United States Patent

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[54] **ROPE-JUMPING DEVICE**
6 Claims, 5 Drawing Figs.

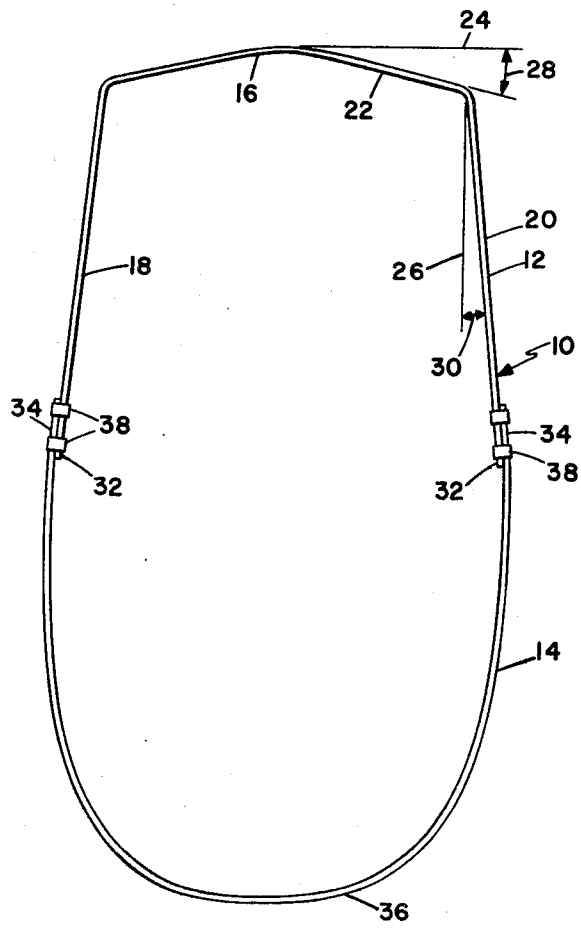
[52] **U.S. Cl.** **272/75**
[51] **Int. Cl.** **A63b 5/20**
[50] **Field of Search** 272/74, 75

[56] **References Cited**
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ABSTRACT: A rope-jumping device that will provide exercise and entertainment for users in jumping, having a U-shaped rod structure with a bowed end rod and depending rod members that diverge outwardly to clear the sides of the user, and a flexible line secured to the ends of the rod members, which device is manipulated by the hands of the user on the bowed end rod to cause the flexible line to rotate over the head and under the feet of the user.



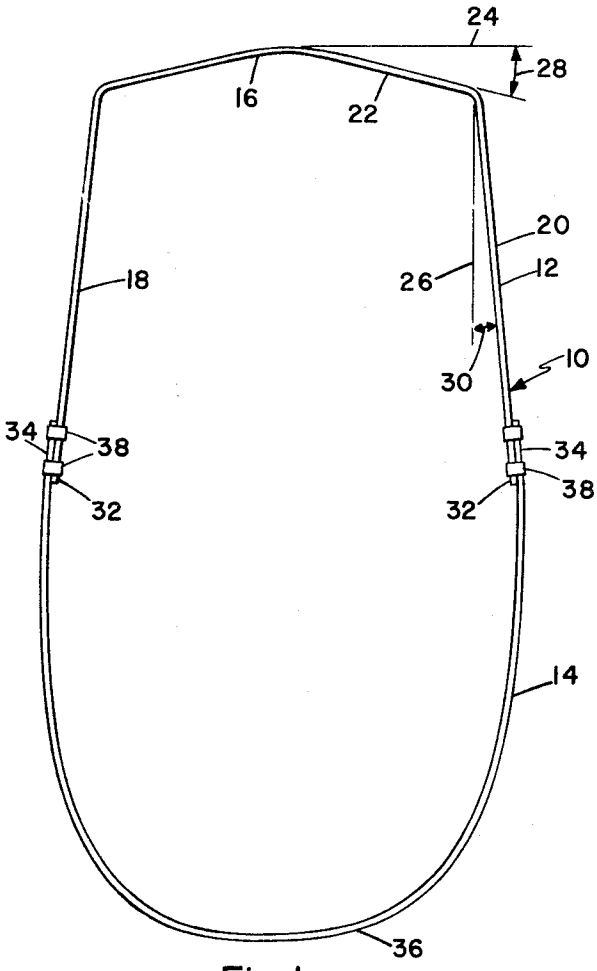


Fig. 1

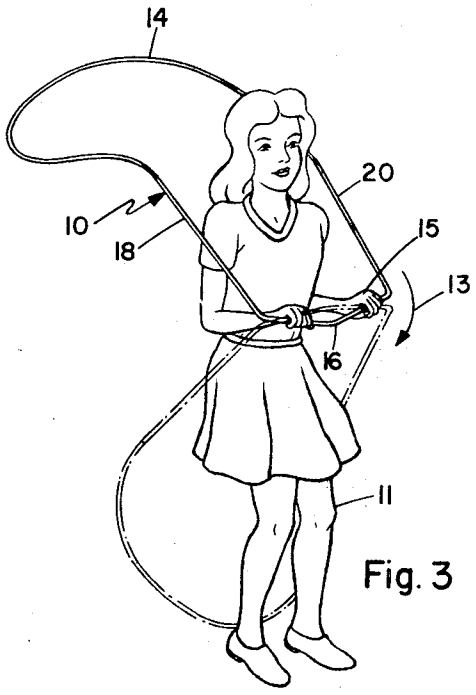


Fig. 3

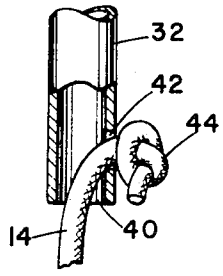


Fig. 4

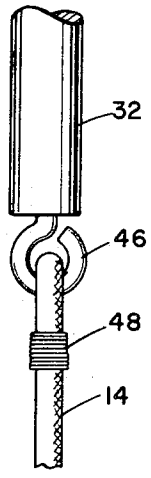


Fig. 5

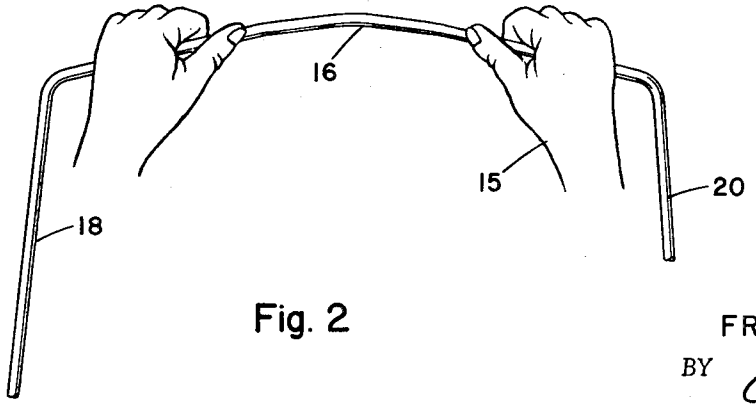


Fig. 2

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ROPE-JUMPING DEVICE

BACKGROUND OF THE INVENTION

Jumping rope has amused children and adults for many years. The known rope-jumping devices usually comprise a flexible line with separate handles that are grasped by the user. The rope is rotated in a swinging movement over the head and feet of the user in the known manner. While such rope-jumping devices can provide exercise and amusement for children and adults, it has some limitations regarding use, such as for example, it is difficult to pass the known rope-jumping devices from one person to another during use. Further it is difficult for a person with only one hand to use the known rope-jumping devices. Thus it is advantageous to have a rope jumping device that is easily used by children and adults to provide a repetitive and entertaining jumping movement and which device is inexpensive to make, is simple to use, has a durable construction, and that provides a new and different use from known rope-jumping devices.

SUMMARY OF THE INVENTION

In an embodiment of this invention, a U-shaped structure solely comprising an end rod and a pair of dependent rod members has a flexible line secured to the ends of the dependent rod members. The end rod and the rod members are positioned in the same plane with the rod members diverging slightly outward to clear the sides of the user. The rod members are spaced from each other a sufficient distance to allow the user to be positioned therebetween. The end rod is slightly bowed outwardly to provide angled surfaces on each side of the midpoint of the rod that are easily grasped and manipulated by the fingers in a rotating movement, that rotates the end rods in a radial direction to the axis of rotation of the end rod. This swings the flexible line over the head and under the feet of the user when the user makes the required jumping movement. The rigid construction of the U-shaped structure allows, for example, rotational movement by a person's single hand, and also allows one person to pass the rope-jumping device during use to another person.

It is therefore an object of this invention to provide a new and improved rope-jumping device.

It is another object of this invention to provide a new and improved rope-jumping device that is inexpensive to make, is durable in construction, and that is easy to operate to provide entertainment or exercise.

It is another object of this invention to provide a new and improved rope-jumping device that may be operated by one hand of the user.

It is another object of this invention to provide a new and improved rope-jumping device that allows transfer of the rope-jumping device between different users during operation of the device.

Other objects and attendant advantages of this invention will become more apparent upon a reading of the following detailed description and an examination of the drawings wherein like reference numerals designate like parts throughout and in which:

FIG. 1 is a side plan view of an embodiment of the rope-jumping device of this invention;

FIG. 2 is a partial view of the U-shaped structure being manipulated by the hands of the user.

FIG. 3 is a view illustrating the use of the rope-jumping device of this invention.

FIG. 4 is a partial view with parts broken away of another connection between one end of the depending rod members and one end of the line.

FIG. 5 is a partial view of another connection of the end of the depending rod members and one end of the line.

Referring to FIG. 1, a rope-jumping device 10 has a U-shaped rigid rod structure 12 to which is secured a flexible line 14. The ends 34 of the flexible line are secured to the ends 32 of the depending rod members 18 and 20 by appropriate band structure 38, such as tape, metal bands or the like, that are easily removable to replace the line 14 when it is sufficiently worn through use. The U-shaped structure 12 comprises an end member 16 and depending rod members 18 and 20. Each of these members lie in the same flat plane.

In use, the user 11, see FIG. 3, grasps the end member 16 with her hands 15 and through manipulation of her fingers and a swinging movement, rotates the U-shaped structure 12 causing the flexible line 14 to move over the head and under the feet of the user 11 when the user jumps. It may be observed that the end member 16 is essentially rotated on an axis line 24 in, for example, the rotational direction 13.

In reference to FIGS. 1 and 2, the end member 16 is bowed outwardly with, for example, one end 22 projecting from the axis of rotation 24 in an angle 28 that may be about 12°. This bow or bend in end rod 16 allows the user 11 through her hands 15 to rotate end rod 16 and the remaining structure around the axis 24. The depending rod members 18 and 20 have, for example, an angle 30 of about 5° from a line 26 perpendicular to the axis of rotation 24. This provides additional spacing between ends 32 to hold the ends of the flexible line 38 outwardly from the user 11. The midportion of the line 36 is essentially the same distance from the connection to the respective ends of the line and rod members as the end rod 16.

The rod members may have different end constructions for being secured to the ends of the line 14. For example in FIG. 4, the end 32 of the rod members has a hollow open end 40 with an aperture 42 through the wall, through which projects the line 14 having a knot 44 in the end thereof that holds the line 14 in replaceable fashion to the end 32 of the rod members. In FIG. 5, there is illustrated an eyelet 46 connected to the end of the rod member 32 by any known means, and the line member 48 is passed through an eyelet 46 and secured thereto by a suitable known winding 48.

It may be observed in using this invention, that the user 11 may operate and rotate the U-shaped member 12 with a single hand. Also it may be observed that when one user 11 is using the device manipulating the rope-jumping device 10 in the direction of arrow 13, then that user 11 may pass the device to another person through coordinated jumping action of the two users.

Having described my invention, I now claim.

1. A rope-jumping device for being manipulated by a user comprising,
   - a U-shaped structure solely comprising an end rod and a pair of depending rod members,
   - said rod members having a space therebetween sufficient to receive a user,
   - a flexible line connected between the ends of said rod members,
   - the distance between a midportion of said line and said end rod being greater than the height of a child user,
   - said line has a midportion with a length substantially equal to the length of said end rod,
   - and said midportion of said line and said end rod being spaced substantially equal distances from the connection of the ends of said line to the ends of said rod members.

2. A rope-jumping device for being manipulated by a user comprising,
   - a U-shaped structure solely comprising an end rod and a pair of depending rod members,
   - said rod members having a space therebetween sufficient to receive a user,
   - a flexible line connected between the ends of said rod members,
   - the distance between a midportion of said line and said end rod being greater than the height of a child user,
   - said rod members and said end rods are in the same plane,
   - said rod members diverge outwardly at a slight angle from each other,
   - and said end rod is bowed outwardly along its length in a direction away from said rod members to facilitate rotational movement by a user's hands.

3. A rope jumping device as claimed in claim 2 in which,

in use said end rod has an axis of rotation when manipulated by a user,

and said bowed condition comprising a bend in said end rod at its midpoint with each end portion of said end rod extending at about a 12° angle from said axis of rotation.

4. A rope-jumping device as claimed in claim 3 in which,

said rod members diverge outwardly from perpendicular to said axis of rotation at about 5° angle.

5. A rope-jumping device as claimed in claim 1 in which,

the ends of said flexible line overlapping the ends of said rod members, and removable band means for securing said ends together.

6. A rope-jumping device as claimed in claim 1 in which,

the ends of said rod members having eyelet means for receiving the ends of said line.

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