NUMISMATOLOGY SORTING AND COUNTING APPARATUS

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The present invention relates to a new and improved coin examining and counting apparatus and more particularly to a new and improved sorting and coin apparatus suitable for use by the numismatic hobbyist.

The numismatist usually obtains quantities of coin of the different denomination of coins and selects those which enhance his collection. Initially the coins are spread out and sorted to inspect various numismatic factors such as year, mint mark, general condition and etc. The selected for the collection are placed to one side and the remaining rejected coins are returned to a bank or other money exchanging agency. Usually this requires that the coins be wrapped in standard coin wrappers accommodating a prescribed number of coins.

The process of manually counting and wrapping the coins is extremely tedious and time consuming and detracts from the fascinating collecting phases of numismatology.

Generally the numismatic hobbyist is not financially able to use commercial sorting and counting equipment of the type found in banks. This commercial equipment is mechanically complex and accordingly expensive. Therefore, the numismatist has hand counted the coins individually or has used counting devices which relied on the thickness of the denomination of coin being counted to achieve the number of coins prescribed for a standard wrapper. For example, each denomination of coin is made to a standard thickness so that the theoretically a prescribed number of stacked coins in a wrapper should be equal in length to the prescribed number of coins multiplied by the standard coin thickness. However, this method of coin counting is not accurate because as is well known the greatest coin wear occurs on the faces thereof so that the coin thicknesses are reduced to the extent that the number of coins for any given stacked length may vary. This frequently results in the number of coins in a standard wrapper exceeding the prescribed number and results in a financial loss to the numismatist. Also, when coins are hand counted mistakes are frequently made causing banking and bookkeeping errors at the bank or money exchanging agency where the coins are returned by the numismatist.

It is an object of the present invention to provide a simple, time saving and accurate sorting and counting device which obviates the difficulties encountered heretofore.

It is a further object to provide a coin sorting and counting device which is of simple construction and economical to construct.

It is another object to provide a coin counting apparatus which is constructed and arranged to utilize the diameter of the coins as an accurate basis for counting coins of any one denomination of a plurality of denominations of coins.

It is still another object to provide a coin counting apparatus which is constructed to be capable of counting any one denomination of a plurality of different denominations of coins utilizing the diameter of the selected coin denomination as a basis for accurately determining the number of coins to be counted.

It is still a further object taken in conjunction with the immediately foregoing object to provide a means which communicates with the counting means for providing a support for the wrappers into which the counted coins are rolled.

A further object taken in conjunction with the immediately foregoing objects to provide the counting arrangement with a sorting table disposed adjacent to the counting arrangement.

Further objects and features will hereinafter appear.

In the drawings:

FIG. 1 is a perspective view of the coin sorting and counting apparatus of the present invention;

FIG. 2 is a top plan view of the coin sorting and counting apparatus shown in FIG. 1, but with the light and magnification means omitted;

FIG. 3 is a fragmentary view taken generally along the lines 3—3 of FIG. 2; and

FIG. 4 is a fragmentary cross sectional view through the apparatus showing another embodiment of counting groove.

Referring now to the drawings there is shown a sorting and counting tray 10 which may have mounted thereon a light and magnification member 11.

The sorting and counting tray 10 may be made from any suitable rigid material as for example wood, plastic, aluminum and the like. The tray 10 may be formed substantially rectangular. The central portion of the top surface forms a sorting surface 12 on which coins C are adapted to be placed for sorting and inspection. Adjacent the coin surface 12 is a counting groove 13 into which the rejected coins are inserted for automatic counting as more fully to be explained hereinafter.

Disposed within recesses located outwardly of the counting groove 13 are counting blocks 14a and 14b. A similar counting block 14 may be disposed in the counting block 13. The upper corners of the tray 10 may be provided with erasable marking surfaces 15 upon which there may be recorded the designation of the coins being sought.

The magnifying and lighting arrangement 11 includes a flexible goose neck conduit 16 of which the lower end is seated within a boss extending upwardly from the tray 10. Fixed to the upper end of the goose neck conduit 16 is a magnifying lense 17 in which there is disposed a light bulb (not shown) for providing illumination on the tray 10.

It is common practice to place coins of a single denomination of coin of the sorting tray 12 where they are inspected for their numismatic characteristics. In the event one of the coins has a desired characteristic it is separated from the coins by dropping through a coin opening 18. Underlying the opening 18 is a coin receptacle 19 which receives the selected or valued coins.

The receptacle 19 is supported on a horizontal shelf 20 supported on and extending from the lower end of a vertical web 21 which the upper end is fastened to the underside of the tray 10. Extending from the other side of the vertical web 21 is a coin wrapper shelf 22 upon which coin wrappers W may be supported. The rejected coins are inserted through an opening 23 communicating with the counting groove 13 and dropped into the wrapper W. Preferably, the opening 23 is formed somewhat elliptically or elongate to provide a ledge along which the coins may be canted to drop through opening 23 and thereby facilitate the filling of the wrapper W.

In accordance with the present invention the counting groove 13 is formed to use the diameters of the denomination of the coin being counted as a basis for achieving the count. To this end, the counting groove 13 is of a length which equals the summation of a select number of coin diameters of the denomination of coin being counted. For example, if it is desired to obtain a count of fifty pennies the length of the counting groove 13...
may be made to substantially equal the summation of fifty diameters of the penny coin. In this manner when the groove 13 is filled the desired count of coin is automatically obtained.

In this connection it should be mentioned that the length of the groove 13 should equal the multiple of diameters of the coin corresponding to the count or number of coins found in the standard bank coin wrapper. For example, the length of a five cent counting groove would be equal to 20 diameters of five cent coins, a penny counting groove would be equal to 50 diameters of the penny and etc.

In the form shown, the counting groove 13 is formed as a closed curve, namely circular. To render the counting groove universal and suitable for counting a full range of denomination of coins of which each has a different diameter, the groove 13 is formed at least as long as the summation of the diameters of that denomination of coin resulting in greatest length for a standard coin wrapper count. The groove 13 shown is formed so that the length exceeds the greatest length as determined above and thereafter selectively shortened to obtain the length corresponding to a diameter summation equaling the coin count of the various denominations of coins.

Selective shortening or lengthening of the counting groove 13 is achieved by means of segment counting blocks 14, 14a and 14b which are each of different lengths to vary the groove length in accordance with the denomination of coin being counted. The blocks 14, 14a and 14b are effective when selectively inserted either alone or in combination into the groove 13 to change the length of the groove 13 and thereby change the number of coins of a particular denomination which are automatically counted. Assuming that the segment counter block 14 is of a length which results in changing the length of groove 13 to accommodate fifty diameters of pennies, when the groove 13 is completely filled 50 pennies are automatically counted. Similarly block 14a may change the length of the groove 13 so that twenty nickels are counted when the groove 13 is completely filled. Any number of counting blocks 14 may be supplied to accommodate domestic and foreign coins.

In order to obtain an accurate count within the groove 13 the centers of the coins must lie substantially along a common line. In the form of counting groove shown, the common line is a circumference lying between the inner and outer limits of the groove. To assure that the coins are maintained in the above relationship while at the same time providing the groove width to accommodate a plurality of different denominations of coins, the groove 13 is as shown, in particular in FIG. 3, formed so as to make the width variable. This is accomplished by the provision of a separable annular ring 25 which is insertable into the groove 13.

When the annular ring 25 is inserted in the groove 13 the latter is reduced in width thereby to limit the insertion of five cent, one cent and ten cent coins therein. Expressed in other words, the width of the groove 13 is limited so as to be substantially no greater than about one and one quarter times the smallest diameter of the denomination of coin being counted. When the annular ring 25 is removed the groove 13 is of a width capable of receiving twenty-five cent and fifty cent coins.

Referring now to FIG. 4 there is shown another embodiment of counting groove 13 which maintains the coins of the different denominations and diameters along a common circumference. To this end, the groove 13 is formed with a pair of stepped ledges 13a and 13b of which the ledge 13a is adapted to accommodate the width of a quarter and the ledge 13b the width of a half dollar. The lower or primary groove 13 is of a width which accommodates the one penny, nickel and dime coins.

The operation and function of the sorting and counting tray should be readily apparent. Initially, a plurality of coins are spread on the sorting surface 12. These coins may be of the same or different denominations. After the coins have been inspected for numismatic values the rejected coins of one denomination are inserted into the counting groove 13. Inserted within the counting groove 13 is the counting block segment 14 of the denomination being counted so that when the groove is completely filled with coins C in touching relationship the count will be equal to that found in the standard wrapper for the selected denomination of coin. Thereafter the coins are pushed around the groove 13 and are dropped through the opening 23 into a wrapper W.

This procedure is followed until all of the coins on the sorting surface are counted and wrapped.

What is claimed is:

1. A coin counter comprising a base, a closed curve groove formed in said base, said groove having a width at least as great as the largest diameter of a plurality of denominations of coins, and means insertable into said groove for varying the length of said groove to equal a prescribed number of diameters of a selective one denomination of said plurality of denominations of coins.

2. The invention as defined in claim 1 including means insertable into said groove for limiting the range of denominations of coins which may be counted by reducing the width of said groove.

3. The invention as defined in claim 1 wherein said groove is circular.

4. The invention as defined in claim 1 wherein said groove is formed with a plurality of ledges of varying height and providing a means for supporting coins of different diameters thereon.

5. A coin counter comprising a base, a circular groove formed in said base, said groove having a width at least as great as the largest diameter of a plurality of denominations of coins and not greater than twice the smallest diameter of said plurality of denominations, an opening through said base communicating with said groove for receiving said coins therethrough and means insertable into said groove for varying the length of said groove to equal a prescribed number of diameters of a selective one denomination of said plurality of coins.

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