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Lippe et al.

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[54] **BELT OR COLLAR WITH RUNNER TRACK**

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[21] Appl. No.: **320,601**

Related U.S. Application Data

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[52] **U.S. Cl.** **46/51**

[51] **Int. Cl.** **A63h 1/32**

[58] **Field of Search** ..... 119/106, 96; 46/47, 51; 272/24, 60, 80; 273/DIG. 19, 95 A

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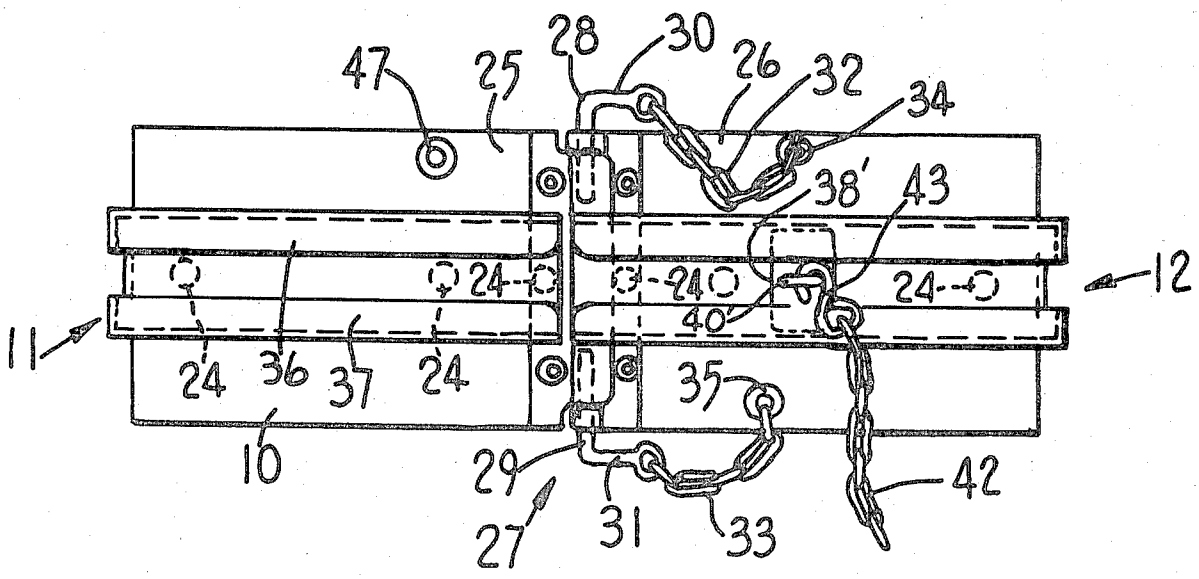
[57] **ABSTRACT**

In a belt-type toy or collar, adapted to encompass a wearer, the belt has a circumferential track at its outer side which retains a slide member therein adapted to be connected to a ball or other object by an elongated flexible connecting member, the slide member is adapted to move in the track to permit relative circumferential movement of the object with respect to the wearer and the belt may include a chordally extending elastic member fixed at each end to an interior portion of the belt to accommodate various sized wearers.

7 Claims, 9 Drawing Figures



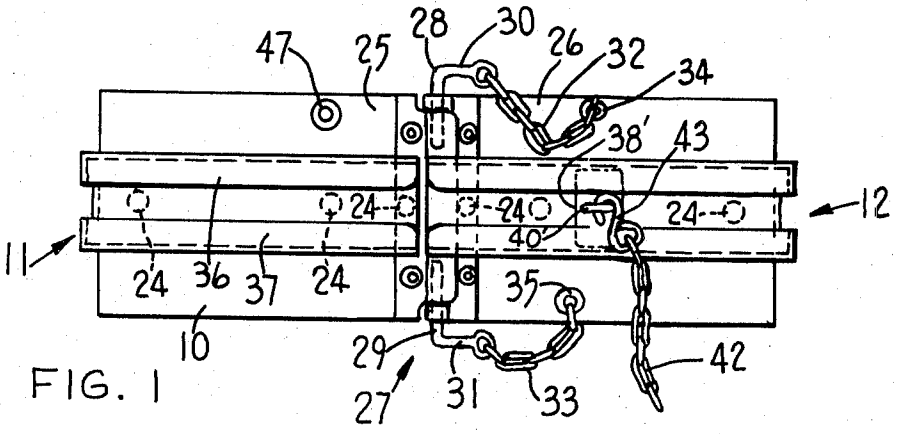

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FIG. 1

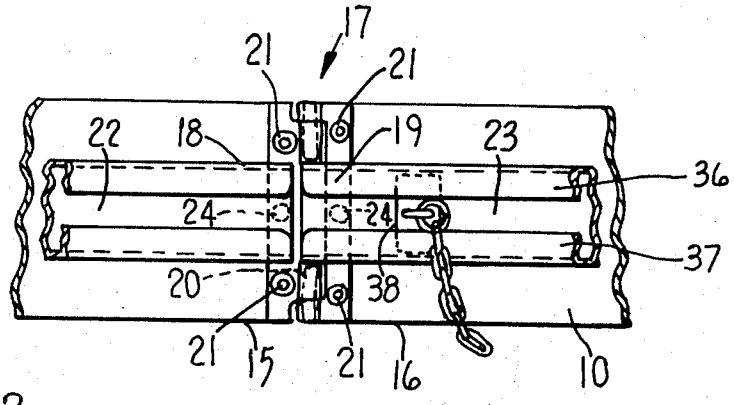
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FIG. 2

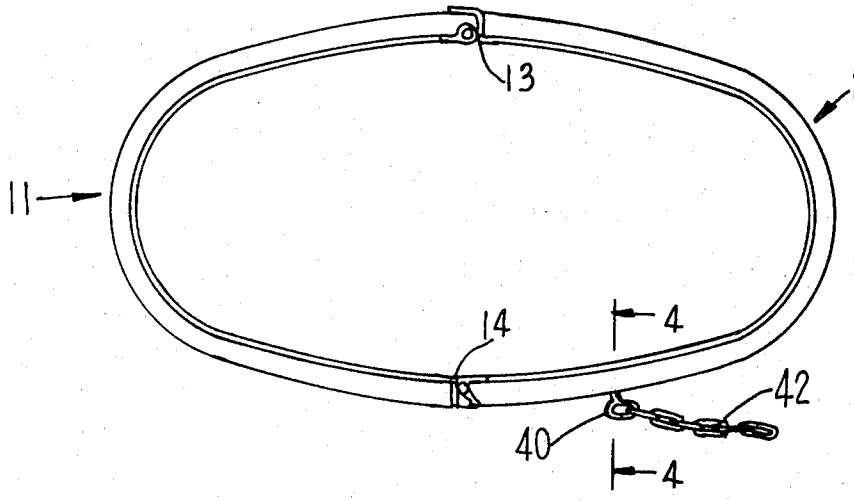


FIG. 3

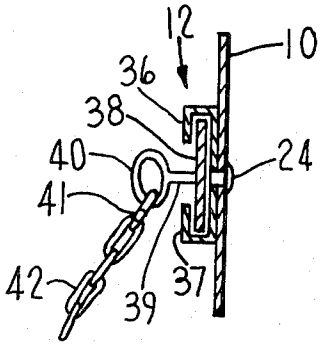


FIG. 4

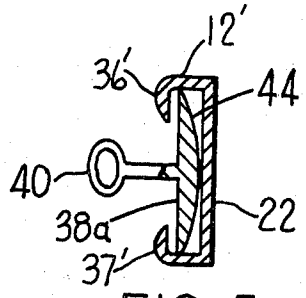


FIG. 5

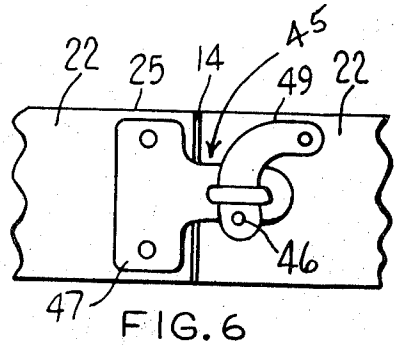


FIG. 6

FIG. 7.

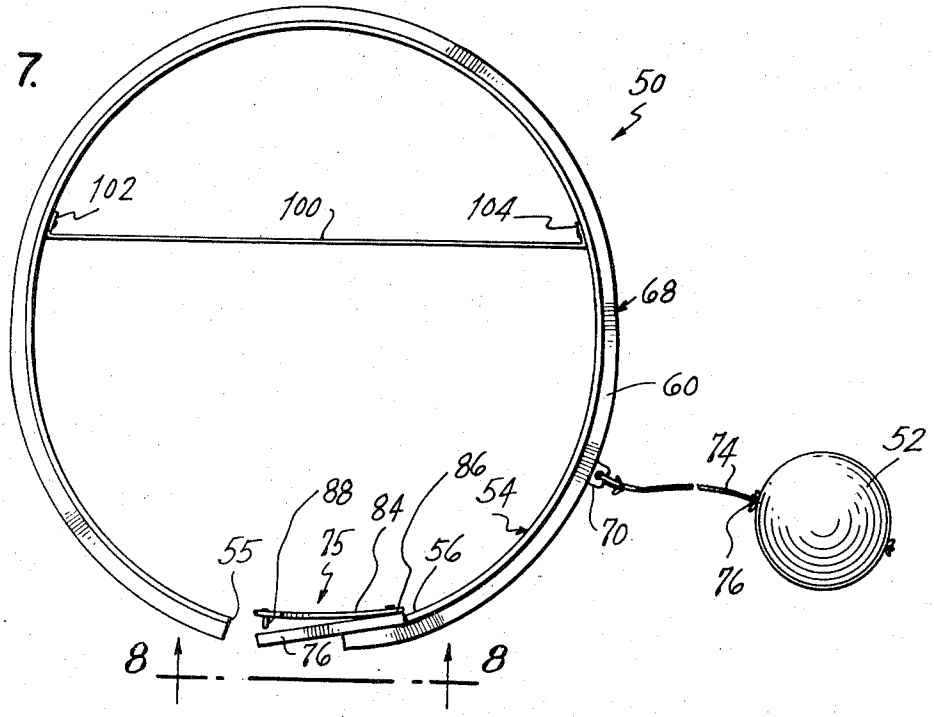


FIG. 8.

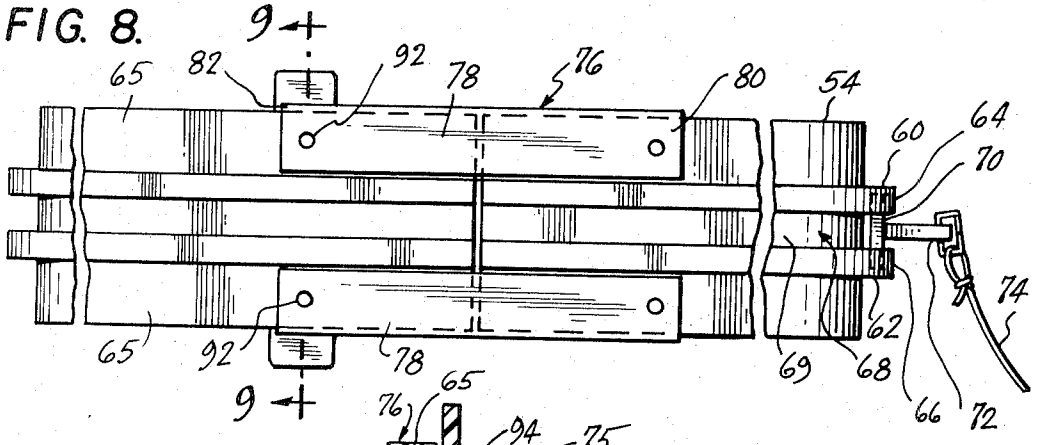
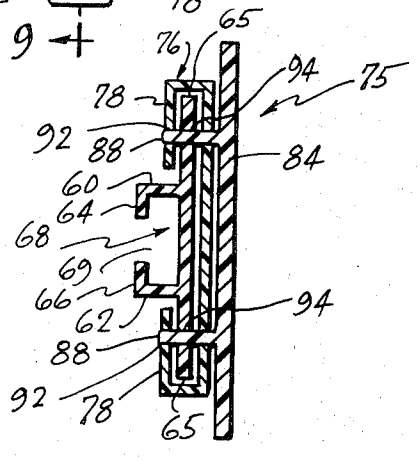


FIG. 9.



BELT OR COLLAR WITH RUNNER TRACK

This is a division of application Ser. No. 27,486, filed Apr. 13, 1970, now U.S. Pat. No. 3,721,216.

This application is a continuation-in-part of our co-pending U.S. patent application, Ser. No. 832,400, filed June 11, 1969, the disclosure of which is incorporated herein by reference.

This invention relates generally to belt-type toys or collars, and more particularly to belts of the type which are flexibly connected to an object to permit relative movement between the wearer and the object.

Toys have been proposed in which a one-piece annular member or ring is adapted to surround a body portion, for example, the leg of the wearer, and is flexibly connected, as by a rope or plastic leash extending from a fixed location on the ring, to an object, such as a ball, whereby the ball may be spun about the leg in response to gyrations of the leg within the ring. In this type of toy, the ring is moved about the body portion in conjunction with the ball, thereby making movement of the ball in the desired circular path substantially difficult.

In a similar application, dog collars are generally connected at one point thereon to a leash adapted to be held by a handler or attached to a fixed object so that the collar must slide on the dog's neck for the dog to turn in the collar. When the collar is so tight that it cannot slide about the dog's neck, the animal's movements are severely restricted and there is danger or choking or asphyxiating the dog by entanglement of the leash about the dog's neck as he moves his head.

Accordingly, it is an object of the present invention to permit independent movement of the wearer of a belt or collar and an object to which the belt is connected.

Another object of the invention is to flexibly connect a body encompassing belt or ring with a toy or other object to permit movement of the toy or object in response to body gyrations of the wearer.

A further object of the invention is to provide a belt of the character described which is adapted to encompass a variety of sizes of wearers.

Yet another object of the invention is to provide a belt of the character described which is both economical and simple in construction.

In accordance with an aspect of this invention a belt having a circumferential track of generally channel shaped cross-section extending from its outer side includes at least two free end portions and releasable connecting means adjacent these two free ends for fastening the belt about the waist of a wearer. A slide member is retained within the track and is adapted to be connected to an object or the slide member of another belt, by a flexible connecting member such as a chain or plastic strap. In one embodiment, a ball is attached to the free end of the flexible connecting member and body gyrations of the wearer create centrifugal forces which move the ball outwardly from the wearer to the full extent of the connecting member and angular forces to move the ball in a circumferential path about the wearer as the slide member is correspondingly moved in the circumferential track. The belt is also provided with an elastic member fixed at each end to interior points on the belt to extend chordally therein for accommodating different sized wearers and to hold the belt in a relatively fixed position against the wearer while the slide member moves in relation thereto.

In another application, the belt serves as a collar for a dog and the slide member is flexibly connected to a leash to provide an increased degree of freedom for the dog in relation to his handler or the object to which the leash is attached.

It is also contemplated that the belt of the present invention may be used to produce a challenging and exciting innovation in the dancing art. Since much of modern dancing involves separation of the partners due to body movements and gyrations involved in dancing maneuvers, it is foreseen that two partners wearing belts constructed in accordance with the present invention may be interconnected by a single flexible strap or chain to prevent excess straying of the partners and also to challenge the skillfulness of the dancers to perform necessary movements while under the limited restraint of the connecting member.

In each of these uses of the invention, unnecessary entanglement with the connecting means is avoided since the belt is maintained in a fixed position relative to the body and the slide member is adapted to travel the entire length of the circumferential track to enable the wearer to rotate independently of the object to which he is connected.

The above, and other objects, features and advantages of this invention, will be apparent in the following detailed description of illustrative embodiments of this invention which are to be read in connection with the accompanying drawings wherein:

FIG. 1 is a front elevational view of a belt or collar of a type in which the present invention may be employed;

FIG. 2 is a partial rear elevational view of the belt or collar illustrated in FIG. 1, but with a modification of the attachment of the flexible connecting member to the slide member;

FIG. 3 is a plan view of the belt shown in FIGS. 1 and 2;

FIG. 4 is a sectional view taken on line 4—4 of FIG. 3;

FIG. 5 is a sectional view, similar to FIG. 4, but showing another embodiment of the present invention;

FIG. 6 is an elevational view of a releasable connecting mechanism adapted for use with the belt or collar of the present invention;

FIG. 7 is a plan view similar to FIG. 3, but showing another embodiment of the present invention;

FIG. 8 is a partial front elevational view of the belt illustrated in FIG. 7 as viewed in the direction of arrows 8—8 thereon; and

FIG. 9 is a sectional view taken on line 9—9 of FIG. 8.

Referring to the drawings in detail, and initially to FIGS. 1 and 3 thereof, it will be seen that a belt or collar 10 of the type in which the present invention may be employed generally comprises a pair of relatively wide semi-cylindrical belt portions 11 and 12 joined at the rear 13 and front 14 of the belt. Belt portions 11 and 12 are each provided with generally U-shaped semi-cylindrical channel members 22 and 23 respectively which are somewhat narrower than sections 11 and 12 and form an annular track about belt 10 which, as more fully explained hereinafter, is adapted to retain slide member 38 for flexible connection of the belt with an object or another person.

Belt portions 11 and 12 are pivotally interconnected at their ends 15 and 16, in the rear 13 of belt 10, by a hinge 17 which enables sections 11 and 12 to be swung apart to provide an opening at the front 14 of the belt through which the waist of a wearer may be inserted. Each half of hinge 17 is attached to the respective end portions 15 and 16 of members 11 and 12 in any conventional manner, as for example by eyelets 21, while the bight portions of channels 22 and 23 are attached to the hinge and to members 11 and 12 by flush head rivets 24 to provide an integral and stable belt structure. As seen in FIG. 2, the end portions 18 and 19 of channels 22 and 23 respectively are disposed to one side of pivot pin 20 of hinge 17 to avoid interference with the operation of the hinge.

The other end portions 25 and 26 of sections 11 and 12, adjacent front opening 14, are adapted to be interconnected by a second releasable hinge or latch 27 in abutting relation to close the belt and provide an uninterrupted track about the wearer in conjunction with channel members 22 and 23. As seen in FIG. 1, hinge or latch 27 is provided with two complementary sections fixed respectively to ends 25 and 26 beneath their associated channel members 22 and 23 by eyelets 21 and flush head rivets 24 in the same manner as hinge 17.

The two halves of hinge or latch 27 have apertures 27′ which are axially aligned with ends 25 and 26 of bands 11 and 12 are placed in abutting relation and these apertures are adapted to receive removable pins 28 and 29 to hold ends 25 and 26 in this abutting relation. Pins 28 and 29 are friction fit within hinge 17 but are readily removed therefrom to open belt 10 at its front end 14 to provide for entrance or removal of the belt from about the wearer. To prevent inadvertent loss of pins 28 and 29, they are respectively provided with eyelets 30 and 31 at their free ends for flexible connection by members 32 and 33 to eyelets 34 and 35, respectively, which as seen in FIG. 1, are mounted on belt portion 12. While members 32 and 33 are illustrated in the drawings as chains, it is contemplated that any conventional type of flexible connecting members may be used, such as, for example, plastic straps, leather leashes, rope or the like.

When belt 10 is placed about a wearer in the above described manner, channels 22 and 23 which, as seen in FIGS. 1 and 2, include oppositely directed spaced lip portions 36 and 37 are positioned in substantially end abutting relation to provide an uninterrupted track about the wearer. A generally flat slide member 38 (FIG. 3), is retained within the uninterrupted track by lip portions 36 and 37 and is adapted to slide throughout the track circumferentially about the wearer. A pin 39, which extends through the slot formed between lips 36 and 37 is attached to or formed integrally with slide 28 and includes an eyelet portion 40 adapted to be connected to flexible connecting member 42 through a swivel 41. As mentioned, the flexible connecting member 42, which is shown in the drawings as a chain, may be attached at its free end to a ball or other object (not shown) so that the ball can be moved in a circular path about the body of the wearer in response to body gyrations. In this case the gyrations of the wearer create centrifugal and angular forces which move the ball outwardly to the full extent of flexible connecting member 42 to tension the member and to pull slide 38 through the track as the ball is moved in its circular path. Alternatively, belt 10 may be utilized as a dog collar wherein member 42 constitutes a leash, so that the degree of movement permitted the animal is substantially increased by the slidable connection between the collar and the leash provided by member 38 while the animal is still prevented from straying.

In FIG. 1 there is illustrated a connecting member 43 which may be used with one of a pair of belts worn by respective dancers to provide a novel and challenging innovation to modern dancing. Member 43 comprises a hook fixed to the free end of the flexible connecting member 42 of a belt (not shown) worn by one of the dancers and is readily engaged with the eye 40′ of slide member 38′ on the belt worn by that dancer's partner to link the partners together. In this manner the dancers are enabled to dance and gyrate about each other since the slide members 38 and 38′ in each of their respective belts will move within the track formed by channels 22 and 23 all around the bodies of the respective dancers and yet the dancers will be limited as to the distance which they may move apart.

To store chain 42 when the belt is not in use, an eyelet 47 may be provided on its associated belt to engage and retain hook 43 and it is contemplated that to enhance the appeal and appearance of such belts some or all of the various chains thereon may be provided with charms or the like, as for example, male and female symbols. Moreover, it is also contemplated that such belts may be made of or painted with a phosphorescent material to advantageously produce luminescent effects during dancing, particularly in dancing establishments catering to young people which often utilize "black light" to produce psychedelic luminescent effects.

In each of the above described embodiments of the present invention, hinges 17 and 27 on channel members 22 and 23, and slide member 38 are preferably made of metal, such as aluminum, whereas belt or collar 10 is made of sheet fabric or plastic. However, it is contemplated that all of the elements may also be made of a plastic such as polypropylene, polystyrene, fluoropolymers or the like and that connecting members 42 may be formed as a leather leash, nylon rope or chord, plastic straps or the like in lieu of the chains illustrated in the drawings.

FIG. 5 illustrates another embodiment of the present invention wherein band portions 11 and 12 are eliminated and the belt comprises channel shaped members 12′, which may be formed in two parts as in the previously described embodiment, or alternatively, may be formed as an interrupted annular member having only a front opening and made of a flexible material such that the belt can be opened at the front to fit around the waist of a wearer. Slide member 38*a* used in this embodiment is provided with a curved rear portion 44 which permits rocking or swaying of the slide within the channel formed by lips 36 and 37 to minimize torsional deflection of the channel member during use of the device.

In order to maintain the front opening of belt 12′ closed and thus maintain the free ends of the belt in end abutting relation to provide an uninterrupted track about the wearer, the belt, as seen in FIG. 6, is provided with a latch 45 on the inner side thereof. Latch 45 includes a staple 47, fixed to one end 25 of channel 22 on the interior portion thereof, which overlaps the other end 26 of channel 22 when ends 25 and 26 are

placed in abutting relation. A hinged latch member 49 is pivotally mounted adjacent end 26 and is adapted to engage staple 47 when opening 14 is closed and ends 25 and 26 are placed in abutting relation. A protruding dimple 46 on latch 49 is adapted to engage staple 47 and serves to prevent inadvertent dislodgment or opening of the belt during use of the device.

In FIG. 7 there is illustrated another embodiment of the present invention wherein a belt 50 is provided which is adapted to encompass the waist of a wearer and which is provided with a slide member 70 connected to a ball 52 adapted to be moved in a circular path about the wearer in response to body gyrations.

Belt 50 includes an inner annular belt portion 54 having a pair of free ends 55 and 56, which are adapted to be held in abutting relation by releasable connecting clip 75, and a pair of generally L-shaped circumferentially extending channel members 60 and 62 on the exterior surface of the belt, as seen in FIG. 8, which define a circumferential track 68 thereon. Channel members 60 and 62 have oppositely extending lip portions 64 and 66 respectively which define an annular slot 69 therebetween about the periphery of the belt and when free ends 55 and 56 of belt 54 are placed in end abutting relation the corresponding free ends of the track 68 formed by members 60 and 62 are also placed in abutting relation so that the slot 69 is substantially uninterrupted about the periphery of the belt.

Slide member 70 corresponds substantially to member 38 of the prior embodiments and is an integral, generally T-shaped element positioned for movement between members 60 and 62 and held there by lips 64 and 66. Stem portion 72 of slide 70 extends through slot 69 and is connected to a flexible member or string 74 which is attached at its free end 76 to ball 52, so that, when the device is placed about a wearer's waist, slide 70 will move in the annular track 68 in response to body gyrations and ball 52 will be caused to move in a generally circular path about the body of the wearer. It is contemplated that in this embodiment of the present invention belt 50 will be formed of an integral molded plastic and that both the belt 50 and slide 70 will be formed of a self-lubricating plastic such as polytetra fluorethylene.

The free ends of track 68 are held in abutting relation by a releasable connecting member 75 including a channel shaped member 76 having oppositely extending lip portions 78, which as seen in FIG. 9, surround the flanges 65 provided by belt 54 on either side of members 60 and 62. One end 80 of member 75 is fixed to flanges 65 adjacent free end 56 of belt 50 by a pair of rivets 76 and its opposed end 82 is adapted to receive flanges 65 of the belt adjacent free end 55 between lip members 72 and to retain end 55 therein in abutting relation with end 56.

Releasable connecting member 75 is also provided with a flexible plate 84 serving to lock ends 55 and 56 in abutting relation as shown in FIG. 9. Plate 84 is fixed to member 76 by rivets 76 at one end 86 and at its opposed end is provided with a pair of spaced lugs 88. Member 76 and flanges 65 of belt 50, adjacent end 55, have pairs of apertures 92 and 94 respectively which are adapted to be aligned when ends 55 and 56 are placed in abutting relation with member 75 and thence to receive lugs 88 therein to maintain the relative positions of the elements and to provide an uninterrupted track 68 about the wearer.

In order to accommodate various sized users with a fixed diameter belt 50, an elastic member or strap 100 is fixed at each of its ends 102 and 104, respectively, to the inside surface of inner annular belt portion 54. Member 100 thereby extends chordally within the annular belt and will snuggly engage the wearer's waist during use of the device and prevent rotation of the belt about the wearer. In addition, since elastic member 100 will stretch, belt 50 will readily accommodate wearers of many different sizes and thus only a single diameter belt may be produced which can thence be used by a large range of individuals.

Although illustrative embodiments of the invention have been described herein with reference to the accompanying drawings, it is to be understood that the invention is not limited to those precise embodiments, and that various changes and modifications may be effected therein by one skilled in the art without departing from the scope or spirit of this invention.

What is claimed is:

1. A belt-type toy or the like, of the character described, adapted to surround a portion of a wearer's body, comprising a generally annular belt having thereon an outwardly extending track of generally channel-shaped cross-section and outwardly extending flange members projecting beyond said track, said belt and said track thereon having at least two free end portions defining an opening through which the wearer's body portion is insertable within said belt, separate releasable connecting means independent of said belt and mounted thereon adjacent said opening and exteriorly of said track for maintaining said ends in substantially end abutting relation so that said track is uninterrupted about the wearer, and slide means retained within said track and adapted to move freely along the entire length thereof, said releasable connecting means comprising a separate generally channel-shaped member independent of said track and having flange portions adapted to overlap said oppositely extending belt flange members, said channel member being fixed to said belt adjacent one of said free end portions and extending longitudinally therebeyond, said channel member being adapted to receive said flange members of the belt adjacent the other of said free end portions, and means for holding said other free end portion within said channel member to maintain said free ends in substantially abutting relation; and an elongated flexible interconnecting member pivotally attached at one end to said slide and fixed at its other end to a toy, whereby said toy is adapted to be moved in a circular path by gyrations of the wearer's body and the associated movement of said slide member in said track.

2. A belt-type toy or the like as defined in claim 1, wherein said toy is a ball.

3. A belt-type toy or the like as defined in claim 1, including a chordally extending elastic member fixed at each end to the interior of said belt whereby said device is adapted to fit closely about different sized wearers.

4. A belt-type toy of the character described, comprising an annular belt having at least two free end portions defining an opening through which a portion of the user's body may be inserted and an outwardly extending annular track of generally channel shaped cross-section including a pair of inwardly directed lips extending substantially parallel to said belt and providing an annular slot therebetween, said belt being substantially wider than said track and providing a pair of

oppositely extending annular flange members adjacent said track, a separate releasable connecting member independent of said belt fixed at one end to said belt adjacent one of said free end portions and having a generally channel shaped cross section including inwardly directed lips adapted to receive said flange members therebetween, said connecting member having a free end extending beyond said one free end portion of said belt, whereby to receive the other free end portion of said belt, means holding said free end portions in end abutting relation in said connecting member to provide a free and uninterrupted track about the wearer, slide means retained within said track and extending through said slot, said slide means being adapted to move in said uninterrupted track in response to body movements of the wearer; and said slide means including a flexible connecting member having its free end connected to a ball, said ball being adapted to be moved in a generally circular path about the wearer in response to body movements of the wearer.

5. A belt-type toy according to claim **4,** wherein said means for holding said free end portions in end abutting relation comprises a flexible plate member fixed to said connecting member and carrying pin means located adjacent the free end of said connecting member, said other free end portion of the belt and said connecting member each having openings therein adapted to be located in alignment when said free end portions are placed in end abutting relation within said connecting member, said pin means being adapted to be inserted through said aligned openings to hold said end portions within said connecting member during body movements of the wearer.

6. A belt-type toy according to claim **5,** including a chordally extending elastic member fixed at each end to an interior portion of said annular belt whereby said belt is adapted to fit closely about different sized wearers.

7. A belt-type toy or the like, of the character described, adapted to surround a portion of a wearer's body, comprising a generally annular belt having thereon an outwardly extending track of generally channel-shaped cross-section and outwardly extending flange members projecting beyond said track, said belt and said track thereon having at least two free end portions defining an opening through which the wearer's body portion is insertable within said belt, separate releasable connecting means independent of said belt and mounted thereon adjacent said opening and exteriorly of said track for maintaining said ends in substantially end abutting relation so that said track is uninterrupted about the wearer, and slide means retained within said track and adapted to move freely along the entire length thereof, said releasable connecting means comprising hinge means for interconnecting said free end portions including at least one removable pin member operatively secured to said belt; and an elongated flexible interconnecting member pivotally attached at one end to said slide and fixed at its other end to a toy, whereby said toy is adapted to be moved in a circular path by gyrations of the wearer's body and the associated movement of said slide member in said track.

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