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AMUSEMENT AND EXERCISING DEVICE

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Fig.1

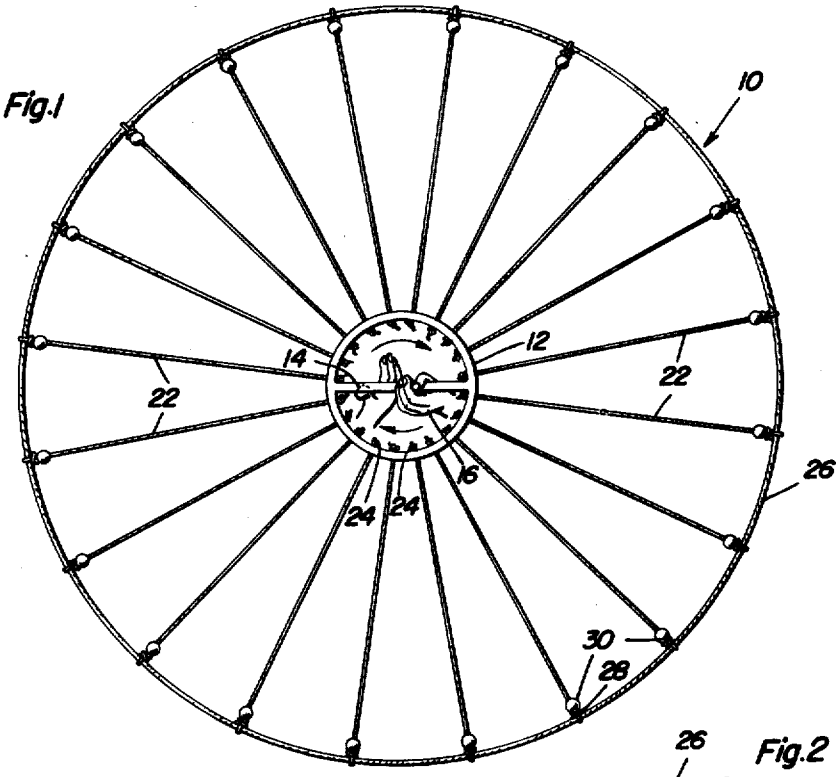



Fig.2

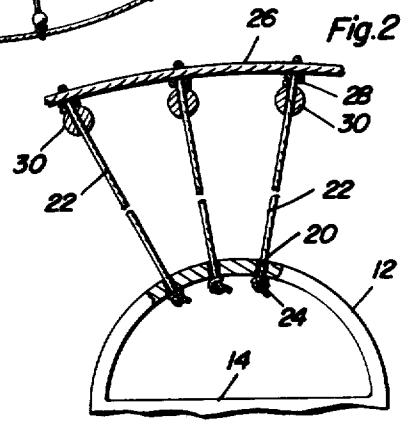
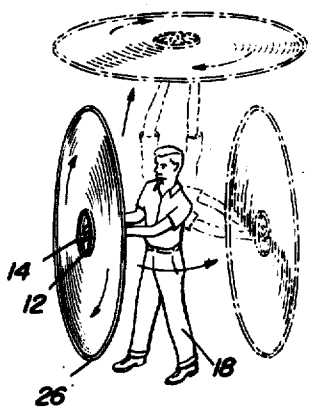



Fig.3




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# AMUSEMENT AND EXERCISING DEVICE

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6 Claims. (Cl. 46—51)

The present invention generally relates to an exercising device of the type that employs the principle of centrifugal and centripetal force during its operation and develops physical skills and may be employed in gymnastic exercises, physical education, therapy as well as play.

The primary object of the present invention is to provide an exercising device requiring dexterity on the part of the person using the device who by using various techniques may employ the device in many different orientations thus accomplishing various spectacular effects by whirling the device above the head, throwing it up in the air and catching it when it comes down and many other similar techniques.

Basically, the device includes a ring member having a transverse bar with the ring member having attached to the same a plurality of radially extending flexible strings or lines which are attached to a flexible ring member concentric with the first mentioned ring with there being provided weights on the radial strings or lines whereby centrifugal force will hold the flexible ring member outwardly and form a circular member when whirling.

A further object of the present invention is to provide an exercising device which is simple in construction, easy to use, well adapted for its particular purposes and relatively inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevation of the device of the present invention illustrating the manner in which the hands grasp the cross bar for rotation and operation of the device;

Figure 2 is a partial sectional view on an enlarged scale of the structure of the device; and

Figure 3 is a schematic perspective view illustrating the device in use in several different possible positions.

Referring now specifically to the drawings, the numeral **10** generally designates the amusement device of the present invention which includes a rigid annular or ring member **12** which defines a circle and which is provided with a diametrically extending rigid cross bar **14** which cross bar **14** is of sufficient length to generally receive both hands **16** of an operator or user **18**.

The annular member **12** is provided with a series of radially extending openings **20** each receiving a flexible line **22** having a knot **24** on the inner end thereof thus anchoring the line **22** to the annular member **12**. The axis of the openings can also be perpendicular to the plane of ring **12**. Any other means can be employed to develop the friction necessary to anchor lines **22** to ring **12**.

Disposed in concentric relation to the annular member **12** is an enlarged flexible ring or annular member **26** constructed of rope or similar material which is concentric with the annular member **12** and the flexible lines **22**



are secured thereto by virtue of the terminal ends of the lines **22** looping over the flexible member **24** and secured thereto by a knot **28** or other means. Mounted on each of the strings **22** is a spherical ball **30** which may be termed a weight and which may be constructed of various suitable materials such as wood or the like and which may be slidable on the string **22** so that it will come to rest against the flexible ring **26** when the device is spinning.

While the device may have different or various dimensions, one working embodiment of the invention has the circular frame of the central wheel which is designated by the numeral **12** provided with a diameter of 13 inches and is constructed of wood but may be constructed of a plastic material or a metallic material. The annular member **12** is stiffened by the cross bar which is round which enables the user to hold and operate the device with his hands. The diameter of the cross bar itself may be approximately ¾ of an inch and should be constructed of the same materail as the annular member **12**. The strings **22** may be constructed of fiber, wire, leather, thermoplastic or any other suitable material and the fact that the strings go through the openings **20** in the annular member **12** and are secured thereto by the knot **24** on the inner end provides for radial adjustment of each of the strings so that the most effective radial length thereof may be provided. The desired length of the strings is 33 inches and, of course, this distance can be altered. Further, in the working embodiment, there are 20 strings employed but again, this number can be changed. This, of course, has to be accompanied by a corresponding adjustment of the spacing of the terminal ends of the strings **22** along flexible ring **26**.

The strings are placed equidistantly along the circumference of the annular member **12** and the balls **30** may be either spherical or egg shaped with their dimension being slightly less than one inch in diameter. The balls **30** may be constructed of wood, metal or thermoplastic material and are instrumental in transmitting the centrifugal force to the outer member **26** which may be constructed of rope or other sufficiently flexible material. In the working embodiment, the rope **26** is a one-quarter inch rope. It is pointed out that the dimensions may be altered to suit the physique of different individuals, various age groups and the particular purpose or use may also necessitate the alteration of dimensions but the general ratio of the different parts should not be changed substantially.

To operate the device, one has to take hold of the bar **14** and rotate it by seizing it alternately with the left and right hand and turning it each time in one direction. While various techniques may be applied, it has been found that best results can be achieved by turning the wheel each time, that is with each hand 360°. When the central wheel starts to rotate, the centrifugal force opens up the device to a full circle as shown in Figure 1. As the user of the device develops skill, he can accomplish various difficult procedures such as whirling the device above his head or to either side or throwing it in the air and catching it when it comes down. Also, other various elements may be attached to the basic construction set forth. For instance, ribbons, small twinkling or shining metal objects or small noise making objects may be attached to the strings or the outer member **26**. Further, the strings can be multicolored and the entire device will provide entertainment and fun while helping to develop stronger physique, bodily skill and coordination. The device is very spectacular and is extremely effective for gymnastic exercises such as mass gymnastic exercises employed for entertaining the general public but the device also finds utility for individual use for both entertainment, amusement and exercise.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. An exercising device comprising an inner circular member, a cross bar extending diametrically of said inner circular member, an outer circular member disposed in concentric relation to the inner circular member, and a plurality of flexible members interconnecting the inner circular member and the outer circular member whereby centrifugal force will hold the flexible members taut while spinning but yet permitting variation in the rotational planes of the inner and outer circular members.

2. An exercising device comprising an inner circular member, a crossbar extending diametrically of said inner circular member, an outer circular member disposed in concentric relation to the inner circular member, and a plurality of flexible members interconnecting the inner circular member and the outer circular member whereby centrifugal force will hold the flexible members taut while spinning but yet permitting variation in the rotational planes of the inner and outer circular members, said inner circular member being rigid, said outer circular member being constructed of flexible material whereby centrifugal force will hold the flexible member in circular condition concentric with the inner circular member.

3. An exercising device comprising an inner circular member, a crossbar extending diametrically of said inner circular member, an outer circular member disposed in concentric relation to the inner circular member, and a plurality of flexible members interconnecting the inner circular member and the outer circular member whereby centrifugal force will hold the flexible members taut while spinning but yet permitting variation in the rotational planes of the inner and outer circular members, said inner circular member being rigid, said outer circular member being constructed of flexible material whereby centrifugal force will hold the flexible member in circular condition concentric with the inner circular member, each of said flexible members being in the form



of a radially extending string anchored to the inner and outer circular members, and a weight mounted on each of said flexible strings for holding the flexible strings taut and holding the outer circular member in circular condition during rotation of the device.

4. In an exercising device, a rigid annular member defining a circle, a rigid cross bar extending diametrically of said annular member, a flexible annular member encircling the rigid annular member, and a plurality of flexible strings interconnecting the rigid annular member and the flexible annular member for holding the flexible annular member concentric with the rigid annular member during rotation of the annular members together about a common axis.

5. An exercising device comprising an annular member, a cross member extending transversely of said annular member and forming a handle for rotating said annular member, a plurality of flexible members connected to said annular member at circumferentially spaced points with the flexible members extending outwardly from the annular member, and an annular member connected with and supported by the outer ends of the flexible members with the outer ends of the flexible members being connected to the annular member at circumferentially spaced points for holding the two annular members generally in spaced relationship to each other.

6. An exercising device comprising an inner rigid annular member, a cross member extending across said inner annular member, an outer annular member constructed of flexible material encircling the inner annular member in spaced relation, and a plurality of flexible members interconnecting the inner and outer annular members for maintaining the inner and outer annular members generally in concentric relation when the device is rotated about an axis generally at the center of the inner annular member whereby the weight of the outer annular member will tension the flexible members and maintain the flexible members generally in a radial relation with the inner and outer annular members generally in concentric relation.

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