FOOT IMPELLENT TOY

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ABSTRACT

A unitary toy to be repeatedly kicked to keep the toy in play and away from play-ending ground contact, said toy having a plurality of flexible strands disposed in a circular pattern with their outer ends substantially co-terminous, and their inner ends tightly bunched between two parts of an elastomer kicking center. The kicking center is weighted to provide desired flight of the toy during repeated kicking, and the strands have inherent strength sufficient to maintain a pattern of circular plane without collapsing due to gravity.

6 Claims, 4 Drawing Figures
FOOT IMPELLENT TOY

This invention relates to a toy used in an advantageous way by being kept in play through impelled floating movements following application of force from the foot. This invention particularly relates to a disc-like body with structural features which allows such toy to be kept continuously in play following exercise of modest levels of skill required for the repeated kicking action.

Various types of toys and amusement devices have been known to serve as missiles in somewhat of a floating movement following application of force, such as from a striking element or from a throwing movement. Generally, such devices are provided with feathers to obtain a floating movement, such as in the well known shuttlecocks. Understandably, such shuttlecocks can be struck in only one place, usually the cork head or body; and such cork can be struck only from one direction since the feathers extend in fixed relationship from the other direction. It is also evident that such shuttlecocks are designed for a particular type of play, namely, between two participants who additionally use rackets or bats to propel the shuttlecock between them.

An amusement device which features the floating movement of a shuttlecock, but which can be used in markedly different ways to attain high levels of amusement would be highly desirable. In particular, a device of this type which lends itself to advantageous use by a single player would be highly desirable, even though the amusement device would be susceptible for use with two or more players. In addition, it will be appreciated that a device of this type designed particularly to be propelled by the force of the foot would lead to new ways of realizing enjoyment in play. In particular, it is desirable to provide an amusement device which can be repeatedly contacted with the foot from any direction to keep such device in play in a desired floating movement.

It is, accordingly, an object of the present invention to provide an amusement device having the desired features noted above. An added feature of this object is to provide such a device which can be economically and quickly manufactured, and which retains its structural features to assure the desired functional operation of the unit over extended periods of time and following extended use in play.

Yet another feature of this object is to provide such an amusement device in which flexible strands are advantageously used to provide a floating movement to the device following its impelled movement. It is an important feature that such flexible strands have a memory so that they substantially resume their shape following collapse after forcible contact with the foot. Another important feature of this object is to provide an amusement device of the type described in which components are uniquely combined to attain desired goals in play involving kicking the device, floating the device, allowing the device to return for succeeding kicks to be kept in play, and having such device to hold up under continued playing.

The objects with the features enumerated, together with still other features and objects which will occur to practitioners from the use of the invention, are attained by the device which will now be disclosed in detail in the following disclosure, including drawings wherein:
Elastomeric disc part 27 is shown with a recessed weight chamber 30. An annular or collar weight 31 is shown positioned in the weight chamber. It is seen that the inner ends of the strands of the central portion 12 are captured between the continuous walls of the collar weight and the continuous wall of the weight chamber 30. Elastomeric disc part 26 has a locking stub 32 which is dimensioned to frictionally engage the inside continuous walls of the collar weight 30 in clamped and secured position.

The amusement device shown herein may be constructed in a variety of ways, but certain features relating to materials and dimensions are highly desirable for best performance of the unit. It is preferred that the kicking center have a flat top as shown in FIG. 3. This lends itself to better foot contact. It is preferred that the kicking center be a disc shape, and have a diameter from about one inch to about two inches. It has been found that the diameter of the entire toy, as defined by the outer ends of diametrically opposite strands, be greater than four inches but less than six inches. The foregoing relative dimensions of the kicking center and the toy, as a whole, has been found to lead to the best operation of the device in play, particularly from the point of view of repeated foot contact, the distance the device is impelled by a kicking force encountered in ordinary use, and the floating or return movement of the device towards the foot.

The weight element in a device of the foregoing dimensions should have a weight from about one ounce to two ounces. The height of the disc parts should be at least 3/16 inch and no more than about one-half inch. A particularly preferred dimension is about one-fourth inch measured between opposite flat bottoms and tops as in FIG. 3, or between the flat bottoms and the highest point of the spherical top as measured in FIG. 4.

The flexible strands has the required inherent strength sufficient to maintain said strands in a circular pattern to resist the pull of gravity. It is particularly preferred that such strands be wool yarn closely positioned together so a relatively continuous circular, planar "carpet" of yarn is formed. The size of individual wool strands have been found to be highly suitable to obtain a successful toy when grouped together as described. Such strands have sufficient rigidity to retain the circular planar pattern, and such wool yarn also has the desired "memory" to resume its circular pattern following collapse by contact with the foot or the like. The wool yard is of the dimension conventionally obtain for use in knitting.

The claims of the invention are now presented. What is claimed is:

1. A toy of a disc-like body adapted to be impelled by the force of the foot, including a two-part elastomeric kicking center, a plurality of flexible strands radiating outwardly from said kicking center, said strands having sufficient inherent rigidity to retain the pattern of a circular plane against the pull of gravity, all of such strands being commonly held between the two-part elastomeric kicking center, said plurality of radiating strands being sufficiently bunched in mutually dense relationship so as to define a substantially continuous circular pattern and a weight element smaller than the kicking center and positioned between said two-part elastomeric kicking center so that said weight is enclosed by said kicking center, said element having sufficient weight to impart desired flight movement from the force imparted by the foot in expected use during play, and to be again contacted by the force of the foot in repeated play.

2. A toy of a disc-like body as in claim 1, wherein said flexible strands are wool yarn, the outer ends of said plurality of wool yarn being substantially coterminal to define a thick circumferential edge, and the inner ends are tightly bunched and held between said two-part elastomeric kicking center.

3. A toy of a disc-like body as in claim 1, wherein each part of the elastomeric kicking center is a flat top disc, and wherein a substantially flat bottom of each part is bonded to the tightly bunched strands fixed between the parts.

4. A toy of a disc-like body as in claim 3, wherein a weight chamber is present in at least one of the bottoms of said two parts, and wherein said weight element is positioned within said weight chamber.

5. A toy of a disc-like body as in claim 1, wherein each of the two parts of said elastomeric kicking center is a spherical disc, and wherein substantially flat bottom portions of said parts are bonded to the strands.

6. A toy of a disc-like body as in claim 5, wherein the bottom of one of said parts is a weight chamber, an annular weight element being deposited in said chamber, and wherein the bottom of the other of said parts has an integral stub extension which frictionally fits within said annular weight element, and wherein the inner ends of the flexible strands are captured between a continuous wall of the weight chamber and the annular weight element.