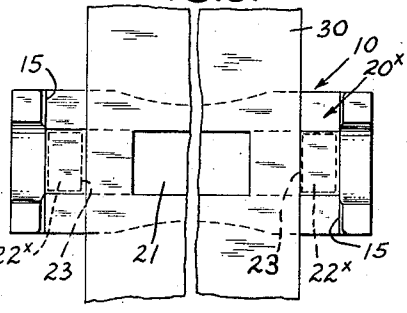
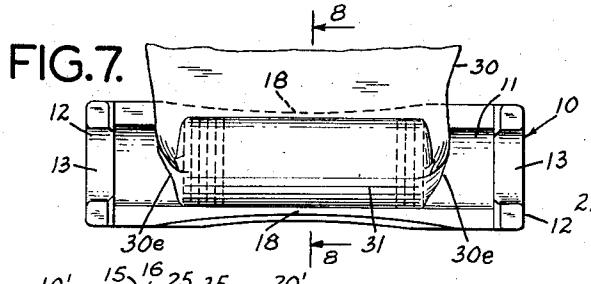


FIG. 7.



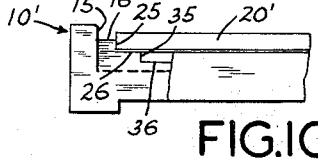


FIG. 10.

INVENTOR.
CHARLES N. HAGOPIAN
BY
ATTORNEY.

Patented May 11, 1948 2,441,486

UNITED STATES PATENT OFFICE

2,441,486

COIN STACKER

Charles H. Hagopian, New York, N. Y.

Application November 12, 1946, Serial No. 709,227

13 Claims. (Cl. 93—2)

1

This invention relates to coin handling devices and, more particularly, to devices for stacking and counting coins of various denominations and wrapping the stacked and counted coins in a paper coin wrapper to form what is generally referred to as a "coin roll." The lengths of the stacks of coins vary according to the denomination of the coins; the accepted banking practice is to wrap pennies, nickels, dimes and quarters so that the coin roll will contain the predetermined number of coins to total, respectively, 50¢ (pennies), $2.00 (nickels), $5.00 (dimes) and $10.00 (quarters).

The object of this invention is to provide a unitary device for stacking, counting and wrapping predetermined numbers of coins of various denominations to form coin rolls of accepted or standard denominational value. An allied object is to provide a unitary coin handling device as described in which the stacking and counting of the coins are simultaneous operations, which are, at the same time, the initial steps in the wrapping operation. The coin stacking, counting and wrapping device of this invention is unitary not only in that all three operations may be performed on the same device but also in that the same device may be used for various coin denominations.

For the attainment of the foregoing and such other objects as may appear or be pointed out I have shown a preferred embodiment, with certain modifications, of the invention in the accompanying drawing, wherein:

Figure 1 is a top view of the base member of the improved device;

Figure 2 is a front view of the base member;

Figure 3 is an end view thereof;

Figure 4 is a top view of the frame member of the improved device;

Figure 5 is an end view of the frame member;

Figure 6 is a top view showing the frame member in position on the base member, a paper coin wrapper being interposed between the two, preparatory to the actual wrapping operation;

Figure 7 is a top view similar to Figure 6 but showing the frame member removed and the coins partially wrapped;

Figure 8 is a transverse section on the line 8—8 of Figure 7;

Figure 9 is a top view of a modified form, with the frame member in place and the coin wrapper interposed; and

Figure 10 is a fragmentary side view of a second modification, also showing one end of the base and frame member.

2

The improved coin handling device comprises two parts, viz., a base member 10 (Figures 1–3) and a frame member 20 (Figures 4 and 5). Base member 10, of metal, plastic, wood or other suitable material, is generally of elongated prismatic shape, which is conveniently four-sided as shown, but which may be of a different number of sides, if desired. The base shown in the drawing as one form of the invention is adapted to handle pennies, nickels, dimes and quarters and, more particularly, is provided with two longitudinal grooves (an uppermost groove 11, Figure 1 and Figures 2–3 and a lowermost groove 11', Figures 2–3), of which the uppermost groove 11 (as shown in the figures) is used for pennies, nickels and quarters—for which reason it will be referred to as the "common groove"—while the lowermost groove 11' is used for dimes. Both grooves are arcuate, as clearly seen in Figure 3, the radius of the common groove 11 being such as to permit pennies, nickels or quarters to be rested or fitted therein; the dime groove 11' is of smaller radius to accommodate the considerably smaller diameter of that coin (compared to the group: pennies, nickels, quarters). Grooves 11, 11' do not extend to the ends of base 10, but terminate short of the ends, at end flanges, respectively 12, 12'. End flanges 12, 12' themselves have arcuate cutouts, respectively 13, 13', which are not necessarily aligned with the coin grooves 11, 11', as best revealed in Figure 3; i. e., end cutouts 13, 13' are shallower than the coin grooves, resulting in shoulders 14, 14' at the juncture of the coin grooves and end cutouts.

Recessed shoulder 14, defining the ends of common coin groove 11, is transversely aligned with the inner side 15 of end flanges 12; this side of the end flanges is, in effect, a pair of shoulders 15, 15 projecting above the flat top surface 16 or rather surfaces 16, 16 along both sides of coin groove 11. The distance along the flat top surfaces 16, 16 between the projecting shoulders 15, 15 at each end is somewhat longer than the width of the nickel and penny wrapper (which have substantially the same width). Hence these wrappers, as well as the quarter wrapper (which is of less width than the other two) may be received between the end flanges 12, as shown in Figure 6, wherein the paper wrapper is designated 30.

The dime side (dime groove 11'), positioned lowermost in Figures 1–3, has similar projecting shoulders 15', 15' and flat top surfaces 16', 16'.

However, the distance along the flat edge surfaces 16', 16' between projecting shoulders 15', 15' at each end is less than the corresponding distance in the common side (common groove 11), being somewhat longer than the width of the dime wrapper (which is smaller in width than the wrappers of the other denominations).

As a result of the end cutout 13 in the end flange 12 there are formed a pair of posts 17, 17 at each end of the base 10, having flat surfaces. There are thus four posts 17, one at each corner of the base, see Figure 1, which serve as feet (i. e., the posts 17 of the common side—uppermost in Figure 1—function as feet when the base is inverted to present the dime side uppermost). The dime side has similar corner posts 17' which are shown in Figures 2–3 functioning as supporting feet. Corner posts 17' of the dime side of the base are longer than the posts 17 of the common side, by reason of the lesser distance between projecting shoulders 15', 15'.

The frame member 20, or rather frame members inasmuch as a separate frame is provided for each denomination—four in the case of the illustrative embodiment—may likewise be made of metal, plaster or other suitable material. Frame member 20 is of rectangular shape, Figure 4; with respect to their overall dimensions, the four frame members 20 cooperative with base member 10 of the illustrative embodiment may have the same width, but are made in two different lengths: Three of the frames (for pennies, nickels and quarters) are of a common length, longer than the fourth frame, so as to be snugly received between the end shoulders 15, 15 of the common side of the base member, while the fourth or dime frame is shorter so as to be received within the reduced length between end shoulders 15', 15' of the dime side. Frame member 20 is provided with a centrally disposed rectangular opening 21; the dimensions of the rectangular opening is different in each of the four frames with respect to both length and width. In the first place, the diameters of the various coins differ—this is reflected in the different widths of the frame openings; secondly, the lengths of the coin rolls also differ—this is reflected in the difference in the lengths of the respective frame openings.

Frame member 20 is provided with a pair of depending lugs 22, 22, one at each end of the frame and disposed on the longitudinal axis thereof. The lugs are arcuately shaped, see Figure 5, so as to fit within the arcuate coin grooves 11, 11'; accordingly, lugs 22 of the three frames (penny, nickel, and quarter) cooperative with the common side of the base member may differ dimensionally from the lugs of the dime frame. As a matter of expedience in manufacture I have found that the lugs may be identical in all four frames and still satisfactorily perform their function, which is to center the frame on the base. Lugs 22 are shown in Figure 4 as extending from the edges of rectangular opening 21 to the ends of the frame; they may, however, be made shorter. But, by making the inner end of the lugs flush with the sides of the opening, the stacking of the coins in the opening will be facilitated, as the end face of the lug aids in holding the coins, particularly the first coin or coins placed therein, in upright position.

The manner of using the improved device in stacking, counting and wrapping coins will now be described first with reference to Figure 6. The base member 10 is turned so that the proper coin

groove is uppermost; it will be assumed that this is the common groove 11, as in Figures 6–8, and that nickels are to be wrapped. Next, the nickel wrapper 30 is placed across the top of the base member 10, its side edges abutting the projecting shoulders 15 of the end flanges, and with a short predetermined extent 30*a* of the paper beyond one side of the base. The nickel frame 20 is then placed over the wrapper, positioned between end flanges 12, 12 with its depending lugs 22, 22 disposed at coin groove 11. The frame member preferably should be sufficiently heavy so that its placement in position, as described, will depress the paper wrapper and, by reason of arcuate lugs 22, cause it to conform to the curvature of the coin groove. Additionally, the weight of the frame member retains the paper wrapper in place during the stacking and counting of the coins, as will be described. The coins such as nickels N, Figure 6, are inserted in opening 21 of the frame, being received in the hollow presented by the wrapper. Insertion of the coins is continued until it becomes impossible to force in another nickel, at which point the proper number of coins will be contained in the frame opening. The frame member is now removed and the coins wrapped or "rolled" in paper wrapper 30, as indicated in Figure 7.

Preferably the ends of wrapper 30 are crimped in at the ends, indicated by 30*e*, simultaneously with the rolling of the coins and wrapper; by the latter it is meant that the roll or stack of coins, with the paper about it, is rotated within coin groove 11. The cutouts 13 in end flanges 12 are provided for clearance of the fingers of both hands, giving them accessibility to the ends of the coin roll 31 as it is being formed. The aforementioned turning or rolling of the stacked coins in its wrapper is facilitated by reducing the width of the top flat surfaces 16, 16, Figure 1 of the base member along a central portion thereof, as indicated at 18, 18 in that figure. Reduced surfaces 18, 18 are provided by longitudinally concaving the sides of the base member inwardly at the central portion, see Figure 1, and by tapering the sides upwardly towards the top surfaces 18, 18, the tapered sides being designated 19, 19 in Figure 8 (with respect to uppermost common coin groove 11, and 19, 19' with respect to the lowermost dime groove 11'). In this manner a portion of the base member—at the central portion thereof—is provided where the tapered sides 19, 19, see Figure 8, are substantially flush, i. e., form a substantially continuous line with the outer edge portions of the coin roll. The fingers, particularly the thumb, may therefore smoothly pass upwardly from tapered portion 18 into contact with the roll of coins during the rolling or wrapping process, as indicated by the arrow in Figure 8, being the front or left side as shown in that figure.

As indicated above, the device shown in Figures 1 to 8 represents but one form in which the invention may be carried out. The base member may have only one coin groove, or it may have more than the two shown; also, the coin grooves may be laid out for any coin denomination or combinations of denominations. The coin grooves may be, for example, provided in each of the four sides of the base member with individual coin grooves for pennies, nickels, dimes, and quarters. There would still be a separate frame member for each denomination.

The coin grooves for the different denominations may be arranged in parallel on a single flat

base, and the frame member made composite and of sufficient length to be provided with the corresponding coin openings likewise arranged in parallel to align with the coin grooves. The flat base and composite frame may be separable or fixedly associated, as by pivoting the composite frame member on the composite flat base so that when turned to overlie the flat base, its coin openings will be aligned with the corresponding coin grooves.

In the form of the improved device of Figures 1–8, the paper wrapper **30**, in the case of the equal width penny and nickel wrappers, abut the end shoulders **15**, see Figure 6, while the narrower quarter wrapper falls short of the end shoulders and is preferably, although not necessarily, positioned or centered on the base member so that an approximately equal space is provided at each side (between the edge of the wrapper and end shoulders **15**). In the modification shown in Figure 9 provision is provided for centering narrower width wrappers. Base member **10** is the same as in Figures 1 to 8; frame member **20x**, however, differs in that an additional function has been given its arcuate lugs **22x**, **22x**, namely, for centering the coin wrapper **30**. No change has been made in the coin opening **21**. Dependent lugs **22x**, **22x** are made relatively shorter than in the form shown in Figures 1 to 8 and are disposed at the ends of the frame member; the distance between the inner or facing sides **23**, **23** of the lugs is such that the coin wrapper **30** will be snugly received between them. The device is used in the same manner described above with reference to Figures 1 to 8, except that wide wrappers are placed between end shoulders **15**, **15** (as before) and narrow wrappers are placed between facing sides or shoulders **23**, **23** of the frame member.

A second modified form for centering narrow width wrappers is shown in Figure 10 wherein the base member **10'** is recessed at the top surface **16** to provide steps at each end of the base (only those at the left end being shown in partial Figure 10), each step presenting a ledge **26**, **36** and a shoulder **25**, **35** respectively. In this case, the length of the frame member depends upon the particular coin denomination, more accurately, the particular wrapper width of the various denominations. The frame member for coins having the widest wrapper would be the longest and would be placed (together with the wrapper) on top surfaces **16**, **16** to abut end shoulders **15**, **15**. The frame member for the next widest wrapper (**20'** shown in Figure 10) would be somewhat shorter and would be placed (together with the wrapper) on ledges **26**, **26** in abutment with shoulders **25**, **25**.

In the above description, the invention has been disclosed merely by way of example and in preferred manner; but obviously many variations and modifications may be made therein which will still be comprised within its spirit. It is to be understood, therefore, that the invention is not limited to any specific form or manner of practicing same, except in so far as such limitations are specified in the appended claims.

I claim:

1. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising an elongated base member, the uppermost longitudinal face thereof having a pair of end flanges presenting inner, facing shoulders, the distance between said facing shoulders being sufficient for the width of a wrapper of a particular denomination, said longitudinal face having an arcuate groove, terminating at the end flanges, for seating coins of the said particular denomination, a frame member of a length to be received between the said end flanges, having at each end an arcuate depending lug adapted to fit in the said coin groove, said frame member being sufficiently heavy to cause its said pair of depending lugs to conform the said wrapper placed on the uppermost face of the base member to the arcuate shape of its said coin groove, said frame member having a central opening of a length to receive a predetermined number of coins of said particular denomination.

2. The device according to claim 1 wherein the said end flanges are provided with arcuate cutouts centrally aligned with the said coin groove.

3. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising an elongated base member, the uppermost longitudinal face thereof having a pair of end flanges presenting inner, facing shoulders, the distance between said facing shoulders being sufficient for the width of a wrapper of a particular denomination, said longitudinal face having an arcuate groove, terminating at the end flanges, for seating coins of said particular denomination, a frame member of a length to be received between the said end flanges, having at each end a depending lug adapted to enter the said coin groove, said frame member having a central opening of a length to receive a predetermined number of coins of said particular denomination.

4. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising a base member in the form of a four-sided elongated prism, the uppermost and lowermost longitudinal faces thereof each having a pair of end flanges presenting inner, facing shoulders, the distance between said facing shoulders of the respective faces being somewhat longer than the width of wrappers of the particular denominations accommodated by the respective faces, said longitudinal faces having each a central, arcuate groove, terminating at the end flanges, for seating coins of the said particular denominations, frame members each of a length to be received between the said end flanges of the respective faces, each frame member having at each end an arcuate depending lug adapted to fit in the said coin groove, said frame members being sufficiently heavy to cause the said pair of depending lugs to conform the said wrapper placed on one of the said faces of the base member to the arcuate shape of its said coin groove, said frame members each having a central opening of a length to receive a predetermined number of coins of its particular denomination.

5. The device according to claim 4 wherein one of the said two coin grooves is a common groove accommodating pennies, nickels and quarters, and the other coin groove accommodates dimes, further provided with three frame members cooperative with the said common groove and a fourth frame member having a central opening to receive a predetermined number of dimes and cooperative with the said dime groove of the base member, the said three frame members having central openings to receive predeter-

mined numbers of pennies, nickels and quarters, respectively.

6. The device according to claim 4 wherein the said end flanges are provided with arcuate cutouts centrally aligned with the said coin grooves and forming posts in the end flanges on each side of the cutouts, the posts of the lowermost face serving as corner feet to support the base member when the uppermost face is in use.

7. A device for packaging coins in wrappers of predetermined widths depending upon the respective coin denominations to form a coin roll, comprising an elongated base member, the uppermost longitudinal face thereof having a pair of end flanges presenting inner, facing shoulders, the distance between said facing shoulders being somewhat longer than the width of a wrapper of a particular denomination, said longitudinal face having a central, arcuate groove, terminating at the end flanges, for seating coins of the said particular denomination, the said wrapper being positioned on the uppermost face of the base member and a predetermined number of stacked coins placed thereon and the stack rotated in the coin groove to roll them in the wrapper, the surface of the uppermost face on at least one side of its central groove being reduced in width at the central portion thereof to facilitate the said rolling.

8. The device according to claim 7 wherein the said central reduced portion is provided by concaving the sides of the base member inwardly towards the medial point of the member.

9. The device according to claim 7 wherein the said central reduced portion is provided by tapering the sides of the base member upwardly towards the said uppermost surfaces.

10. The device according to claim 7 wherein the side of the base member at the said central reduced portion is substantially flush with the outermost portion of the coin roll.

11. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising an elongated base member, the uppermost longitudinal face thereof having a pair of end flanges presenting inner, facing shoulders, the distance between said facing

shoulders being sufficient for the widest wrapper, the uppermost face having at least one step close to said end flanges presenting spaced shoulders and ledges, the distance between the pair of spaced shoulders being sufficient for the next widest wrapper, said longitudinal face having a central, arcuate groove, terminating at the end flanges, for seating coins of the said particular denomination, frame members of predetermined lengths to be received between the said end flanges and said spaced shoulders, having at each end a depending lug adapted to enter in the said coin groove, said frame members each having a central opening of a length to receive a predetermined number of coins of its particular denomination.

12. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising an elongated base member, the uppermost longitudinal face thereof having a pair of end flanges presenting inner, facing shoulders, the distance between said facing shoulders being sufficient for the widest wrapper, said longitudinal face having a central arcuate groove for seating coins, a frame member of a length to be received between the said end flanges, having at each end a depending lug adapted to enter said coin groove, the distance between the inner, facing sides of the said pair of lugs being sufficient for the next widest wrapper, said frame members having central openings of lengths to receive predetermined numbers of coins.

13. A device for stacking and counting coins and packaging them in wrappers of predetermined widths depending upon the respective coin denominations, comprising a base member having an arcuate groove for seating coins of particular denomination, a frame member having a central opening of a length to receive a predetermined number of coins of said particular denomination, and means for associating the said frame member with the said base member to align the said central opening of the frame member with the said arcuate groove of the base member.

CHARLES H. HAGOPIAN.