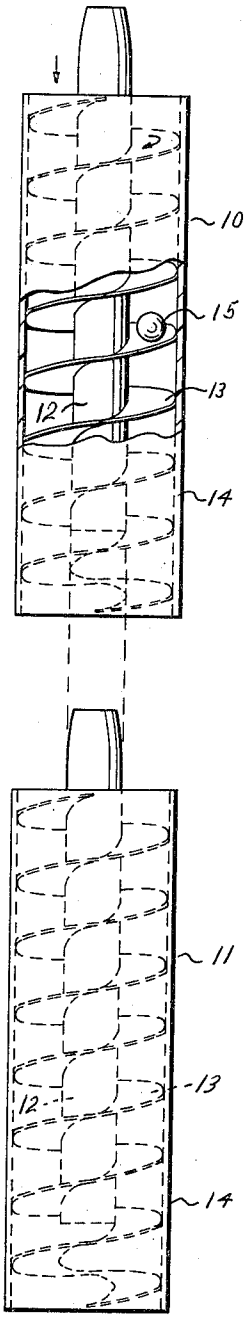
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AMUSEMENT AND EDUCATIONAL DEVICE

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AMUSEMENT AND EDUCATIONAL DEVICE

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This invention relates to a toy and more particularly to a ball and spiral track toy.

One of the principal objects of this invention is to provide a toy that will help the coordination of a child's hands with his eyes.

Another object is to provide a toy that has few moving parts. The movement of the ball down the track being supplied by gravity and the movement of the two spiral track sections back and forth by the child. There are no mechanical parts.

Another object is to provide a toy that requires a certain amount of skill to operate. The toy will not run by itself but some practice is required for a child to become proficient in its operation.

Another object of this invention is to provide a toy that requires the use of the child's hands so that he participates in the toy's action.

Still another object of this invention is to provide a toy that will appeal to both boys and girls equally as well, and will also appeal to children as young as the age of three.

Another object is to provide a toy that can be used both indoors and outdoors with no space required for its operation.

Another object is to provide a toy that can be operated by the child either sitting down or standing up, or when riding in an automobile, or when sitting in bed as when a child is recovering from an illness.

Another object is to provide a toy that can be used by a child for self entertainment. This same toy adapts itself equally well to either group entertainment or individual entertainment.

Another object is to provide a toy, that by the nature of its operation which requires coordination of the eyes and hands, would have some value in physical therapy work. This toy could be used in hospitals by children learning to reuse their hands or eyes.

Another object is to provide a toy that will be used by the child over and over again. This toy is not one that will be used once and then put aside never to be used again. Its durability and the fact that it challenges a child to develop his skill in its operation will cause him to return to it again and again.

Another object is to provide a toy that will appeal to all of the children in a household. Thus one toy would provide entertainment for all of the children in a home and its use would not be limited to certain age groups.

Other objects and a fuller understanding of the invention may be had by referring to the following description and claims taken in conjunction with the accompanying drawing in which the drawing is a side elevational view of the invention, partially sectioned to reveal a ball rolling down a spiral track within.

Referring now to the drawing, the toy is illustrated as identical units **10** and **11**. These units are composed of an inner core **12** and a spiral runway **13**, encased in a transparent tube **14**. Core **12** is axially offset with respect to spiral **13**, thus projecting at one end of the unit and leaving an axial recess at the other. Spirals **13** are preferably made in one piece from a rigid molded plastic of various colors strong enough to resist cracking and chipping.

The outer shell or tube **14** is clear transparent material, probably plastic that is bonded to the inner core and

spiral runway assembly to unite the parts permanently in position. This outer shell, when made of proper plastic material, will resist scratching and cracking and the squeezing pressure of a child's hand. Metal balls **15** are a heavy ball-bearing type steel ball of proper diameter so they will have suitable clearance to allow them to roll freely around and down the track.

To use this toy, unit **10** is held by one hand perpendicular to the body. The other hand picks up the metal ball and inserts it into the top of unit **11**. The ball will start to roll down the spiral track, and is confined to the track by the transparent outer shell. As the ball begins its descent, the other hand picks up unit **14** and inserts the top projection of core **12** into the bottom axial recess of the unit **10**, holding one piece in each hand and forming a continuation of the spiral runway as both pieces are joined together. When the ball reaches the end of unit **10** it will drop down into unit **11** and continue on its way. As soon as the ball starts down unit **11**, the top section or unit **10** is pulled up and away from unit **11** and moved with one hand in a circular motion around and down to the bottom of unit **11** where the top peg of unit **10** is inserted into the axial recess of unit **11**. At the same time the hand holding unit **11** is moved up to eye level so the progress of the metal ball can be followed until it traverses unit **11** and drops down again into unit **10**.

This is a repetitive process and the rotation of unit **10** and unit **11** is kept up until the user tires or until rotation of the pieces is not made fast enough and the ball falls out of the spiral track assembly.

The operation of this toy requires the constant use of both hands and eyes. Otherwise, once coordination is lost the switching of the two pieces will not be made at the proper time and the user will be required to start over again.

As soon as the child becomes proficient at operating the toy using one ball, two balls can then be started down the track at the same time one behind the other. If the user has the necessary skill and coordination he could continue to add balls trying to see how many could be kept in continuous motion at one time.

Although the invention has been described in its preferred form with a certain degree of particularity it is understood that the present disclosure of the preferred form has been made only by way of example and numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention hereinafter claimed.

What is claimed is:

1. An amusement and training device, comprising, a spiral ramp track having a first and second open end, said spiral track having a longitudinal axis, a stud lying along the axis of said track and projecting beyond said first end, and said track having a recess extending into said track from said second end along said axis, said recess shaped and dimensioned to receive a stud of the type and dimension of its opposite end in a freely separable close fit, whereby two or more such devices may be loosely jointed to form a continuing spiral track which will guide a spherical ball along the track of one device to the track of another.

2. An amusement and training device comprising, a spiral ramp track having a central longitudinal axis, guide retainer means confining a ball on said track to a spiral course around said axis, said ramp track beginning at an open end of the device and spiralling in a continuous spiral form to an opposite end opening to space for discharge of rolling marbles from the device, and releasable means at each end of said device adapted to

permit a plurality of such said devices to be held loosely jointed end-to-end to form a continuing spiral track which will guide a spherical ball along the track of one device to the track of another, said devices being joinable quickly to enable shifting of the device while a ball is rolling along the ramp of one device.

3. An amusement and training device comprising, a first and second spiral ramp track in loosely jointed end-to-end relationship, each of said ramp tracks having a central longitudinal axis, guide retainer means confining a ball on said track to a spiral course around said axis, said ramp track beginning at an open first end of the ramp track and spiralling in a continuous spiral form to an opposite second end opening for discharge of rolling balls from the ramp track, said first end having a female coupling means and said second end having a male coupling means, said second end of said first ramp track being joined to the first end of said second ramp track in a quick disconnect relationship, and said first end of said first ramp track being similarly quickly joinable to said second end of said second ramp track by axial alignment of said first and second ramp tracks, whereby said first and second ramp tracks may be shifted in their order of connected alignment while a ball device is rolling along the ramp of one of the devices to thereby keep the ball rolling through one and then the other so long as operation dexterity permits.

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