

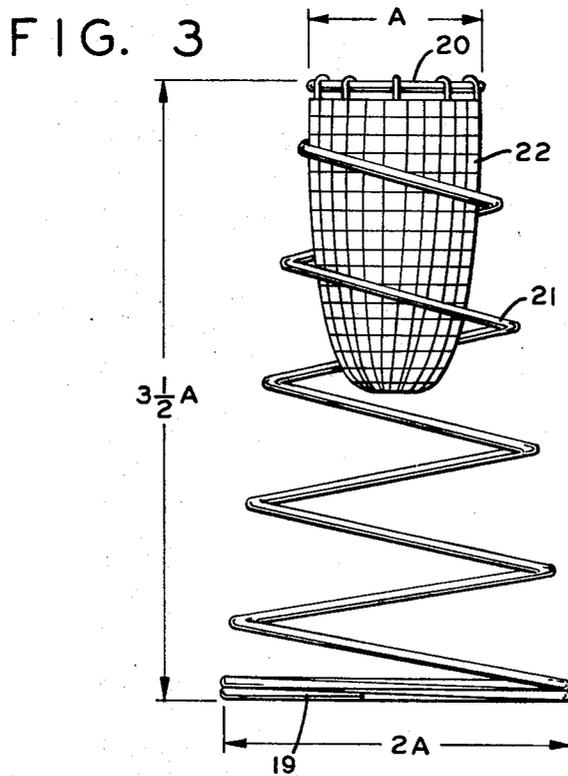
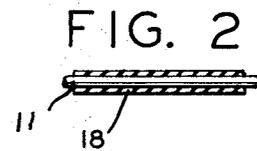
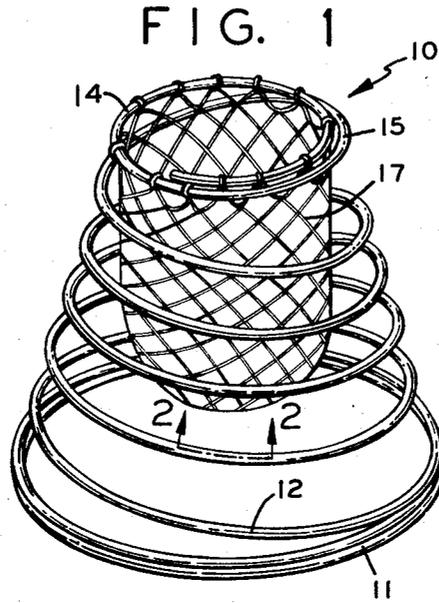
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HELICAL SPRING BOUNCING DEVICE

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HELICAL SPRING BOUNCING DEVICE

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7 Claims

ABSTRACT OF THE DISCLOSURE

An exercising and amusement device for young persons comprising a tapered helical structure formed of spring material and having at least three convolutions, a circular base section formed with about two parallel convolutions and a circular top section with at least one convolution which is generally parallel with the base section. A basket or receptacle to receive the person is secured to the top section and depending into the tapered helical structure.

This invention relates to an amusement and exercising device for children and comprising a relatively large coiled compression spring of tapered contour with its end of larger diameter supported on the ground or on the floor of a playroom, and provided at its upper end with a basket or net-like receptacle, or even a harness, in which the child is suspended. Any movement of the child imparts a corresponding movement to the compression spring causing it to flex, bend and sway in much the same fashion as a resilient pole of considerable height responds to shifting of the mass of the human body.

An object of the invention is to provide a rugged but sensitive resilient structure wherein movements of the body, particularly swaying and up-and-down movements, are instantly transmitted to the spring like structures, always followed by recoil in a direction opposite to the initial movement and wherein a series of simple or compound movements are produced, the number of which is limited only by the ingenuity of the child.

An important object of the invention is to provide a mild exercising device which is perfectly safe for the child, and which produces a variety of sensations and many hours of enjoyment.

Yet another object of the invention is to provide an amusement and exercising device having a high measure of play value in addition to providing as much or as little exercise, and as rough and as gentle, as the child desires.

A further object of the invention is to provide a spring-like exerciser which can absorb and react to all the different motions in which a child finds pleasure, i.e., jumping, swinging, rolling, swaying, rocking, bending, pushing, pulling, etc. These movements can be transmitted to the resilient structure causing it to flex in a great variety of directions.

In the drawing:

FIG. 1 is a perspective view of one embodiment of the present invention;

FIG. 2 is a section taken on line 2—2 of FIG. 1;

FIG. 3 is a side elevation showing a modification.

The embodiment of the invention shown in FIG. 1 includes a helical structure 10 of spring material having about two parallel convolutions 11 at the base which is of sufficient diameter to impart stability to the combined amusement and exercising device, considering the fact that motions of the human body are transmitted to the

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upper end. A third convolution 12 may be of only slightly less diameter and the succeeding convolutions or convolution are of progressively less diameter to form a tapered helical structure with the upper convolutions 15 somewhat smaller than the others and supporting a basket of carrier 17, here shown as being of netted construction. Many materials are suitable for this helical structure, among them fiber glass, spring steel and plastic materials. The material may be either solid or tubular.

FIG. 2 shows a short length of the steel wire 11 used in making the spring with a covering 18 of rubber or other resilient material.

The modified contour shown in FIG. 3 is especially adapted for somewhat older children since it has more convolutions and is fairly high relative to its diameter at the base and it provides a feeling of sailing through the air, like the willow steel poles used by professional performers in exhibitions and circuses. It has a base section 19 of about two parallel convolutions and the top 20 may extend about 1½ convolutions. This top ring may have a diameter about ½ that of the base. The number of intermediate convolutions 21 is a matter of choice, 5½ being shown. The basket 22, in this instance, is made of nylon net or other fabric and is supported on the top convolution by weaving this top coil through the openings at the top of the net.

The relative dimensions indicated in FIG. 3 are suggestive only and the structure may have any contour or height relative to the base.

If desired, the base section 19 may be clamped to the floor or ground to definitely avoid the possibility of the structure overturning as a result of too vigorous motion being imparted to it.

Good results have been obtained by using a ¾" stainless steel tubing and the weight is somewhat less than if ⅝" stainless solid wire is used, but they both give good results. Fiber glass either solid wire or tubing has also proved satisfactory.

While there have been described herein what are at present considered preferred embodiments of the invention, it will be obvious to those skilled in the art that many modifications and changes may be made therein without departing from the essence of the invention. It is therefore to be understood that the exemplary embodiments are illustrative and not restrictive of the invention, the scope of which is defined in the appended claims, and that all modifications that come within the meaning and range of equivalency of the claims are intended to be included therein.

What I claim is:

1. An exercising and amusement device for young persons and including a tapered helical structure formed of spring material and having at least three convolutions, a circular base section formed with about two parallel convolutions and a circular top section with at least one convolution which is generally parallel with the base section, and a receptacle of a size to receive the person, said receptacle being secured to said top section and depending into the tapered helical structure.

2. The structure recited in claim 1 wherein the helical structure is formed from fiber glass.

3. The structure recited in claim 1 wherein the helical structure is formed from spring plastic material.

4. The structure recited in claim 1 wherein the helical structure is formed from spring steel.

5. The structure recited in claim 1 wherein the helical structure is formed from tubular material.

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6. The structure recited in claim 1 wherein the helical structure has a resilient covering.

7. The structure recited in claim 1 wherein the top section has a diameter about $\frac{1}{2}$ that of the base section.

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