Oct. 10, 1961 D. A. TAYLOR 3,003,385

BATON

Filed April 6, 1959 2 Sheets-Sheet 1

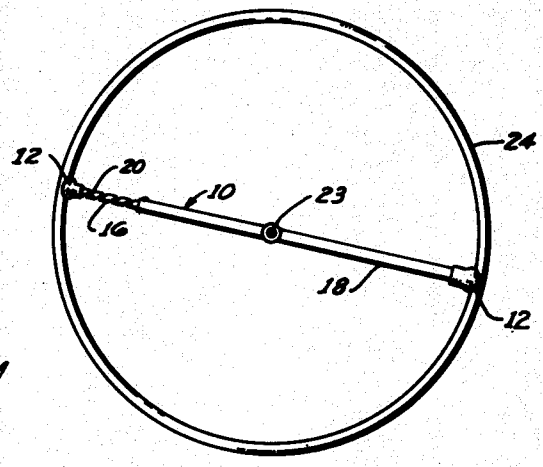


Fig. 1

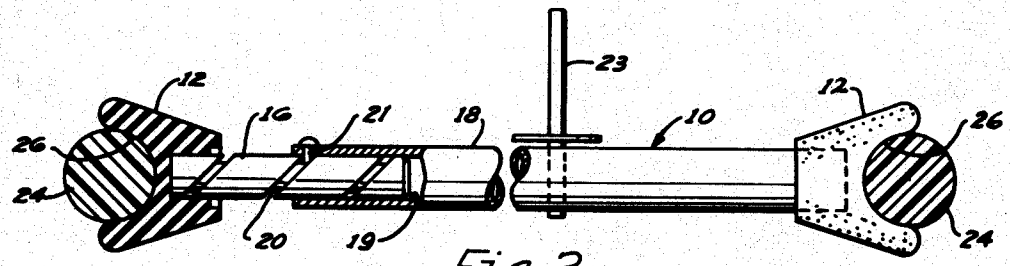


Fig. 2

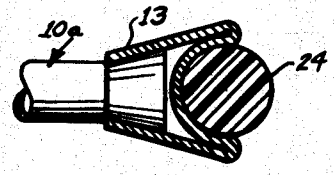


Fig. 3

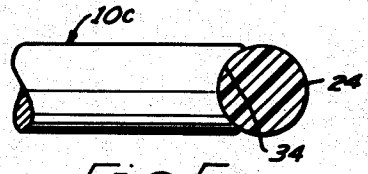


Fig. 5

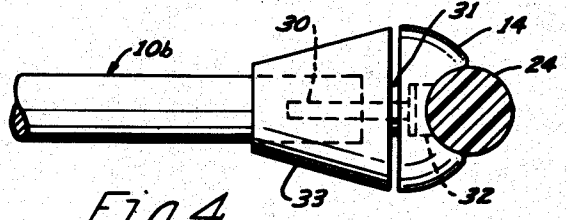


Fig. 4

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BATON

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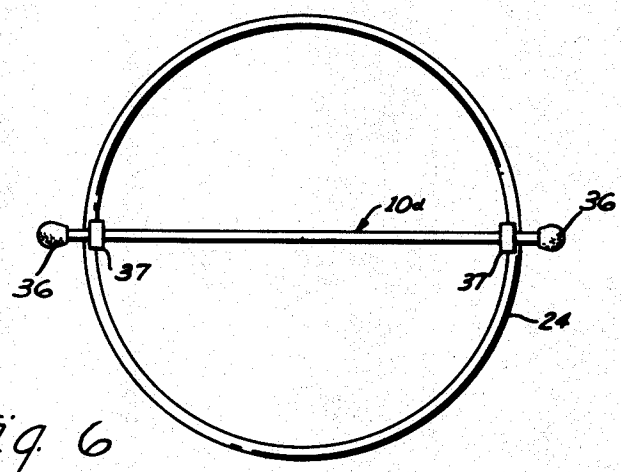


Fig. 6

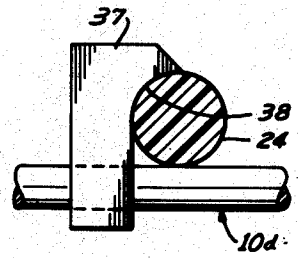


Fig. 7

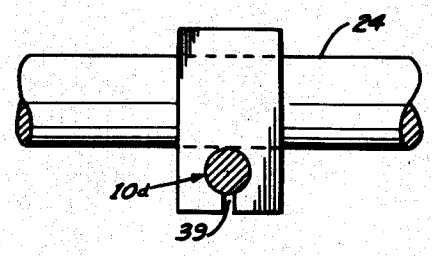


Fig. 8

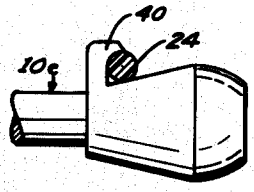


Fig. 9

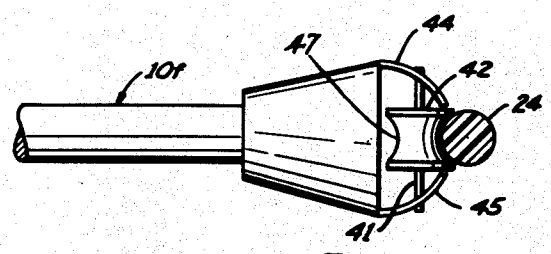


Fig. 10

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3,003,385

BATON

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9 Claims. (Cl. 84—477)

This invention relates to batons of the general type twirled by drum majors, drum majorettes, children, and teenagers, and more particularly to a baton and hoop combination.

An object of the invention is to provide a baton which may be simply and quickly secured to a hoop so as to extend diametrally or chordally thereof in a plane coincident with the plane of the hoop or in a plane juxtaposed against the hoop and parallel to the plane thereof, thereby enabling the baton to be twirled manually with the hoop thereon and frictionally held so that both rotate in a common plane, or parallel planes, normal to the hoop axis.

A further object of the invention is to provide a baton having a plurality of telescoping sections whereby the length of the baton may be adjusted as required.

Briefly, the foregoing objects are accomplished by the provision of a baton comprising two elongated sections adjustably telescoped together to enable an operator to selectively change the length of the baton. Suitable connecting means are provided on the baton for securing the baton near its ends to the hoop at two widely spaced circumferential points on the hoop so that the baton and hoop are substantially coplanar in that they lie in a common plane or in two parallel planes so close to each other that the baton is against or very close to one of the axially exposed ends of the hoop.

In one form of the invention, connecting means are positioned at each end of the baton to enable the baton to be secured to the hoop interiorly thereof and coplanar in relation and in fixed position circumferentially of the hoop.

In another form, the connecting means are near to, but spaced from the ends of, the baton so that the baton is disposed in a plane parallel to but slightly spaced from, the plane of the hoop.

The connecting means also may include a friction reducing connection between the hoop and baton by which the baton supports the hoop and can be rotated about the hoop axis and thereby rotate the hoop about its own axis with reduced frictional driving force, whereby the hoop may be rotated about its axis with, or relative to, the coplanar baton, selectively.

Other objects and advantages of the invention will become apparent from the following description taken in conjunction with the drawings, in which:

FIG. 1 is a side elevational view of a baton and hoop combination constructed in accordance with the invention;

FIG. 2 is an enlarged top plan view of the baton and hoop shown in FIG. 1, parts thereof being shown in section for clearness in illustration;

FIG. 3 is an enlarged fragmentary top plan view of a right-hand portion of the baton and hoop showing a modified connecting means for connecting the end portion of the baton to the hoop, with parts thereof being shown in section for clearness in illustration;

FIG. 4 is an enlarged fragmentary top plan view of a right-hand portion of a baton and hoop showing a further modification of the connecting means for connecting the end portions of the baton to the hoop, with parts thereof being shown in section for clearness in illustration;

FIG. 5 is an enlarged fragmentary top plan view of a right-hand portion of the baton and hoop and showing

a still further modified form of connecting means for connecting the end portion of the baton to the hoop, with parts thereof being shown in section for clearness in illustration;

FIG. 6 is a side elevational view similar to FIG. 1 illustrating a baton and hoop combination with a modified connecting means which connects the baton to the hoop adjacent to the ends of the baton so that the baton lies alongside one axial face of the hoop;

FIG. 7 is an enlarged fragmentary bottom plan view of the right end portion of the baton and hoop shown in FIG. 6, the hoop being shown in section;

FIG. 8 is a left end view of the structure shown in FIG. 7;

FIG. 9 is a fragmentary enlarged top plan view of a further modification of the right end portion of a baton such as illustrated in FIG. 6, the hoop being shown in section; and

FIG. 10 is a fragmentary top plan view of the right end portion of a baton such as illustrated in FIGS. 1 or 6, illustrating a further modification in the connecting means, the hoop being shown in section.

The present invention is directed to a baton and hoop combination, and an axially adjustable baton which may be secured to a hoop so as to lie in, or substantially in, the plane of the hoop, whereby the baton, with the hoop thereon, may be twirled manually about the hoop axis to create a novel and pleasing effect. Although the invention is described with reference to batons of the type used by drum majors and drum majorettes, it will be understood that the invention may be applied to any type of baton and particularly to the toy type of batons used by children and teenagers.

Referring to FIGS. 1 and 2, there is shown a baton **10** which, in the preferred form, is formed as an elongated, straight tubular bar or member having hoop connecting means **12** at its ends. The hoop connecting means also act as end weights to assist in the twirling of the baton by increasing its dynamic inertia once it is set in motion. The baton **10** may be constructed of any suitable material such as wood, metal, plastic, etc. Although the cross section of the baton is shown herein as being substantially round, it will be understood that any other suitably configured cross section may be used that will enable the baton to be manually twirled. Similarly, the baton may or may not be provided with the connecting means **12**.

In the preferred form of the invention, the baton **10** is formed of two elongated, straight sections or members **16** and **18** which are circular in cross section and are telescopically connected together so that the length of the baton **10** may be adjusted as required. The member **18** contains an open-ended longitudinal bore **19** which, if desired, may extend the entire length of the member **18**. The member **16** is of an external diameter slightly less than the internal diameter of the bore **19** so that the member **16** is telescopically received in the bore **19** with a snug fit.

Suitable thread means, such as the screw thread **20**, may be provided on the member **16**. The thread **20** is adapted to coact with mating thread means or follower on the member **18**. Such latter thread means or follower, as shown herein, may be in the form of a protuberance or stud **21** disposed in the wall of the member **18** and extending into the bore **19** a distance sufficient to engage the thread **20** so as to threadedly coact therewith. With this construction, minute adjustment of the length of the baton **10** may be effected. To provide facile manual twirling of the baton **10**, the dowel or handle **23** may be provided, as shown.

To create a pleasing and unique effect, the baton may

be secured to a hoop **24** in substantially coplanar relation thereto, by the connecting means **12** at two widely spaced circumferential points on the hoop, and preferably at diametrically opposite points. The connecting means **12** at each end may be composed of relatively stiff but resilient material having the outwardly exposed end contoured to accommodate the hoop. For example, the outer ends may be provided with outwardly open grooves **26** which partially embrace the cross section of the hoop **24** with a snug fit. In practice, the length of the baton is adjusted so that it is slightly less than the diameter of the hoop, after which the baton length is increased an amount sufficient to provide a snug fit between the connecting means **12** and the respective adjacent portions of the hoop. Since relative rotation of the members **16** and **18** is necessary for lengthening and shortening the baton, at least one connecting means **12** may be frictionally held on the baton sufficiently tightly to prevent it from slipping off, but yet permitting it to be rotated slightly relative to the member to which it is secured, about the axis of the member, thereby permitting proper alignment of its groove and the cross section of the hoop. For this reason, resilient material is preferred. On the other hand, the connecting means **12** may be sponge rubber and globular so that they can be deformed by the hoop to provide grooves similar to the grooves **26**.

Instead of semi-solid connecting means **12**, hollow globular balls or members **13** of resilient material, such as illustrated in FIG. 3, wherein the baton is indicated at **10***a* may be used. Such members engage the hoop, by being elastically deformed by the hoop, with sufficient friction to retain the hoop in fixed circumferential position on the baton. The doubled side walls of the member **13**, when the hoop is installed, are sufficiently rigid to prevent displacement of the hoop.

In some instances, it is desirable to rotate the hoop about the longitudinal axis of the baton **10***b* and for this purpose connecting members **14**, such as illustrated in FIG. 4, may be used. The members **14** are mounted rotatably on the ends of the baton. For example, each member **14** is rotatably supported by a pin **30** parallel to the baton axes so as to rotate about the axis of the pin and baton.

The inner end of each of the pins **30** is disposed in its associated end portion of the baton, while the outer end of each pin extends longitudinally outwardly of the end of the baton. The member **14**, for example, is held in axial position by the head **32** of the pin. A washer **31** prevents surface contact of the member **14** with a base portion **33** of the connecting means thus provided.

Referring next to FIG. 5, there is illustrated a baton **10***c* which may be secured to a hoop by providing directly in the ends of the baton outwardly concave grooves **34** formed for mating coaction with the adjacent portion of the hoop.

An alternate form of hoop connecting means is shown in FIGS. 6, 7 and 8 wherein the baton **10***d* is provided with weights **36** at the ends and is provided with a pair of spaced resilient holding bars **37** disposed intermediate the ends of the baton. Each of the holding bars is provided with an outwardly facing hook portion **38** formed for receiving the adjacent portion of the hoop **24**. The holding bars **37** are spaced on the baton in a manner whereby the holding bar hook portions **38** receive the hoop with a snug resilient fit. A keyhole slot **39** may be formed in the base of the holding bars through which the baton may be snapped into engagement with the holding bars in the manner shown in FIG. 8.

As shown in FIG. 9, a baton **10***e* is provided with another form of hoop connecting means. Each connecting means has an outwardly concave hoop-receiving portion **40** formed to receive the adjacent portions of the hoop with a snug fit.

In some instances, it is desirable to support the hoop on the ends of the baton, such as indicated at **10***f* for rotation of the hoop about its own axis relative to the baton while the two are substantially coplanar. For this purpose, the baton, as illustrated in FIG. 10, may be provided at each end with a shaft **41** which extends parallel to the axis of the hoop and which supports a friction reducing means or roller on the end of the baton for rotation relative to the baton about the axis of the shaft. The shaft is supported in metal or plastic arms **44** and **45**. The roller **42** is provided with a circumferential concave groove **47** configured to receive the adjacent portion of the hoop with a snug fit so as to offer sufficient frictional resistance to enable the twirler to cause the hoop to be rotated by and with the baton about the hoop axis. The frictional resistance to rotation of the roller is such, however, that if the rotation of the baton is arrested, the hoop will continue to rotate relative to the baton.

In the description and claims, the term "substantially coplanar" has been used to define both the combination wherein the baton lies within the hoop, as in FIG. 1, and the modifications thereof, and the combination wherein the baton is juxtaposed against or is very close to an axially exposed end of the hoop, as in FIG. 6 and the modifications thereof.

The terms and expressions which have been employed are used as terms of description, and not of limitation, and there is no intention, in the use of such terms and expressions, of excluding any equivalents of the features shown or described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

Having thus described my invention, I claim:

1. In combination, an annular hoop of which the outer periphery of the cross section is approximately circular, a manually twirlable baton extending diametrically of the hoop across the space within the hoop, detachable connecting means on the baton detachably connecting the baton to the hoop at diametrically opposite portions of the hoop and holding the hoop and baton in substantially coplanar relation sufficiently firmly so that said hoop and baton can be twirled as a unit by twirling the baton about an axis parallel to the hoop axis, the baton having its cross sectional dimension in the plane of the hoop small enough so that the baton with the hoop attached can be twirled by the fingers of one hand by manipulation of the baton by the fingers progressively between adjacent fingers in the conventional baton twirling manner, and said baton terminating at its ends close to the periphery of the hoop.

2. The combination according to claim 1 wherein the baton lies within the hoop and the detachable connecting means are at the outer ends of the baton, respectively, and provide concavities which open outwardly endwise of the baton for accommodating and holding the hoop.

3. The combination according to claim 1 wherein the baton includes two coaxial telescopic portions which are movable relative to each other in opposite directions axially to relatively extended and retracted positions to increase and reduce the overall length of the baton, selectively, to cause the connecting means to engage the hoop firmly and means are provided on said portions for securing them in the relatively extended and retracted positions selected.

4. The combination according to claim 1 wherein said connecting means comprise resilient members disposed one at each end of the baton, each of said members being compressible endwise of the baton by the hoop and providing in its outer end a concavity which opens outwardly and accommodates the hoop in resilient stressed engagement and thereby holds the hoop in said concavities with a snug fit so that the hoop and baton twirl together.

5. The combination according to claim 1 wherein said connecting means include members disposed on the ends of the baton and in firm engagement with the hoop, and said members are rotatably mounted on the respective ends of the baton for rotation substantially about the longitudinal axis of the baton.

6. The combination according to claim 1 wherein said connecting means include hoop engaging and supporting means which support the hoop for rotation circumferentially of the hoop and relative to the baton with frictional drag opposing said rotation.

7. The combination according to claim 6 wherein said hoop engaging and supporting means comprise a roller mounted at each end of the baton, each of said rollers being mounted for rotation about an axis substantially perpendicular to the longitudinal axis of the baton and parallel to the axis of the hoop, each of said rollers having a circumferential groove formed on its periphery for receiving the adjacent portion of the hoop therein.

8. The combination according to claim 1 wherein said baton is disposed at one face of the hoop and extends at its ends outwardly a short distance beyond the outer periphery of the hoop.

9. The combination according to claim 8 wherein said connecting means comprises holding bars disposed at each connection of the baton to the hoop, each of said holding bars has a hook portion for receiving the adjacent portion of the hoop therein, said holding bars are spaced from each other on the baton in a manner enabling the hoop to be received in the hook portions with a snug fit.

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