

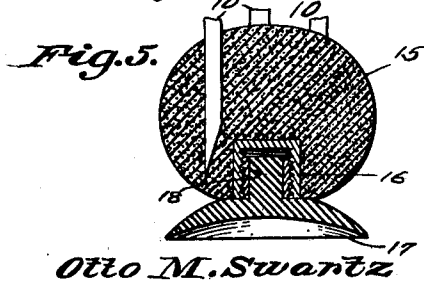
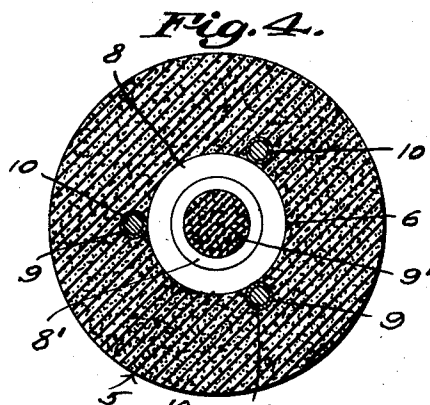
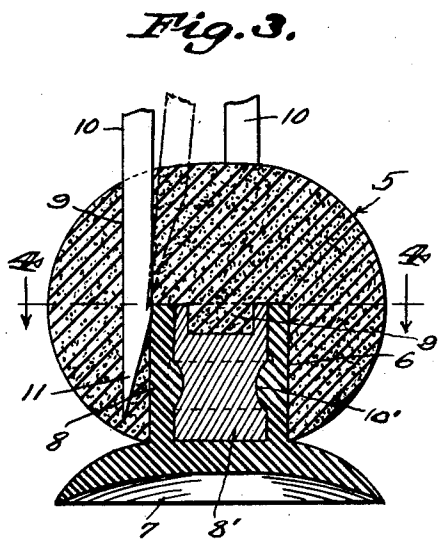
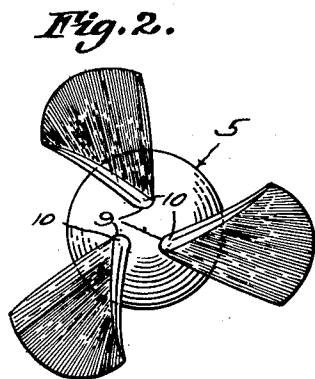
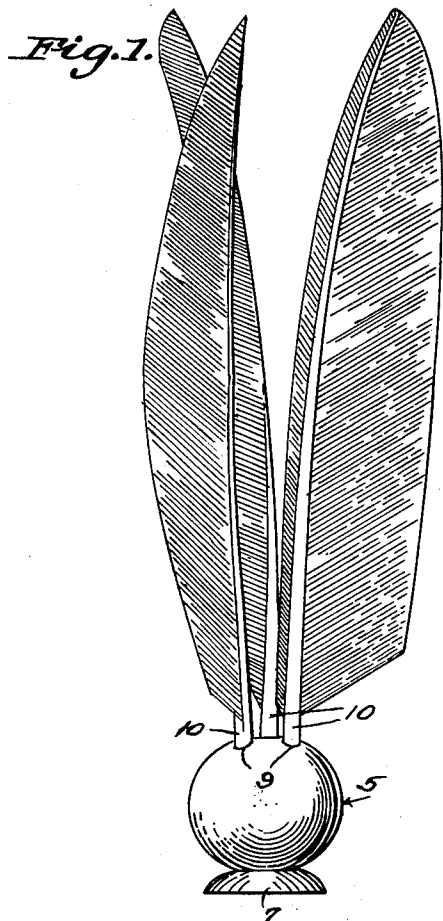
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O. M. SWARTZ

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SUCTION CUP DART

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Otto M. Swartz

INVENTOR

BY *Cathow & Co.*
ATTORNEYS.

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SUCTION CUP DART

Otto M. Swartz, Chicago, Ill.

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2 Claims. (Cl. 273—106.5)

This invention relates to games wherein projectiles in the form of darts are thrown by hand at a target.

The primary object of the invention is to provide a projectile or dart having a sponge-like rubber body and a suction cup secured thereto which suction cup will, upon contact with the target, adhere by suction to the target, indicating a score in playing the game.

An important object of the invention is to provide a projectile wherein the body portion thereof is mainly in the form of a weighted rubber ball, to be thrown in the same manner as a baseball, the projectile descending with a cushioned "giro" impact.

Another object of the invention is to provide a projectile which is so constructed that the quills that are carried thereby to guide the projectile are arranged at predetermined angles with respect to the ball or body, to cause the projectile to rotate as it is moving toward the target, lending a pleasing appearance to the projectile.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing,

Figure 1 is an elevational view of a projectile in the form of a dart, and constructed in accordance with the invention.

Figure 2 is a plan view thereof.

Figure 3 is a sectional view through the body and suction cup of the projectile.

Figure 4 is a sectional view taken on line 4—4 of Figure 3.

Figure 5 is a sectional view showing a modified construction of the invention.

Referring to the drawing in detail, the projectile comprises a body 5 in the form of a ball, the body 5 being constructed preferably of sponge rubber and provided with a bore 6 of a depth substantially one-half of the diameter of the body, as better shown by Figure 3 of the drawing.

The reference character 7 indicates a suction cup which is provided with a hollow stem 8 that is fitted in the bore 6 uniting the hollow stem to the body, by frictional contact therewith.

Before inserting the hollow stem 8 in the bore 6, the hollow stem is supplied with an ample quantity of rubber cement. A lead weight 8' in the form of a cylindrical plug is forced into such hollow stem which causes a small amount of the rubber cement to be forced laterally from the inner end of the hollow stem. The inner end of said weight is formed with a recess 9' in which the sponge rubber of the body projects anchoring the weight in position within the ball body. The surface of said

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plug is formed with an annular recess 10' in which the rubber of the wall of bore 6 extends further anchoring the weight plug within the bore 6.

Three small holes 9 are drilled in the upper half of the body 5 to a depth even with the bottom of the bore 6, and at points in spaced relation with respect to each other and adjacent to the bore 6, as shown by Figure 4 of the drawing.

The quills, which are indicated by the reference character 10 have tapered ends 11. The quills are forced into the holes 9, the quills moving easily into the holes 9, due to the fact that the holes 9 contain a quantity of the cement which has been forced laterally from the hollow stem during the positioning of the suction cup within the bore of the body 5.

In Figure 5 of the drawing I have illustrated a modified form of the invention in which the rubber ball 15 is provided with a metal slug 16 around which the rubber ball is molded, the slug 16 having internal threads.

The stem of the suction cup 17 is provided with a metal sleeve 18 molded into the stem, the sleeve having external threads so that the stem may be threaded into the slug 16, securing the suction cup to the ball 15.

It might be here stated that when the quills are inserted in the holes 9, the feathered ends of the quills are forced slightly inward from the perpendicular line, with the tapered ends of the quills held solidly against the hard rubber of the suction cup, tilting the quills and holding the quills in a slightly tilted position to cause the projectile to take a rotary movement when it is moving forwardly. The projectile will also descend with a cushioned giro impact, because of this specific construction.

From the foregoing it will be seen that due to the construction shown and described, I have provided a projectile in the form of a dart which is so constructed and arranged that the projectile may be thrown in the same manner as a baseball, the quills maintaining the direction of flight of the projectile to insure accuracy.

The projectile is designed primarily for use in playing a game wherein a target is provided at which the projectile is directed and to which the projectile adheres when striking the target, thereby indicating a score in the playing of the game.

Having thus described the invention, what is claimed is:

1. A projectile of the class described, comprising a body of ball construction formed of sponge rubber material, said body having a bore extending from the surface of said body terminating centrally of said body, a suction cup having a hollow cylindrical stem extending from said suction cup embedded in said bore encasing said stem throughout the entire length thereof, said body engaging said cup at the point where said stem merges with said body, a weight fitted in said cylindrical stem, said weight having a recess formed in the inner end thereof in which a portion of said rubber body is embedded, said weight having an annular recess formed intermediate the ends thereof, portions of said hollow stem lying within said annular recess, anchoring said weight within said hollow cylindrical stem, and quills within the body opposite to said suction cup.

2. A projectile of the class described, comprising a body of ball construction formed of sponge rubber, said body having a bore extending inwardly from the surface of said body, a suction cup, a hollow cylindrical stem extending from said suction cup embedded in said bore, a weight filling said hollow cylindrical stem, means for securing said weight within the stem and body, a plurality of quills having tapered ends forced into said body from a point opposite to said suction cup, said tapered ends contacting said hollow cylindrical stem urging the

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tapered ends of said quills laterally firmly securing said quills in position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,617,243	Flanagan	Feb. 8, 1927
1,774,765	Schoen	Sept. 2, 1930

5

1,918,718
2,016,252
2,359,726
2,377,498

1,348

4

Samsel	July 18, 1933
McNamara	Oct. 1 1935
Booty	Oct. 3, 1944
Jacke	June 5, 1945

FOREIGN PATENTS

Great Britain	1908
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