Jan. 24, 1961 R. R. POLIAKOFF 2,968,889

RETAINING MEANS FOR DIABLO TOY

Filed July 27, 1959

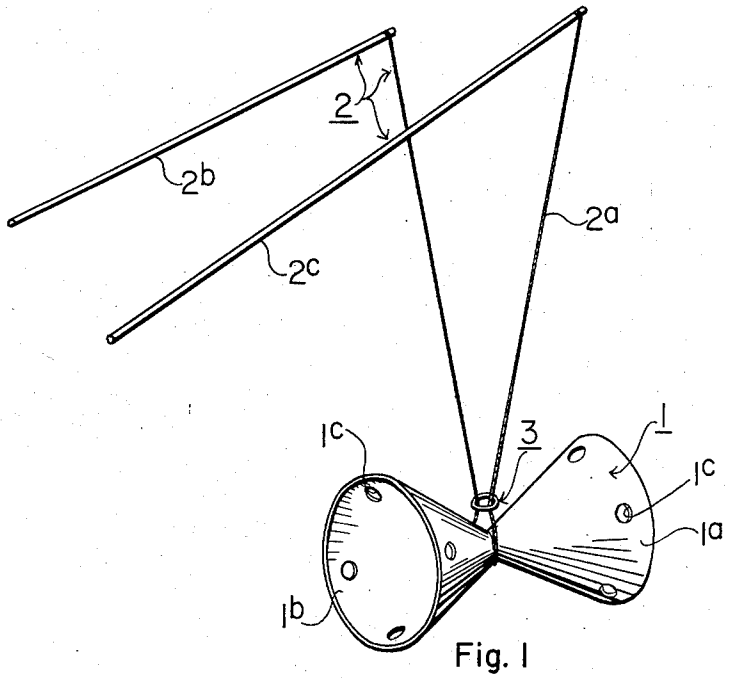


Fig. 1

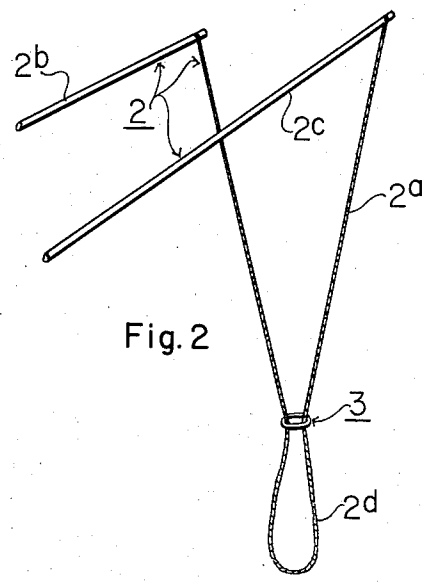


Fig. 2

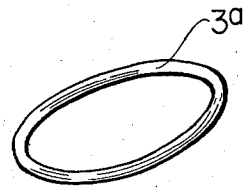


Fig. 3

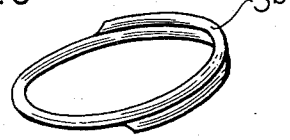


Fig. 4

INVENTOR.
RAYMOND R. POLIAKOFF
BY
Alexander & Dowell

United States Patent Office 2,968,889 Patented Jan. 24, 1961

2,968,889

RETAINING MEANS FOR DIABLO TOY

Raymond R. Poliakoff, 1109 N. 1st St., Boonville, Ind.

Filed July 27, 1959, Ser. No. 829,735

6 Claims. (Cl. 46—60)

My invention relates to aerial tops of the diablo type wherein the top is juggled on a string, and more particularly relates to an improvement wherein means is provided for retaining the top on the string so that beginners and small children can successfully spin the top without having the top frequently fall off of the string, the retaining means being easily removable when an operator of greater skill is manipulating the top.

Prior art diablos comprise a top made up of two conical portions joined near their apexes in axial alignment, and manipulating means usually comprising two stick-like handles having a length of string tied between their outer ends.

It is an object of this invention to provide retaining means for preventing the top from accidentally falling off of the string during manipulation of the diablo.

It is another object of the invention to provide retaining means which is easily removable without requiring untying of the string, the removal of the retaining means permitting tossing of the top from the string in the manner well known in the prior art.

A further object is to add retaining means to the known combination of a top and a string-type manipulating means wherein the retaining means limits the free movement of the top on the string without restricting the manipulation of the top to such a degree that the toy loses its entertainment value to unskilled operators and small children, whereby the utility of diablo toys is extended to persons who would otherwise find manipulation of the toy too difficult.

Referring now to the drawing showing two embodiments of the retaining means,

Fig. 1 is a perspective view of the novel combination of a diablo including a top and string manipulating means, and a band for retaining the top on the string,

Fig. 2 is a perspective view of the string manipulating means with the band slipped upwardly along the string to increase the size of the string loop below the band and thereby permit removal of the top therefrom,

Fig. 3 is an enlarged perspective view of a continuous ring for use as a retaining means, and

Fig. 4 is an enlarged perspective view of a modification comprising a ring-type retaining means of closed helical form.

Referring now to the drawing, Fig. 1 shows a top **1** having two conical portions **1***a* and **1***b* joined near their apexes to form a V-shaped annular groove adapted to receive a string **2***a* which forms part of the manipulating means **2**. The top **1** may also include holes **1***c* to provide a humming noise when the top is spinning at a high rate.

The manipulating means **2** further includes two stick-like handles **2***b* and **2***c*, to the outer ends of which the string **2***a* is secured as shown in Figs. 1 and 2.

The structure thus far described with respect to the drawing comprises a diablo according to the prior art.

To this known diablo, the present invention adds retaining ring means generally designated by the reference character **3**, which denotes not only the specific forms shown in Figs. 3 and 4, but also any other suitable retaining band means.

The band **3***a* shown in Fig. 3 is a continuous annular ring. The band **3***b* shown in Fig. 4 is made substantially continuous by overlapping the ends of the helix forming the band. In either case, however, the band should be very light-weight so that it rides up the string **2***a* as shown in Fig. 1 during manipulation of the top.

A thin plastic ring has been found quite suitable because where the thickness of the ring is approximately equal to the thickness of the string, the weight of the ring is almost negligible. Also the friction drag between the string **2***a* and the plastic of the ring **3** is minimal.

Fig. 1 shows the diablo in operation with the band **3** in place. As the handles **2***b* and **2***c* are respectively raised and lowered, the band **3** passes the string **2***a* therethrough and rides up somewhat above the V-shaped groove in the center of the top. The diameter of the band **3** should not be very much smaller than the diameter of the top at the groove, lest small band-diameter unduly restrict passage of the string **2***a* therethrough. On the other hand, the band **3** should not be much larger than the diameter of the top at the groove or the bunching effect of the band on the string **2***a* will be lost and the top will become unstable on the string.

As stated above, when an operator of greater skill desires to manipulate the diablo without the limiting effect of the band **3**, he may remove the band by raising it upwardly along the string, as shown in Fig. 2, until the lower loop **2***d* becomes large enough to permit removal of the top from the loop. Once the top has been separated from the string, the band **3** may then be slipped downwardly and off of the string.

I do not limit my invention to the forms shown in the drawing, for obviously changes may be made within the scope of the claims.

I claim:

1. The improvement in a diablo toy including a top having an annular groove and including string means for supporting the top at said groove, said improvement comprising retaining means in the form of a closed band surrounding the portions of the string above the top and limiting separation between said portions to a distance no greater than the diameter of the groove.

2. In a device as set forth in claim 1, said band comprising a ring of light-weight material.

3. In a device as set forth in claim 1, said band comprising a helical member having its ends overlapped to form a substantially closed ring.

4. The combination of a top having two frusto-conical portions joined near their apices to form an annular groove; manipulating means including a string passed partway around said groove to form a loop supporting the top; and retaining means for retaining the top in the loop of the string comprising a closed band surrounding the portions of the string extending upwardly from the loop and limiting separation between said portions to a distance no greater than the diameter of the groove.

5. In a combination as set forth in claim 4, said band comprising a ring of light-weight material.

6. In a combination as set forth in claim 4, said band comprising a helical member having its ends overlapped to form a substantially closed ring.

References Cited in the file of this patent

UNITED STATES PATENTS

2,744,354 Watkins et al. ---------- Nov. 4, 1952