FLYING DISC WITH GRIP SURFACES

Inventor: James Kenner, Highland, MI (US)

Correspondence Address:
William H. Honaker
Dickinson Wright PLLC
Ste. 2000, 38525 Woodward Avenue
Bloomfield Hills, MI 48304-2970

Appl. No.: 11/681,356
Filed: Mar. 2, 2007

ABSTRACT

A circular flying disc having an annular rim and a central section joined together by an annular shoulder formed in a single piece of a first material. The annular rim extends downwardly from the annular shoulder bounding a central cavity below the central section. The annular rim includes an inside grip edge facing the central cavity. The grip surface is attached to the circular flying disc and is formed from a second material which is pliant and different from the first material. The grip provides a pliant surface to facilitate grasping and throwing by a user.
FLYING DISC WITH GRIP SURFACES

RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Application No. 60/779,321 filed on Mar. 3, 2006 entitled “Flying Disc With Grip Surfaces” which is hereby incorporated by reference in its entirety for all purposes.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH

[0002] NONE

TECHNICAL FIELD

[0003] This invention relates generally to flying discs and, more particularly, to flying discs used in the game of disc golf. However, it should be understood by those of ordinary skill in the art that the invention is not limited to this type of flying disc, but could be used on any style flying disc.

BACKGROUND OF THE INVENTION

[0004] Flying discs, particularly for the game of disc golf, have been made out of many different polymers. Some of the early models were molded out of filled polyethylene or other blended compounds such as rubber and polypropylene. Some discs were even made out of synthetic rubber. Whole discs made with certain filled polymers or rubber discs perform well when new, but they are subject to wear and distortions in shape with use because of impacts with stationary objects. This is a particular problem when used in the manner necessary for disc golf competition.

[0005] High tech, high durability polymers such as polyurethanes, and T.P.E.’s have pretty much become the standard for the highest quality disc golf discs because of their durability and shape memory (resistance to shape distortions). One problem with high tech polymers is that their surface properties, which make them harder to grip without your hand contact points slipping especially with colder temperatures or when wet. This results in a loss of control and distance capability.

SUMMARY OF THE INVENTION

[0006] The present invention overcomes these problems by providing a grip surface or surfaces made from a soft, easy to grip, pliant polymer such as silicone or any number of synthetic rubbers to critical areas of the disc where players grip the disc for throwing. This can either be done by over molding, molding into the disk, bonding with an adhesive or any other method known to those of ordinary skill in the art.

[0007] The area could be as little as a small area on the top of the disc, where most people put their thumb, or a band of rubber material around the top or top and bottom. Another possible model might have pliant material along the inside grip edge.

[0008] These and other features and advantages of this invention will become more apparent to those skilled in the art from the detailed description of a preferred embodiment. The drawings that accompany the detailed description are described below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of a first embodiment of the flying disc of the present invention with a cutaway section;

[0010] FIG. 2 is a section taken along line 2-2 of FIG. 1;

[0011] FIG. 3 is a bottom view of the first embodiment of the flying disc of the present invention;

[0012] FIG. 4 is a top view of a second embodiment of the flying disc of the present invention;

[0013] FIG. 5 is a partial view of a second embodiment of the flying disc of the present invention;

[0014] FIG. 6 is a top view of a fourth embodiment of the flying disc of the present invention;

[0015] FIG. 7 is a bottom view of a fifth embodiment of the flying disc of the present invention; and

[0016] FIG. 8 is a sixth embodiment of the flying disc of the present invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

[0017] With reference to FIG. 1 of the drawings, a perspective view of the flying disc of the present invention is generally shown at 10. Disc 10 has a central section 11 with a top 12, bottom 14, annular rim 16 and an inside grip edge 18. The central section 11 and the annular rim 16 are joined by a shoulder 19. The disc 10 is preferably injection molded from high durability polymer such as polyurethanes and T.P.E.’s or others well known to those of ordinary skill in the art.

[0018] As shown in FIG. 1, a grip surface 22 is provided on the top 12 and a grip surface 20 along the inside grip edge 18. As stated above, the grip surfaces 20 and 22 can be molded into the disc surface of disc 10, by for example an over mold process, adhesively bonded or attached in any known manner by one of ordinary skill in the art. As should be appreciated, the grip surfaces can be raised, flush or even recessed with respect to the remainder of the disc 10. The adhesive can be either a permanently adhesive or non-permanent. If non-permanent, the grip surfaces can be removed and changed as desired. The grip surface or surfaces 20 and 22 are made from a soft, easy to grip, pliant polymer such as silicone or any number of synthetic rubbers.

[0019] FIG. 2 is a partial cutaway view of the disc shown in FIG. 1 and FIG. 3 is a bottom view of the disc 10. As should be appreciated, the grip surface 20 is illustrated as a continuous surface along the entire inner grip edge 18, but could be intermittently provided along the inner grip edge 18. Additionally, the grip surface 22 on the top 12 of the disc could be continuous as shown in FIG. 4, or as shown in FIG. 5. The disc 10 of FIG. 4 has a narrower continuous band of grip surface 22 and the disc 10 of FIG. 5 has a broader continuous band of grip surface 22. The grip surface 22 could also be intermittent as shown in FIG. 6. As will be appreciated by those of ordinary skill in the art, any number of shapes, designs, etc. can be used as the grip surfaces 20 or 22 and either or both could be used depending upon the desire of the user or designer.

[0020] With reference to FIG. 7, an additional grip surface 24 is provided on the bottom 14. This grip surface 24 can
also have various shapes, be intermittent, be narrower or broader etc. With reference to FIG. 8, the grip surface 18 is also added. As will be appreciated, any combination of the surfaces 20, 22, and 24 could be used.

[0021] The over molded versions would provide a permanent solution to the grip problem. The grips attached with adhesive could be changed as they wear or a player could substitute a piece with more or less grip depending on personal preference. The analogy would be to different grips on things such as golf clubs.

[0022] This combination of high durability polymers for wear with super grip polymers creates a dramatic improvement in design and performance over current discs, particularly disc golf disc configurations.

[0023] The foregoing invention has been described in accordance with the relevant legal standards, thus the description is exemplary rather than limiting in nature. Variations and modifications to the disclosed embodiment may become apparent to those skilled in the art and do come within the scope of the invention. Accordingly, the scope of legal protection afforded this invention can only be determined by studying the following claims.

We claim:

1. A circular flying disc comprising:
   an annular rim and a central section having a top and bottom joined together by an annular shoulder, and formed in a single piece of a first material, said annular rim extending downwardly from said annular shoulder bounding a central cavity adjacent said bottom of said central section, said annular rim including an inside grip edge facing said central cavity;
   a grip surface attached to said circular flying disc, said grip is formed from a second material different from the first material, said second material being pliant and different from said first material whereby said grip provides a pliant surface to facilitate grasping and throwing by a user.

2. The circular flying disc of claim 1, wherein said grip surface is attached to said central section.

3. The circular flying disc of claim 2, wherein said grip surface is attached to said top of said central section.

4. The circular flying disc of claim 2, wherein said grip surface is attached to said bottom of said central section.

5. The circular flying disc of claim 1, wherein said grip surface is attached to said inside grip edge.

6. The circular flying disc of claim 1, wherein said grip surface is a narrow continuous band.

7. The circular flying disc of claim 2, wherein said grip surface is a narrow continuous band.

8. The circular flying disc of claim 3, wherein said grip surface is a narrow continuous band.

9. The circular flying disc of claim 2, wherein said grip surface is a series of intermittent surfaces.

10. The circular flying disc of claim 3, wherein said grip surface is a series of intermittent surfaces.

11. The circular flying disc of claim 1, wherein said grip surface is molded onto said flying disc.

12. The circular flying disc of claim 1, wherein said grip surface is attached to said flying disc with an adhesive.

13. The circular flying disc of claim 1, wherein said grip surface is attached to said central section and to said inside grip edge.

14. The circular flying disc of claim 1, wherein said grip surface is attached to said top and bottom of said central section and to said inside grip edge.

* * * * *