

United States Patent

Hale et al.

[15] 3,662,080

[45] May 9, 1972

[54] TWIRLING BATON

[72] Inventors: **John F. Hale**, 3729 Greenbay Drive,
Dayton, Ohio 45415; **Frederick J. Miller**,
2150 E. Rahn Rd., Dayton, Ohio 45440

[22] Filed: **July 24, 1970**

[21] Appl. No.: **58,117**

[52] U.S. Cl. **84/477 B**

[51] Int. Cl. **G09b 15/02**

[58] Field of Search 84/477; 240/6.42; 272/84, 67,
272/68; D56/1; 46/47; 273/106, 84; 135/45, 60;
D34/5

[56] References Cited

UNITED STATES PATENTS

1,630,467 5/1927 Bradstreet 272/84
3,212,386 10/1965 Sartell 84/477

2,146,972 2/1939 Miller 84/477 B

FOREIGN PATENTS OR APPLICATIONS

524,174 0/1921 France 272/84

Primary Examiner—Richard B. Wilkinson

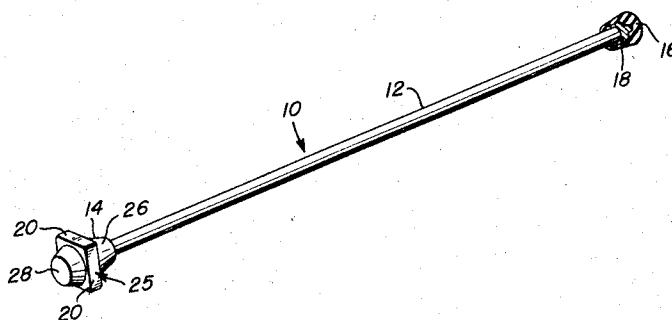
Assistant Examiner—John F. Gonzales

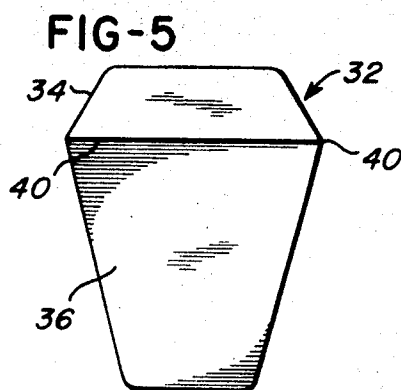
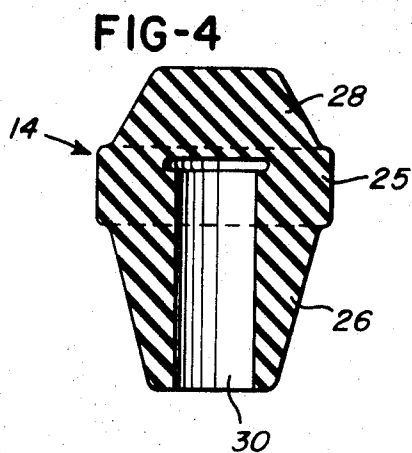
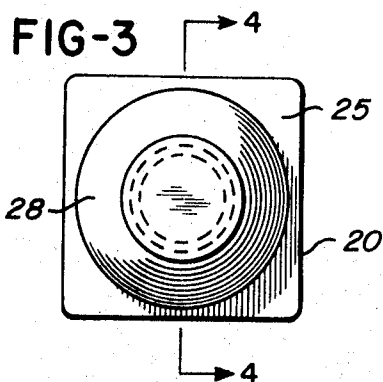
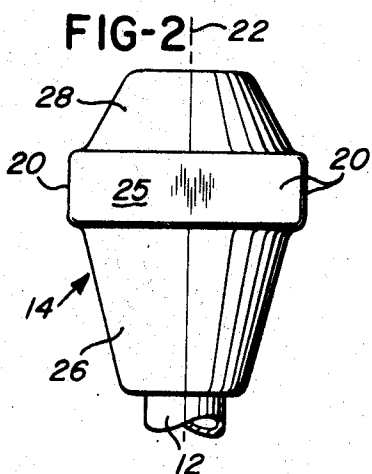
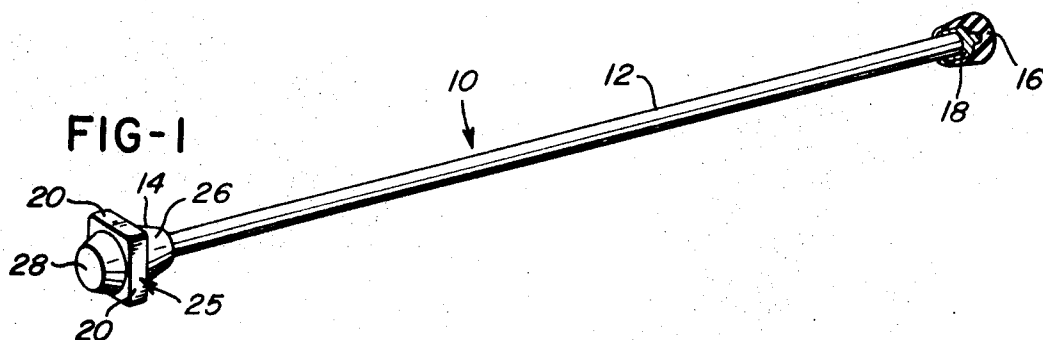
Attorney—Marechal, Biebel, French & Bugg

[57] ABSTRACT

A twirling baton includes a resilient ball having an enlarged non-circular portion with at least two side surfaces formed thereon for preventing the baton from rolling away from the twirler after it has been dropped. In the preferred embodiment, the enlarged portion has a cross-section in the form of a square and provides four planar side surfaces which contact the ground and quickly bring the baton to rest.

6 Claims, 5 Drawing Figures





INVENTORS

JOHN F. HALE &
FREDERICK J. MILLER

BY

Marshall, Biebel, French & Bugg
ATTORNEYS

TWIRLING BATON

BACKGROUND OF THE INVENTION

Twirling batons generally include an elongated shaft with a rubbery "ball" mounted on one end and a rubbery "tip" mounted on the other end. Although the tip is usually somewhat smaller than the ball, the ball and the tip are conventionally somewhat symmetrical, in that they have circular cross-sections and are frusto-conical in shape. Weights are usually incorporated within the tip and/or the ball for establishing the center of gravity of the baton at the longitudinal center of the shaft.

In most instances, when a baton is dropped, it rolls away from the twirler who is then forced to chase after it. In addition to being a source of embarrassment to the twirler, dropping the baton has undesirable secondary effects. When the baton is dropped in the execution of a half-time formation at football games, for example, or at a parade, the twirler is often forced to chase after the baton in front of other performers, thereby disrupting their performance as well as her own. This problem is obviously multiplied in situations where a plurality of twirlers attempt to carry out a difficult baton exchange, and three or four batons are dropped. In such situations, the audience appeal is completely destroyed.

The rolling baton is also of particular concern in competitive twirling, where twirlers are constrained within a limited area to execute their twirling routines. This is because the competitive twirler not only loses points for dropping the baton, but also runs the risk of losing additional points if the baton rolls out of her reach and outside her limited boundary.

In each of the above situations, by the common and relatively slight error of dropping the baton, the twirler can be subjected to a devastating array of embarrassing circumstances which are disproportionate to the magnitude of her offense. Even though the problems outlined above have been known in the art for many years, so far as is known, no one has ever conceived of a solution for remedying it. Most, if not all, improvements in twirling batons have been directed to other areas, such as providing shafts which achieve a dazzling appearance, e.g., U.S. Pat. No. 3,113,482. Such developments do nothing to relieve the twirler from the undesirable burden of looking foolish after having made a mistake.

SUMMARY OF THE INVENTION

The present invention is directed to an improved twirling baton which does not roll and which substantially diminishes the embarrassment to the twirler who drops a baton. In general, the improved baton includes means defining side surfaces on either the ball or the tip, and preferably the ball, which quickly establish a surface-to-ground contact when the baton is dropped and prevent the baton from rolling.

In accordance with the present invention, the resilient ball includes an enlarged non-circular portion having at least two side surfaces which lie in a plane essentially parallel to the centerline of the shaft. These surfaces are preferably planar, and define ball-to-ground contact surfaces which operate to engage the ground and bring the baton quickly to rest.

In the preferred embodiment, the resilient ball has inner and outer end portions, which have circular cross-sections and generally frusto-conical configurations, and an enlarged intermediate portion, which has a cross-section in the form of a square and provides four planar ball-to-ground contact surfaces. Other cross-sectional forms are also within the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the improved twirling baton of the present invention;

FIG. 2 is an enlarged and broken-away elevation view of one end of the baton shown in FIG. 1;

FIG. 3 is a top view of the portion of the baton shown in FIG. 1;

FIG. 4 is a section on the line 4—4 of FIG. 3; and

FIG. 5 is an elevation view of a second embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The twirling baton 10 shown in FIG. 1 includes a shaft 12 with a resilient body or ball 14 mounted on one end and a somewhat smaller resilient body or tip 16 mounted on the other end, both bodies being mounted by means well known in the art. The shaft 12 is preferably formed of a chrome-coated tubular metal, such as stainless steel, although other materials such as solid metal or plastic, or tubular plastic may be employed. Counterbalancing weights are generally employed to balance the tip against the ball, and weight 18 is shown incorporated in tip 16 for this purpose, although another weight could be used in the ball 14 as well. The weights establish the center of gravity of the baton at approximately the longitudinal center of the shaft.

In accordance with the invention, the ball 14 includes four planar surfaces 20 which lie in planes essentially parallel to the centerline 22 of the shaft 12. In the preferred embodiment, the ball 14 has an enlarged intermediate portion 25 having the cross-section of a square and having a longitudinal length sufficient to define the surfaces 20. The intermediate portion 25 lies between an inner end portion 26 and an outer end portion 28, and both end portions have circular cross-sections and are substantially frusto-conical in shape for the purpose of retaining the conventional frusto-conical appearance. The inner end portion 26 has an axial bore 30 (FIG. 4) for receiving the end of the shaft 12. In preferred practice, the portion 25 is integrally formed with the end portions 26 and 28 to define a unitary ball 14.

It should be understood that the invention is not limited to this precise construction and that other constructions are within the scope of the invention. The ball 14 may, for example, have the configuration of a cube, or, alternatively, it may have the cross-section of a square throughout its length, such as a ball 32 (FIG. 5) consisting of two integral portions 34 and 36 with opposite tapers, or a ball having a uniform taper, as represented by the portion 36 of ball 32. In the tapered configurations, lines of contact 40 are formed for engaging the ground, rather than the planar surfaces 20 of the preferred embodiment.

The ball 14 may also be formed with an intermediate portion 25 having a triangular or hexagonal cross-section, although the number of planar surfaces 20 should be limited to between two and six. If more surfaces are used, the cross-section approaches a circle and defeats the object of the invention. The same is true if the ball 14 includes only one planar surface. Accordingly, four planar surfaces are preferred.

From the foregoing description and accompanying drawing, it is apparent that the present invention provides certain desirable advantages and features not provided by the prior art. When a baton incorporating the present invention is dropped, it will not roll away from the twirler. Its momentum may cause it to roll over once or twice, but the planar surfaces will quickly engage the ground or floor, as the case may be, and bring the baton to rest. As a result, to recover from a mistake, the twirler need only take one or two steps to retrieve the baton and can then quickly resume her twirling routine.

Moreover, the present invention substantially eliminates the embarrassment a twirler suffers when she must chase after a rolling baton. Because she knows that when she drops her baton, she will not be penalized for moving outside the performance area, or be forced to disrupt other performers, the present invention enables the twirler to execute her routines with greater confidence, both in competitive situations and in public performances.

The new and improved result provided by the present invention, that of minimizing the embarrassment suffered when a baton is dropped, essentially makes the embarrassment equal to the offense, rather than disproportionate to it as in the prior

art. As such, the baton of the present invention, as a practical instrument, is a significant advance in the art.

While the articles herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise articles, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A baton adapted for twirling, comprising an elongated shaft having a length substantially greater than its diameter, a first resilient body mounted on one end portion of said shaft and having a circular cross-section for rolling, a second resilient body mounted on the opposite end portion of said shaft, weight means associated with one of said bodies for establishing the center of gravity of the assembly of said shaft and said bodies generally at the longitudinal center of said assembly, said second body including inner and outer end portions having circular cross-sections and frusto-conical configurations and an intermediate portion having an enlarged cross-section in the form of a square, and said intermediate portion being integrally formed with said end portions and providing four planar body-to-ground contact surfaces for counteracting the rolling of said baton after it has been dropped.

2. In the art of twirling batons, an improved baton ball adapted for mounting on one end of a baton shaft, comprising a resilient body having an inner end and an outer end, means on said inner end for mounting said body on said shaft, said body having a square cross-section, the cross-sectional area at

a position spaced from said inner end being greater than the cross-sectional area at said inner end to define four lines of contact for engaging the ground and resisting the tendency of said ball to roll.

3. In a twirling baton which has reduced rolling tendencies when dropped on the ground, including an elongated shaft and resilient bodies mounted on the ends of the baton shaft, the improvement comprising means on at least one of said bodies defining an outer surface of non-circular cross-sectional configuration in a plane normal to the shaft and including multiple pairs of laterally spaced ground-engaging contact points thereon, said contact points of each said pair being laterally spaced from each other a distance substantially greater than the diameter of said shaft providing with the opposite end of the shaft at least three-point support establishing stability of the baton on the ground.

4. The baton of claim 3 in which said outer surface of non-circular cross-sectional configuration defines planar surfaces.

5. The baton of claim 3 in which said outer surface of non-circular cross-sectional configuration defines lines of contact.

6. In the art of twirling batons, an improved baton ball adapted for mounting on one end of a baton shaft, comprising a resilient body having an inner end and an outer end, means on said inner end for mounting said ball on said shaft, said body including an integral portion having a square cross-sectional configuration defining pairs of laterally spaced ground-engaging contact support points thereon for resisting the tendency of said ball to roll, and said end portions having circular cross-sections and frusto-conical configurations.

* * * * *

35

40

45

50

55

60

65

70

75