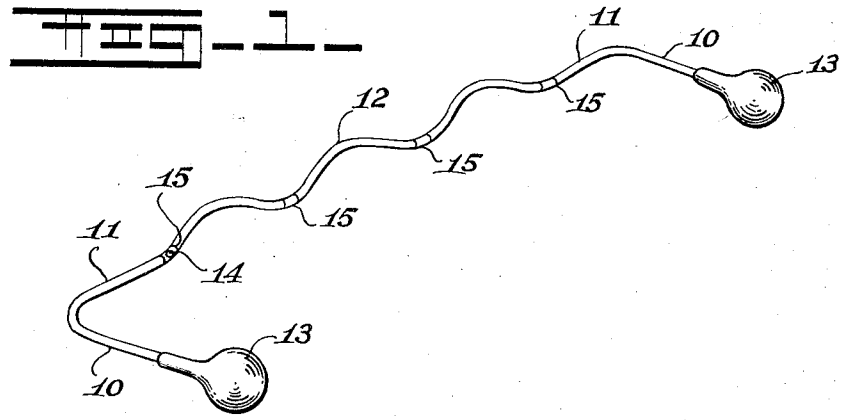
Dec. 29, 1959 T. F. MARCHIONDA 2,919,135

PNEUMATIC SKILL TOY

Filed May 28, 1957

FIG. 1



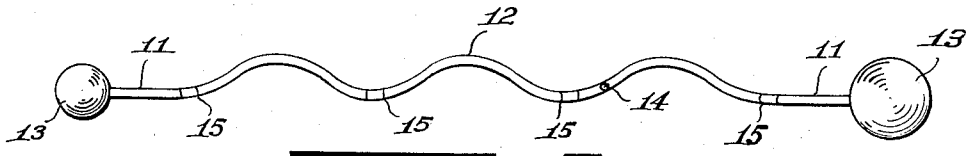


FIG. 2

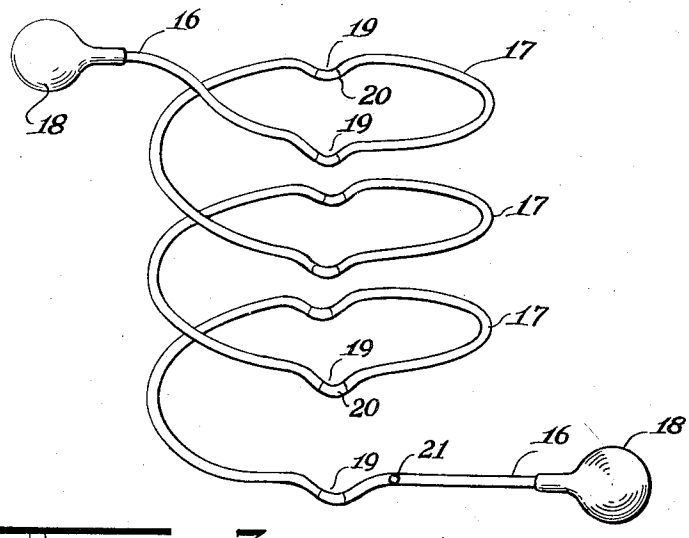


FIG. 3

INVENTOR.

Tony F. Marchionda

BY

W. B. Harpman

ATTORNEY.

United States Patent Office 2,919,135 Patented Dec. 29, 1959

2,919,135

PNEUMATIC SKILL TOY

Tony F. Marchionda, Struthers, Ohio

Application May 28, 1957, Serial No. 662,144

5 Claims. (Cl. 273—119)

This invention relates to a toy and more particularly to skill toy in which air pressure is used to move an object to predetermined locations along a tortuous tubular path.

The principal object of the invention is the provision of an inexpensive, easily constructed, amusing skill toy.

A further object of the invention is the provision of a skill toy comprising a section of transparent tubing having expansible air bladders secured to its opposite ends and a ball disposed in the tubing for movement by air pressure in the tubing.

A still further object of the invention is the provision of a pneumatic skill toy in which manipulation of a pair of resilient air bladders secured to the opposite ends of a section of transparent tubing actuates an object confined in the tubing.

The pneumatic skill toy disclosed herein comprises a simple and inexpensive device which may be easily formed from a section of transparent plastic tubing which is formed in a desired configuration and includes a plurality of objectives positioned therealong.

Rubber balloons or the like secured to the opposite ends of transparent tubing are manipulated by the player to cause air currents to flow back and forth in the tubing and move a ball captive therein. An unusual and novel action is obtained in that air moved in one direction through the tubing as by sufficiently collapsing one of the balloons on one end moves the ball and at the same time the air expands the balloon on the opposite end so that if caution is not employed the resilient quality of the expanded balloon will direct the additional air therein backwardly through the tubing and alter the position of the ball or playing piece therein.

Skill is therefore required to manipulate the ball to the desired plurality of goals or objects along the tubing.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view of a pneumatic toy formed in accordance with the invention.

Figure 2 is a side view of the toy shown in Figure 1.

Figure 3 is a perspective view of a modified form of pneumatic toy.

By referring to the drawing and Figures 1 and 2 in particular it will be seen that a section of transparent plastic tubing which is substantially rigid is indicated by the numeral **10** and that it has spaced sections **11—11** on a common center line with an intermediate undulating section **12** in communication therewith, it being observed that the end sections of the tubing **10** are bent at right

angles to the sections **11—11** and that resilient inflatable air bladders **13—13** are secured to the ends of the tubing **10**. The resilient air bladders **13—13** may take the form of rubber balloons.

A ball **14**, the outer diameter of which is slightly smaller than the diameter of the transparent tubing **10**, is disposed within the same and is movable therethrough by air currents occasioned by squeezing one or the other of the air bladders **13—13**.

Objectives comprising goals **15—15** are formed by markers or other suitable indicia on the tubing at desired locations therealong. An object of the game which may be played with the skill toy is to position the ball **14** progressively through the several markers **15—15**.

It will occur to those skilled in the art that the pneumatic skill toy may take any form or shape and that the action of the ball **14** in the tubing will be entertaining to the player or players in varying degree, depending upon the actual shape of the transparent tubing employed.

In Figure 3 of the drawing an alternate shape is disclosed with respect to that shown in Figures 1 and 2 wherein a section of transparent tubing **16** is formed in a plurality of superimposed spaced convolutions **17—17**.

Expandable resilient air bladders **18—18** are secured to the opposite ends of the tubing **16** and a plurality of depressions **19** having suitable indicia **20** are provided in each of the convolutions **17**. A ball **21**, captive in the tubing, forms the playing piece.

Alternate forms and shapes of the tubing will occur to those skilled in the art including straight horizontal sections and straight vertical sections and the goals or objectives **15** and **20**, respectively, may include electric contacts which may be closed by the balls **14** and **21** as will occur to those skilled in the art.

A game on the skill toy may be played by an individual who will grasp both of the air bladders and direct the action of the captive ball thereby. Alternatively, two players may control the two air bladders on the ends of the tubing or, as many additional players may enter the game as desired, taking turns at the respective air bladder positions.

It will thus be seen that a novel and interesting pneumatic toy has been disclosed which meets the several objects of the invention.

Having thus described my invention, what I claim is:

1. A toy comprising a section of transparent tubing incorporating a plurality of inclines intermediate its ends, a sphere of a diameter slightly less than the interior diameter of said transparent tubing disposed therein and movable therealong, and air bladders secured one to each end of said transparent tubing whereby air displaced from one of said bladders will move said sphere toward the other of said bladders, an objective positioned on said tubing between a pair of said inclines.

2. A toy comprising a tortuous-shaped section of transparent tubing of even inner diameter, a sphere disposed in said tubing, air bladders secured one to each end of said tubing whereby movement of the air from one air bladder will move said sphere toward the other air bladder through said tubing, an objective positioned on said tortuous-shaped section of tubing.

3. A toy comprising a section of transparent tubing of uniform diameter formed in an ascending spiral, said tubing having at least one downwardly curving arcuate section in each convolution of said spiral, resilient air containers attached to the opposite ends of said tubing, a sphere disposed in said tubing for travel therein whereby air moved from one of said resilient air containers through said tubing to the other of said containers will move said sphere, a plurality of objectives positioned in spaced relation longitudinally of said tubing.

4. A toy comprising a section of transparent tubing incorporating a plurality of inclines intermediate its ends, a sphere of a diameter slightly less than the interior diameter of said transparent tubing disposed therein and movable therealong, indicia on said tubing at longitudinally spaced points therealong defining goals and air bladders secured one to each end of said transparent tubing whereby air displaced from one of said bladders will move said sphere toward the other of said bladders.

5. A toy comprising a section of transparent tubing of uniform diameter formed in an ascending spiral, said tubing having at least one downwardly curving arcuate section in each convolution of said spiral, indicia on said downwardly curving arcuate section indicating an objective, resilient air containers attached to the opposite ends of said tubing, a sphere disposed in said tubing for travel therein whereby air moved from one of said resilient air containers through said tubing to the other of said containers will move said sphere.

References Cited in the file of this patent

UNITED STATES PATENTS

293,898	Martin	Feb. 19, 1884
1,033,094	Fuda	July 23, 1912
1,204,132	Clemans	Nov. 7, 1916
2,738,616	Windle	June 26, 1953
2,752,725	Unsworth	July 3, 1956

FOREIGN PATENTS

270,562	Switzerland	Dec. 1, 1950