United States Patent [19]

Geiger

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[54] **FLYING SAUCER**

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[52] **U.S. Cl.** ..... **46/74 D,** 273/106 B
[51] **Int. Cl.** **A63h 27/00**
[58] **Field of Search** ..... 46/74 D; 273/106 B

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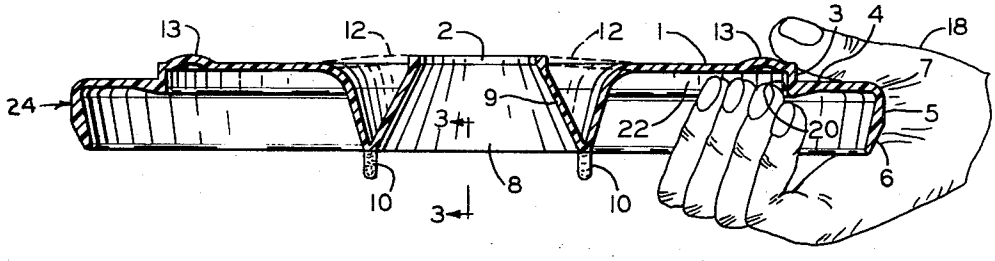
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Assistant Examiner—J. Q. Lever

[57] **ABSTRACT**

A gyro-aerodynamic saucer shaped throwing or projecting implement. Consisting of a single or plurality of inter boundary rings projecting down from relative flat plateau upper outer surfaces, said rings may be accompanyed by raised dimples which make for more comfortable hand grip, and better control of the saucer as it is thrown with a wrist snaping action. Said rings also exert a controlled drag on the upper surface of the saucer to help prevent rolloff or rollover. Also consisting of an outer ring with a flatter cone-shaped lower foresurface to act as lift, simular to flaps on an aircraft, which also tends to prevent rollover, yet cause a more stable flight with a much thinner overall thickness of the saucer, thereby reducing the overall aerodynamic drag during flight. Saucer also having an optional hole in the center with downward projecting cone center shaped center section, for either catching it on the finger of the player, or used in games where stakes are used, thus throwing the saucer on the stake through the hole. Said cone may also have downward projecting hooks on its lower surface and be shot and whirled into flight with an elastic member. Saucer may contain a lower projecting ridge on the under surface of the plateau's upper surface of the larger saucers. Said ridges may also be accompanied with raised dimples adjacent to them, being there to hook the finger tips of the thrower, for a more comfortable grip, and more controled flight while being thrown.

4 Claims, 7 Drawing Figures



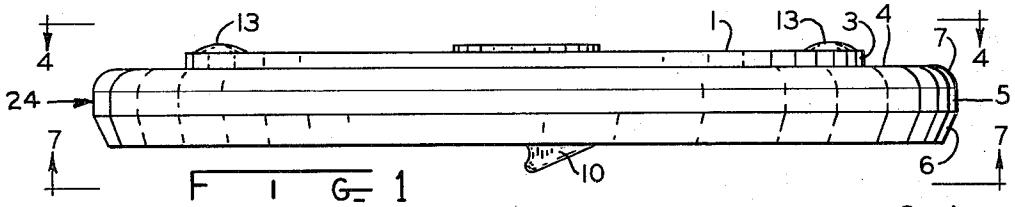


FIG 1

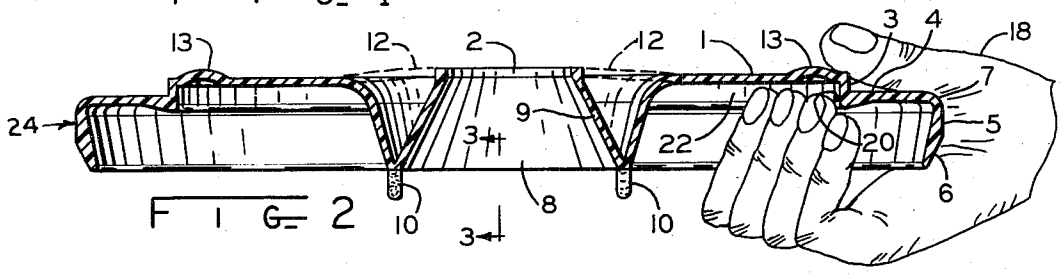


FIG 2

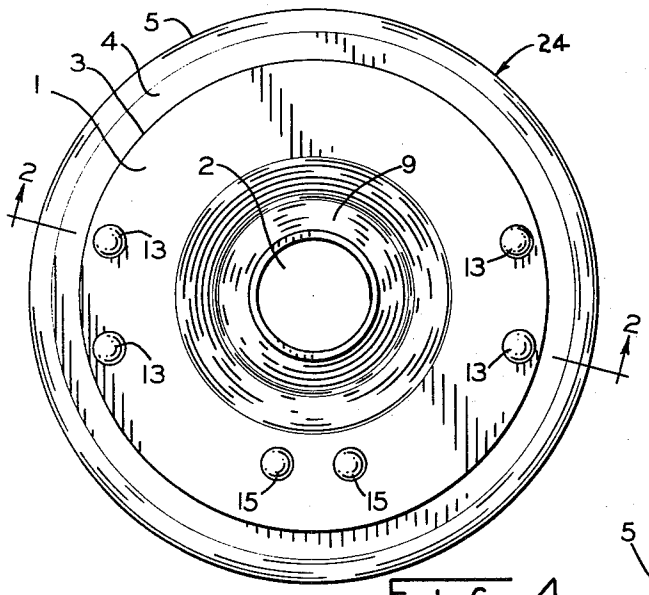


FIG 4

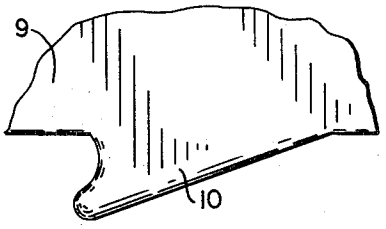


FIG 3

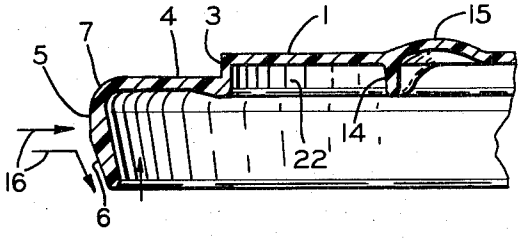


FIG 5

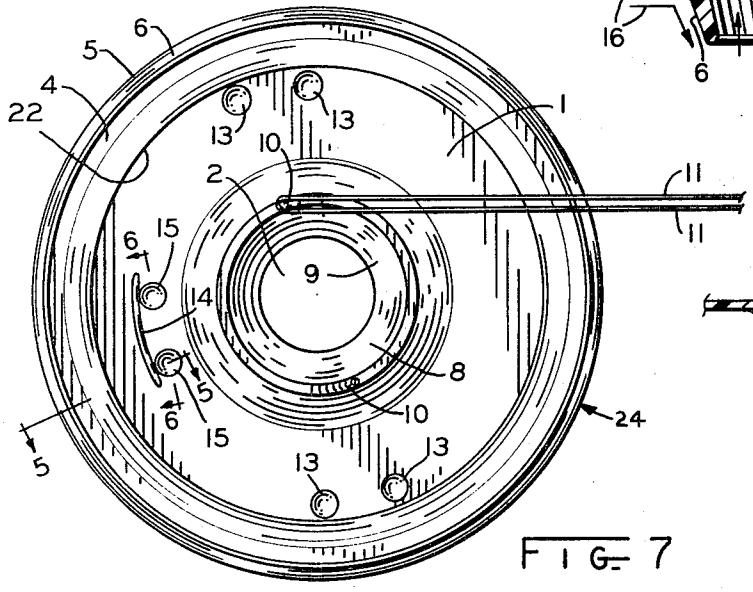


FIG 7

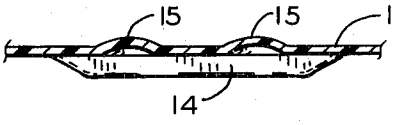


FIG 6

FLYING SAUCER

BRIEF SUMMARY

The average toy flying saucer being used today is rather thick compared to its overall width. This is usually necessary in order to have a stable flight, and if constructed thin, they tend to roll over when thrown in flight. This construction leavies a deep concave surface on the under side of the saucer, which makes it rather difficult to grip in order to throw, especially for a beginner, there being nothing for the finger tips to hook on to. Therefore an object of this invention is to provide an aerodynamic constructed saucer that is thin and at the same time correct the rollover tendency while at the same time provide ridges and dimples to act as hand grips which even a beginner finds easy to grip and throw, and yet have the saucer remain stable in flight.

Another object is to provide a hole in the center of the saucer so it could either be caught with one finger, or be used in games where it could be thrown on stakes through said hole. So a cone shaped centerportion with its lower surface close to the lower outer rings bottom level, provides the advantage of a larger hole, bottom of cone, and at the same time not let the air in the concave surface escape through the hole while it is in a float flight.

An other object is to provide a flying saucer that could either be thrown by hand or be shot into flight with an elastic member. So at the lower surface of the cone shaped center section, downward projecting hooks, which are off center are provided to hook an elastic member on in order to shoot it into a whirling flight.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is an edge or elevation view of the flying saucer.

FIG. 2 is a sectional view, viewed from the line A—A in FIG. 4.

FIG. 3 is an enlarged view of the elastic member hooks located on the bottom of the center cone's lower surface.

FIG. 4 is the top convex view of the flying saucer.

FIG. 5 is a sectional view, viewed from the line B—B in FIG. 7, showing the fingergrips placed on the under surface of the upper plateau in their related position to the two outer rings.

FIG. 6 is an inlarged edge or elevation view of the inner finger grip's downward projecting finger grip ridge and dimples.

FIG. 7 is the lower concave view of the flying saucer, also showing the optional elastic members bottom view, and the position of the stretched elastic member ready for launch.

DETAILED DESCRIPTION

According to the drawings, FIG. 1 the center plateau 1 is relative flat on the top from the center section, where hole 2 is located, to where its outer part joins rim 3. Then at the bottom of rim 3 is another relatively flat plateau 4 extending outwardly to the outer rim 5. It's generally nessary to have a greater radius 7 from the downward edge of plateau 4 to the outer rim 5. The reason being to reduce drag and to fit the hand as the saucer is being gripped. While rim 3 is more sharp at its top edge, thus putting up a limited controlled drag

on the upper section of the saucer while in flight, thus helping to correct the tendency of rollover. Since the outer rim 5 is thicker and has more weight, this makes the drag on the top section more than on the bottom while in momentum of of flight. This tends to act as a pendulum, and keeps the top from taking a rolling action by going faster than the bottom. Then to further correct the rollover tendency of thin flying saucers, outer rim 5 has a cone-shaped flatter downward and inward slopping surface 6 on its lower exterior surface, which tends to create lift much the same as flaps on an aircraft.

While this construction seems to be less streamline than the thicker flying saucers now in use, yet the overall drag is reduced because of the much thinner construction, and yet without loss to the gyro-flight stability. The end result being then, a faster and more stable flying saucer, which is much easier to grip while throwing it.

In FIG. 2 the cone shaped hole 2 is more clearly seen, hole 2 being smaller than the bottom side of cone 9 where hole 8 is, also shown in FIG. 7. This allows it to be easily caught with one finger because of the larger bottom hole 8, while in a so called float flight, it can also be thrown on a stake as in a game kit. Since the extreme bottom edge of cone 9 is at approximately the same level with the bottom of outer rim 5, shown in FIG. 2, small hooks 10 may be provided in order to shoot the saucer by means of an elastic member 11, shown in FIG. 7, into a whirling gyro-stabilized flight without having to throw it by hand. However in certain games where a fast flight, shown by hand is desired, the entire center cone assembly 2,9,8, and 10, may be omitted, then the center plateau's center section could be as in the dotted lines 12 in FIG. 2. So the entire top surface of plateau 1 could be relatively flat over the entire top surface 1. The reason for omitting said center cone essembly is that it puts up a slight drag while in fast flight, however this is very slight, and is noticed by only those who are able to throw a flying saucer extremely fast.

In FIG. 2 and 5 inner rim 3 is shown more clearly, it is apparent that while the saucer is being gripped in order to throw it, the fingers can hook the under and back side of rim 3, while the tips of the fingers can project upwardly into the concave dimples 13, shown in FIG. 2. This gives a big advantage to the thrower, because it is like throwing a thick ring instead of a flat disk, the advantage between the two being apparent. Then on the much larger models of flying saucers, it is an advantage to have the fingers in toward the center slightly farther in order to hold the larger saucer more stable. So in FIGS. 5,6, and 7 are shown an example of a small downward projecting rib 14, with its raised dimples 15, which act much the same as inter rim 3 and dimples 13, to provide a good hand grip, in order to insure a good grip for a controled flight. One or more rib 14 combinations may be used.

While the present invention has been illustrated and described in connection with certain selected example embodiment of the invention, it is understood that this is illustrative of the invention and is by no means restrictive thereof. It is reasonably to be expected that this make numerous revisions and adaptations and it is intended that such revisions and adaptations will be included within this scope of the following claims as equivalents of the invention.

What is claimed is:

1. An aerodynamically stable toy adapted to be hand-thrown and comprising inner and outer concentric integral flat center sections which are joined by a perpendicular section adapted to stabilize the toy against in-flight rollover, and a downwardly projecting rim perpendicular to said outer section and formed integrally with said outer section, said rim terminating in an inwardly tapering cross section portion which develops a conical section effecting in-flight lifting action.

2. The toy in accordance with claim 1 wherein the inner section includes an apertured conical section whereby the toy can be caught.

3. The toy in accordance with claim 1 wherein said inner section includes a conical portion, said conical portion including a hook to launch the toy and resilient means for attaching said hook and for effecting toy-launch.

4. The toy in accordance with claim 1 wherein dimples, and an inner subsurface ridge are formed in said inner section to receive the fingertips of the thrower.

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