Nov. 28, 1961 W. M. SIRKS 3,010,249

WHIRLING TOY

Filed Dec. 4, 1958

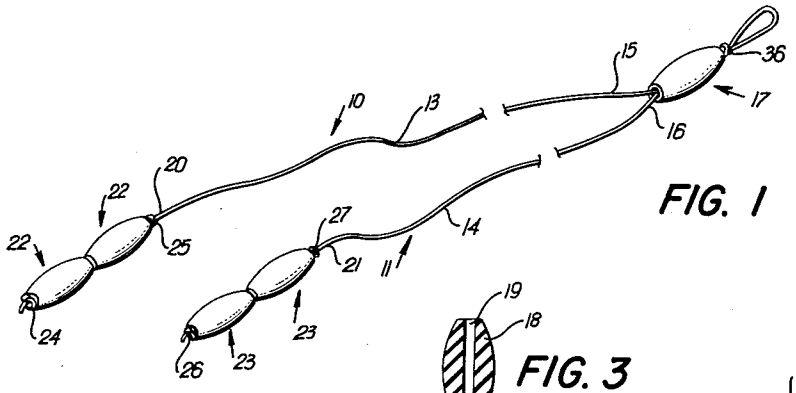


FIG. 1

FIG. 3

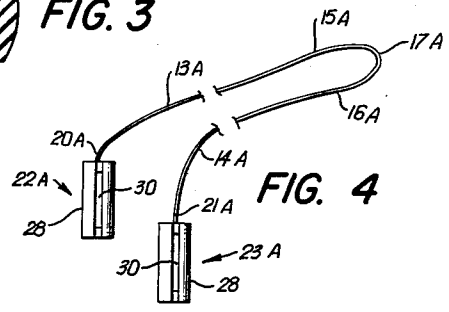


FIG. 4

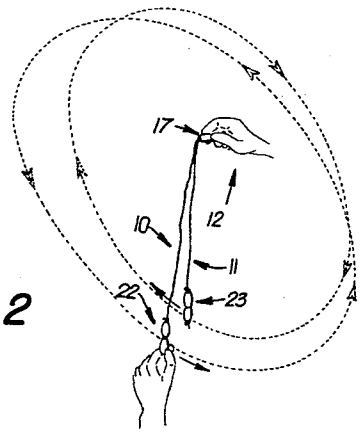


FIG. 2

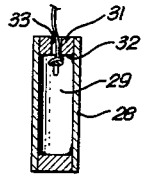


FIG. 5

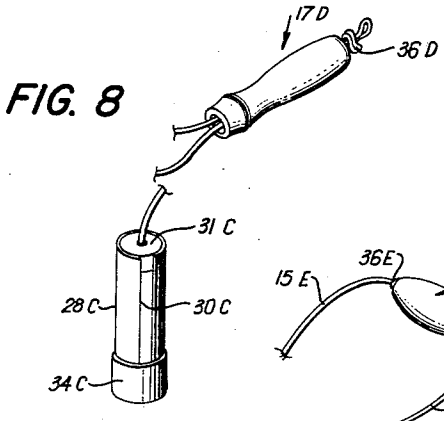


FIG. 8

FIG. 7

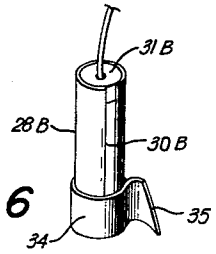


FIG. 6

FIG. 9

INVENTOR.

WALTER M. SIRKS

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3,010,249

WHIRLING TOY

Walter M. Sirks, 6038 W. 85th Place, Los Angeles 45, Calif.

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2 Claims. (Cl. 46—52)

The present invention consists of a whirling toy including at least two longitudinal independently movable pendulum portions (in one preferred form, of different overall lengths) adapted to be adjacently effectively manually held, either looped over a finger operating the whirling toy or held by a manually graspable handle means, during simultaneous and oppositely directed centrifugal swinging rotation of each of the independently movable pendulum portions in adjacent planes—this opposite rotation of each of the pendulum portions being adapted to be maintained by slight intermittent movement of a hand of a person effectively holding the pendulum portions.

In one specific form of the present invention, the whirling toy is also adapted to intermittently produce an audible sound, thus greatly adding to the interest factor of the toy when used by a child.

It will be recognized that the above-indicated features of the whirling toy of the present invention make it well adapted for use as a toy involving a very considerable degree of skill in the operation thereof in a manner somewhat analogous to a prior art toy known as a Yo-yo, thus greatly adding to the interest factor.

It is an object of the present invention to provide a whirling toy of the character indicated above, having two independently rotatable pendulum portions adapted to be controllably manually rotated in opposite directions in adjacent planes and to be maintained in a state of such continuous rotation by slight intermittent movement of a hand of a person effectively holding the pendulum portions.

It is a further object of the present invention to provide a whirling toy of the type set forth in the preceding object, which is further adapted to intermittently produce an audible sound by reason of the fact that either or both of the pendulum portions may carry adjacent the oppositely whirling ends thereof pendulum body means including a hollow sound-producing element having sound-producing slot means at one side thereof extending thereinto in the general manner described hereinafter and also in accordance with the teachings and disclosures set forth in my co-pending U.S. patent application, Serial No. 778,222, filed December 4, 1958, any of which sound-producing elements may be, and are intended to be, interchangeable with the specific sound-producing element specifically disclosed in the drawing and specification of this application.

Further objects will be apparent to persons skilled in the art after a careful study hereof.

For the purpose of clarifying the nature of my invention, several exemplary embodiments are illustrated in the hereinbelow-described figures of the accompanying drawings and are described in detail hereinafter.

FIG. 1 is a perspective view of one exemplary form of the invention, with central portions of the flexible longitudinal tensile members removed in order to reduce the size of the drawing.

FIG. 2 is a reduced-size perspective view illustrating the operation of the form of the invention shown in FIG. 1 in a manner whereby the two flexible longitudinal pendulum portions are effectively manually held and simultaneously oppositely rotated in adjacent planes.

FIG. 3 is a longitudinal cross-sectional view through the elastomeric or rubber element shown in FIG. 1 as comprising the manually graspable handle means.

FIG. 4 is a reduced-size elevational view of a slightly modified form of the invention wherein the manually graspable handle means is eliminated and a connected looped portion of the two pendulum portions acts as the functional equivalent of the handle means of FIGS. 1–3 and is adapted to be looped over and thus held by a finger of a person operating the whirling toy. Also, in this modification, the two pendulum body means of FIG. 1 are modified so that each takes the form of a hollow sound-producing element adapted to intermittently produce an audible sound when whirled in the general manner of the first form of the invention, as shown in FIG. 2.

FIG. 5 is a larger-scale longitudinal sectional view of one of the sound-producing elements shown in FIG. 4.

FIG. 6 is a perspective view of one of the sound-producing elements of the type shown in FIGS. 4 and 5, but slightly modified by the addition of an external encircling means and trailing edge adapted to modify the sound produced by the sound-producing element.

FIG. 7 is a fragmentary view similar to FIG. 6 but shows the external encircling means modified by completely eliminating the trailing edge.

FIG. 8 is a fragmentary perspective view of a modified form of manually graspable handle means.

FIG. 9 is a fragmentary view illustrating another slightly modified form of handle means.

The whirling toy of the present invention includes two longitudinal independently movable pendulum portions, such as are indicated generally at **10** and **11** in FIGS. 1 and 2, adapted to be effectively manually held during simultaneous and oppositely directed centrifugal swinging rotation of the pendulum portions **10** and **11** in adjacent planes in the general manner indicated in FIG. 2, which state of rotation is adapted to be easily maintained by slight intermittent movement of a hand, such as the hand **12**, of a person effectively adjacently holding the pendulum portions **10** and **11**.

In the specific example illustrated in FIGS. 1 and 2, each of the pendulum portions **10** and **11** consists of a flexible longitudinal tensile member **13** and **14**, respectively, each having a holding part indicated at **15** and **16**, respectively, which is adapted to be effectively manually held by the hand **12** of a person operating the toy in the manner indicated in FIG. 2.

In the specific example illustrated in FIGS. 1 and 2, the hand **12** of the person operating the whirling toy effectively manually holds the holding parts **15** and **16** of the flexible longitudinal tensile members **13** and **14** by means of manually graspable handle means, such as is indicated generally at **17**, which in the specific example illustrated in FIGS. 1, 2, and 3 (best seen in FIG. 3) comprises an elastomeric or rubber member **18** having a longitudinal aperture **19** extending therethrough and through which the holding parts **15** and **16** of the longitudinal tensile members **13** and **14** extend and are knotted as are indicated at **36** for effective fastening with respect to the handle means **17**.

Also, each of the independently movable pendulum portions **10** and **11** includes pendulum body means, such as are indicated at **22** and **23**, respectively, carried by the free or connection end parts **20** and **21**, respectively,

of each of the flexible longitudinal tensile members **13** and **14**, respectively. In the specific example illustrated in FIGS. 1–3, each of the pendulum body means **22** and **23** comprises two end-to-end aligned longitudinally apertured elastomeric or rubber members similar to the member **18** clearly shown in longitudinal cross section in FIG. 3, with the connection end parts **20** and **21**, respectively, extended longitudinally through the longitudinal apertures and with retaining knots **24** and **25** positioned at opposite ends of the pendulum body means **22** and with similar retaining knots **26** and **27** positioned at opposite ends of the other pendulum body means **23**, whereby to firmly fix each of the pendulum body means **22** and **23**, respectively, on the corresponding connection ends **20** and **21**, respectively, of the corresponding longitudinal tensile members **13** and **14**, respectively.

It should be noted that in the specific form illustrated in FIGS. 1–3, the pendulum portion **10** is longer than the pendulum portion **11** whereby operation of the device in the general manner indicated in FIG. 2, by oppositely directed swinging rotation of each of the pendulum portions **10** and **11** in the directions indicated by the arrows in FIG. 2, will not cause the pendulum body means **22** and **23** to strike each other and stop the continuous operation of the whirling toy. It will be understood that a slight intermittent movement of the hand **12** of a person holding the handle means **17** will cause the oppositely directed rotation of the two pendulum portions **10** and **11**, in the manner shown in FIG. 2, to be continuously maintained.

FIGS. 4 and 5 illustrate a modified form wherein the handle means **17** of FIGS. 1–3 is eliminated and the functional equivalent thereof is provided by means of a portion **17A** of flexible tensile material effectively joining together the holding parts **15A** and **16A** of each of the flexible longitudinal tensile members **13A** and **14A** so that the portion **17A** may be looped over, and thus held by, the finger of a person operating the toy in the general manner of FIG. 2. It is thought unnecessary to illustrate the operation of this modification since it is evident from careful examination of FIGS. 2 and 4.

Furthermore, in this modified form of the invention, the pendulum body means indicated generally at **22A** and **23A**, respectively, each takes the form of a hollow sound-producing element **28** defining a hollow interior chamber **29**. Furthermore, each of the hollow sound-producing elements **28** includes a portion defining sound-producing aperture means into the hollow chamber. In the specific example illustrated in FIGS. 4 and 5, said sound-producing aperture means consists of a longitudinal slot **30** extending along one side of the hollow sound-producing element **28** and communicating with the hollow chamber **29** therein. It will be noted that in the specific example illustrated in FIGS. 4 and 5, each of the hollow sound-producing elements is formed of a longitudinal cylindrical section of a tube which is closed at each end by plug means **31** and which is wrapped around each of the plugs **31** so as to effectively define the slot **30**. The plugs **31** are effectively joined to the metallic tube by suitable adhesive fastening means such as is indicated at **32** in FIG. 5. This may comprise a rubber base paint, cement, or the like, or any equivalent means for fastening the end plugs **31** in position with corresponding ends of the flexible longitudinal tensile members **13A** or **14A** effectively fastened in one of the plugs **31** by retaining knot means positioned inside of an aperture **33** through the plug **31**, thus effectively mounting both of the hollow sound-producing elements **28** with respect to the connection ends **20A** and **21A**, respectively, of the longitudinal tensile members **13A** and **14A**, respectively.

It will readily be understood that when the two sound-producing elements **28** are rotated in opposite directions in the general manner of the pendulum body means **22** and **23** in FIG. 2, the rapid relative movement of each of the sound-producing elements **28** and the sound-producing slots **30** with respect to ambient atmosphere will cause each of the sound-producing elements **28** to intermittently fill with and discharge air and produce an intermittent or interrupted audible sound in the general manner explained more fully in my co-pending patent application, Serial No. 778,222, filed December 4, 1959. Furthermore, it should be understood that the sound-producing elements **28** may be substituted for the pendulum body means **22** and **23** in FIG. 2, if desired.

FIG. 6 illustrates a slight modification of the invention wherein the sound produced by each of the sound-producing elements, one of which is indicated at **28B**, may be modified as to frequency, type of interruptions, and/or pitch by adding to the sound-producing element **28B** an external encircling means, such as that indicated at **34**, which effectively reduces the overall open length of the sound-producing slot **30B**. In the specific example illustrated, the element **34** takes the form of a piece of flexible tape or the like adhesively fastened onto the tube **28B** adjacent the lower end thereof and having a small trailing portion **35** which has an effect upon the rotary motion and positioning of the sound-producing slot with respect to ambient atmosphere during swinging motion thereof, whereby to alter the interruption rate by stopping all sound at certain intervals by reason of the changed orientation of the sound-producing slot **30B** with respect to the direction of swinging movement of the sound-producing element **28B**. The effective shortening of the slot **30B** also alters the pitch of the emitted sound.

FIG. 7 illustrates, in fragmentary form, a very slight modification of the form of the invention shown in FIG. 6, and similar portions are indicated by the same reference numerals followed by the letter "C." In this modification, the encircling means **34C** does not have a fluttering trailing edge similar to that shown at **35** in FIG. 6 and, therefore, no directional guiding effect during swinging movement of the sound-producing element **28C** occurs in this modification of the invention.

FIG. 8 illustrates a slight modification of the handle means **17** shown in FIGS. 1–3, which is indicated by the reference numeral **17D**. This modified handle means **17D** comprises a conventional type handle which may be made of wood, plastic, or any other suitable material adapted to be manually grasped during oppositely directed rotative operation of the whirling toy of the present invention in the manner described above.

FIG. 9 illustrates another slight modification of the handle means **17** shown in FIGS. 1–3, which is indicated by the reference numeral **17E** in FIG. 9. This modified handle means **17E** comprises an elastomeric apertured member similar to the member **18** shown in FIG. 3, which has knots **36E** at each end thereof in a slightly off-center position similar to the off-center location of the handle means **17** shown in FIGS. 1 and 2, and which is adapted to be looped over and grasped by a single finger in a manner similar to the grasping of the portion **17A** shown in FIG. 4 and described hereinbefore. It will be noted that the handle **17E** in this modification clearly marks the proper off-center position whereas the portion **17A** shown in FIG. 4 has to be carefully selected whenever the device is used, since there is no such marker.

It should be understood that the figures and the specific description thereof set forth in this application are for the purpose of illustrating the present invention and are not to be construed as limiting the present invention to the precise and detailed specific structure shown in the figures and specifically described hereinbefore. Rather, the real invention is intended to include substantially equivalent constructions embodying the basic teachings and inventive concept of the present invention.

I claim:

1. A whirling and intermittent sound-producing toy including at least two longitudinal independently movable pendulum portions adapted to be adjacently effectively manually held during simultaneous and oppositely di-

rected centrifugal swinging rotation of said pendulum portions in adjacent planes, which is adapted to be maintained by slight intermittent movement of a hand of a person effectively holding said pendulum portions, and wherein each pendulum portion comprises: a flexible longitudinal tensile member having a holding part adapted to be effectively manually held and having longitudinally spaced therefrom a free connection end part provided with pendulum body means mounted thereon for rotation around an axis coincident with said free connection end part and said flexible longitudinal tensile member, said pendulum body means including a hollow longitudinal sound-producing element defining a longitudinal hollow interior chamber therein, said sound-producing element consisting of a longitudinal cylindrical section of a tube substantially closed at each end, said element being provided with a portion defining sound-producing longitudinal slot means into said hollow chamber along at least a portion of the length thereof; and external encircling means effectively reducing the overall open length of the portion of the sound-producing element defining the sound-producing slot positioned at one end thereof.

2. A toy of the character defined in claim 1, wherein said encircling means is provided with an extension comprising means modifying the effect of rapid relative movement of ambient atmosphere upon the sound-producing element during whirling motion thereof.

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