June 3, 1958 C. PRIESMEYER 2,836,911

ECCENTRIC COIN

Filed March 27, 1956

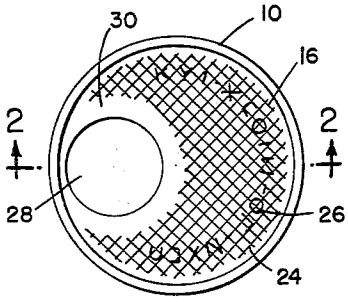

FIG. 1

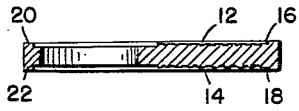

FIG. 2

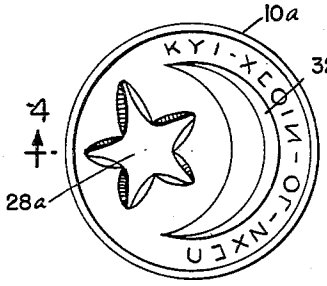

FIG. 3

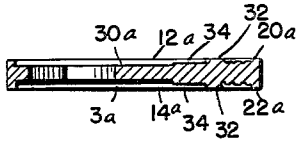

FIG. 4

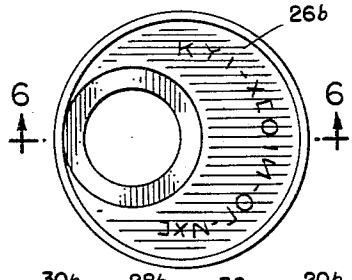

FIG. 5

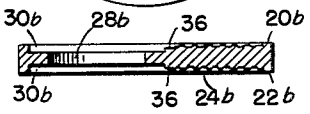

FIG. 6

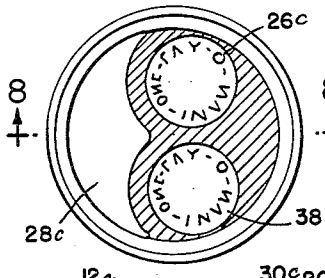

FIG. 7

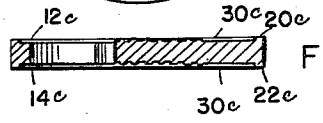

FIG. 8

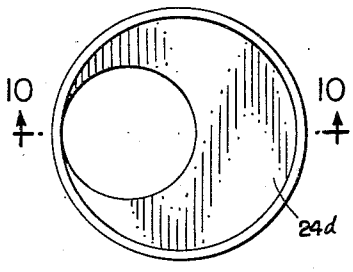

FIG. 9

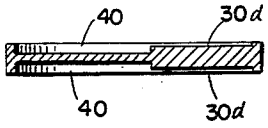

FIG. 10

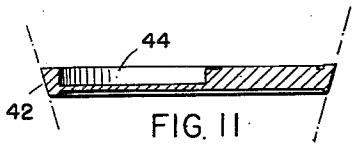

FIG. 11

INVENTOR:

CHARLES PRIESMEYER

BY

Watson W. Haubaugh

ATT'Y

United States Patent Office 2,836,911 Patented June 3, 1958

2,836,911

ECCENTRIC COIN

Charles Priesmeyer, Park Ridge, Ill., assignor to Meyer-Wenthe, Incorporated, Chicago, Ill., a corporation of Illinois

Application March 27, 1956, Serial No. 574,248

10 Claims. (Cl. 40—27.5)

This invention relates to coins and more particularly to a token which is particularly suitable for token meters on public transportation vehicles, but not for coin operated merchandising devices and coin operated games designed to accept coins of legal tender.

Heretofore, transportation companies have been plagued by unscrupulous persons using slugs or spurious elements to obtain free transportation, particularly at unattended pay turnstiles. Moreover, tokens sold for specific services are improperly used for other services or illegally as a substitute for legal tender coins and, although devices are known which are capable of rejecting an element which does not meet the characteristics of the intended token, such devices are characterized by great complexity, including irregularly shaped tokens, and consequent high cost of both the devices and the tokens.

Thus, in order to assist in preventing misuse of tokens as coins, durability, size, shape and many other desirable characteristics of coins, have been sacrificed in the manufacture of tokens to avoid possible misuse of tokens as coins in vending machines.

One of the objects of the present invention is to provide a token that is not dependent upon size, shape, durability or metal content for its rejection if illegal use thereof is attempted.

The invention also remedies a prime disadvantage of both tokens and coins in general with respect to their tendency to roll away from a person when dropped. This fact has proved inconvenient to customers of coin operated merchandising devices and patrons of transportation companies, particularly those operating ferries, elevated trains and subways.

Therefore, an important object of the invention is to provide a coin which is not only difficult to duplicate spuriously and which by its very nature lends itself to rejection with a detection apparatus, but also one which is characterized by a limited ability to roll.

A further object of the invention is to provide a token whose construction and balance is detectable by conventional coin detection apparatus.

A further object of the invention resides in a circular coin which, if it does roll more than a couple of revolutions, will roll in a circle and return to the person dropping it.

Other and further objects, advantages and features of the present invention will be apparent to those skilled in the art from the following description, taken in conjunction with the accompanying drawings in which similar reference characters relate to similar parts and in which:

Fig. 1 is a plan view of a coin made in accordance with the present invention;

Fig. 2 is an elevational sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a plan view of a modified form of the present invention;

Fig. 4 is an elevational sectional view taken substantially on line 4—4 of Fig. 3;

Fig. 5 is a plan view of another modified form of the present invention;

Fig. 6 is an elevational sectional view taken substantially on line 6—6 of Fig. 5;

Fig. 7 is a plan view of a further modified form of the present invention;

Fig. 8 is a vertical sectional view taken substantially on line 8—8 of Fig. 7;

Fig. 9 is a plan view of another modified form of the present invention;

Fig. 10 is an elevational sectional view taken substantially on line 10—10 of Fig. 9; and

Fig. 11 is an elevational sectional view of still another modified form of the present invention.

Referring now to the drawings and more particularly to Figs. 1 and 2, there is shown a coin in the form of a circular disc 10 having on opposite faces 12 and 14 thereof shallow recesses 16 and 18 within the border edges 20 and 22 respectively, which provide panels 24 on which are coined decorative lines and indicia 26. According to the present invention, the token or coin 10 is provided with an eccentrically disposed opening 28 so that the center of gravity of the coin lies to one side of the geometric center of the coin and rolling occurs only with great difficulty and, if it does roll appreciably, it will roll in a circle. A particular advantage of this eccentricity is that should the coin be dropped, in a public place for instance, it may be recovered without difficulty.

The indicia 26 is desirably embossed to add greater mass to the heavy side of the coin, which is the right side, as viewed in the drawings, and an annular depressed area 30 is desirably formed in surrounding relation to the opening 28 for the same purpose.

The present coin or token construction lends itself readily to automatic rejection in coin detection apparatus as presently built. For instance, even though the present coin may be made of conventional minting alloy, the eccentric weighting of the coin gives it two distinct advantages when used in identification and detection apparatus. First, the displaced center of gravity tends to cause an erratic bounce. This characteristic could be readily employed as the sole means of acceptance or rejection as compared with coins of present legal tender. Second, the eccentricity of weight causes the coin to roll in a curve, as distinguished from a straight line, particularly when rolling slowly. This rolling in a curve is effective in a coin detector as well as upon the floor or sidewalk. With these two distinguishing characteristics, a coin detector can be set to accept both performances or reject as to either, thereby rendering the coin so constructed amenable to handling as a unique coin or token for acceptance or rejection as desired.

In Fig. 3 is shown a modified form of the present invention in which a token or coin 10*a* is provided with a star-shaped eccentrically disposed opening 28*a*. This coin is shaped to concentrate, as far as possible, the mass of the coin on the opposite side. To this end, the mass of the coin surrounding the opening 28*a* is also reduced to a minimum. For instance, the opposite faces 12*a* and 14*a* are recessed as at 30*a*, while the heavy side of the coin is provided with crescent-shaped protuberances 32 on both faces extending up to the level of rim edges 20*a* and 22*a*. Extending inwardly from the protuberances 32 are steps 34. The mass of this coin is arranged so that there is little possibility of the coin rolling more than several revolutions.

In Figs. 5 and 6 is shown a further modified form in which deep recesses 30*b* are provided on each face of the coin in relation surrounding an opening 28*b* similar to the opening 28 in the first described form of the inven-

tion. Disposed at one side of the recesses **30***b* are arcuate steps **36** defining in part a crescent-shaped body panel **24***b* recessed slightly below the rim edges **20***b* and **22***b*. On the body panel **24***b* may be embossed suitable indicia **26***b*.

Referring now to Figs. 7 and 8, the token or coin shown in these figures is provided on opposite faces **12***c* and **14***c* with shallow recesses **30***c* which extend inwardly from rim edges **20***c* and **22***c* throughout the entire area of the face except for a pair of islands **38** on each face for reception of indicia **26***c*. An opening **28***c* passes through the coin and opens into the recesses **30***c*. One side of the opening **28***c* is arcuate, while the other side is defined by an edge comprising two joined arcs conforming to the configuration of the islands **38**. The shape of the opening **28***c* and the arrangement of the islands **38** to one side of the coin contributes to the eccentricity required for the above cited purposes.

In Figs. 9 and 10 is shown another modified form of the present invention in which the center of gravity resides in one side of the figure, but in which there is no opening. This coin would have all of the non-rolling characteristics of the coin of the other forms of the invention and would be suitable for use in an identification and detection device utilizing an eccentric bounce. This coin would be suitable for use in installations where it is desired to keep the identification and detection costs at a minimum. The coin of the figures is provided with a pair of oppositely disposed shallow recesses **30***d* in which are formed a pair of eccentrically disposed recesses **40**. Surrounding the recesses **40** is a body panel **24***d* on which may be impressed suitable indicia.

Where curving rolling characteristics are of prime importance, a coin such as the type shown in Fig. 11 may be employed. This coin is eccentric in two planes and is provided with a beveled edge **42** which tends to limit the path of travel of the coin in the event that it is dropped. This construction further assures that the coin will not continue in an arcuate path but will fall down quickly. A deep recess **44** is eccentrically disposed on the face of the coin having the marginal edge of greater diameter. By this arrangement, the center af gravity is displaced from two normal centers, i. e., the axis of rotation and the planar center. As a result, it is extremely unlikely that a coin of this type will roll for any considerable distance.

It will be apparent that this invention may be embodied in devices which differ in many respects and details from the particular embodiment disclosed. All modifications which do not go beyond the scope of the invention will readily suggest themselves to those skilled in the art. It is, therefore, not intended that the invention be limited to the exact construction shown and described, but only to the inventive concept as defined in the appended claims.

I claim:

1. A flat circular coin of substantially uniform thickness having a large-sized opening therethrough whose geometric center is spaced from the geometric center of said coin whereby the center of gravity of the coin is substantially spaced from its geometric center.

2. A flat circular coin of substantially uniform thickness having a single large-sized opening through one-half of the coin and disposed at one side of the geometric center of said coin whereby the center of gravity of the coin is substantially spaced from its geometric center.

3. A flat circular coin of substantially uniform thickness having material removed from one-half thereof in an amount greater than the material present in a major portion of a quadrant of said coin whereby the center of gravity of the coin is disposed in the other half of the coin and is substantially spaced from the geometric center of the coin.

4. A flat circular coin of substantially uniform thickness having the major portion of material of a quadrant thereof removed therefrom whereby the center of gravity of the coin is substantially spaced from its geometric center.

5. A flat circular coin of substantially uniform thickness having material removed therefrom at one or more places located in one-half of said coin over a total area greater than the major portion of a quadrant of said coin whereby the center of gravity of the coin is disposed in the other half of the coin and is substantially spaced from the geometric center of the coin.

6. A flat double face circular coin of substantially uniform thickness having the major portion of material of a quadrant thereof removed therefrom whereby the center of gravity of the coin is substantially spaced from its geometric center, said coin having its peripheral edge structure beveled at a predetermined acute angle to one of the two faces of the coin whereby the coin when rolling upright rolls on a peripheral edge nearer to said one face than to the other.

7. The combination called for in claim 6 in which the material removed is removed from said one of the faces.

8. A flat circular coin of substantially uniform thickness having the major portion of material of a quadrant thereof removed therefrom whereby the center of gravity of the coin is substantially spaced from its geometric center, said coin where the material is removed being characterized by a recess upon one side and an opening through the bottom of the recess to the other side.

9. A flat circular coin of substantially uniform thickness having the major portion of material of a quadrant thereof removed therefrom in one-half of the coin and protuberances of material are present in the other half of the coin whereby the center of gravity of the coin is substantially spaced from its geometric center.

10. A flat circular coin of substantially uniform thickness having the major portion of material of a quadrant thereof removed therefrom, said coin having border edges of uniform thickness and an opening where the material is removed confined to one-half of the coin and disposed within said border edges whereby the center of gravity of the coin is in the other half of the coin and is substantially spaced from the geometric center of the coin.

References Cited in the file of this patent

UNITED STATES PATENTS

1,512,604 Kaynor ---------- Oct. 21, 1924