March 13, 1951 E. OSPINA-RACINES 2,544,720

PNEUMATIC TOY

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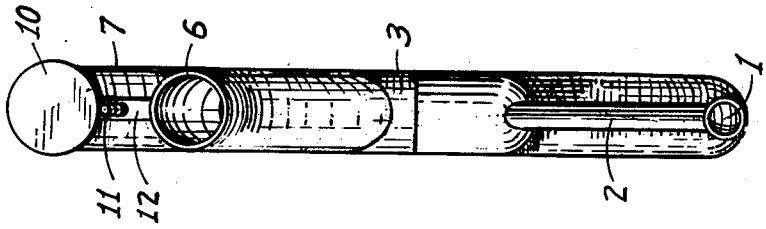


Fig. 2

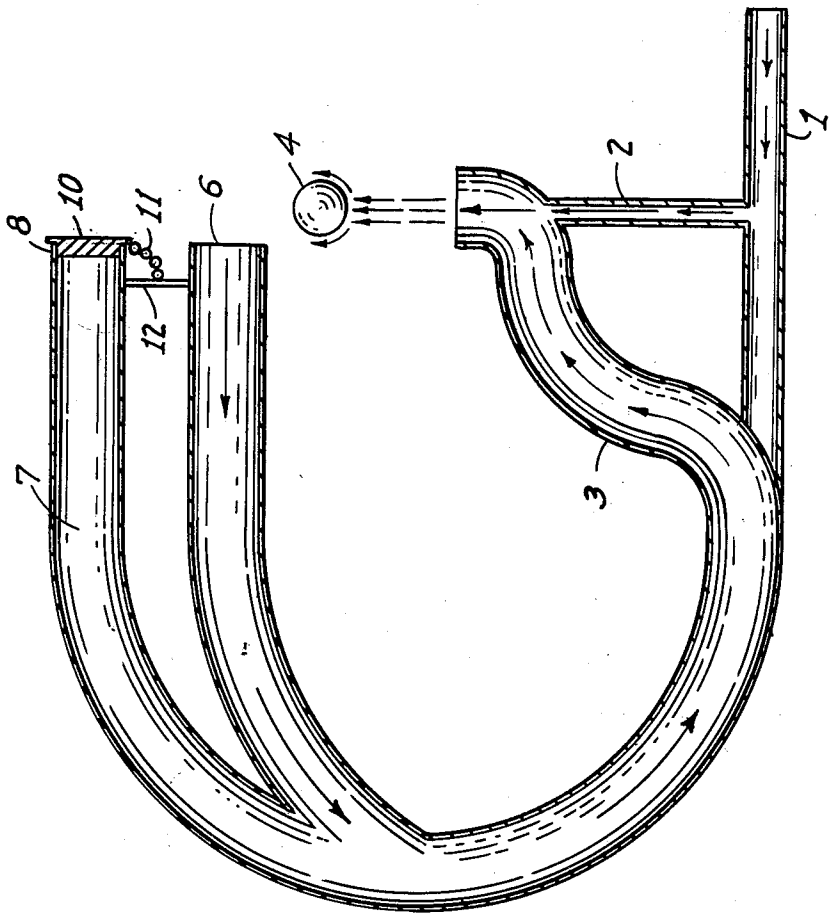


Fig. 1

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PNEUMATIC TOY

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10 Claims. (Cl. 46—44)

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The present invention relates to a novel amusement device eminently suited for use as a toy or game or as a display to attract public attention, for example in conjunction with advertising signs or show windows.

Further possibilities for use of my invention will become apparent from the following description read in conjunction with the drawing, in which:

Fig. 1 is a sectional view of one embodiment of my invention, and

Fig. 2 is a right side view of the embodiment shown in Fig. 1.

Referring to the drawing, in which my invention is illustratively shown in a form suitable for use as a game, toy or amusement device, 1 is a blow tube through which a current of air is blown by the person using the device, the other end of tube 1 being closed, for instance as shown in the drawing, by the outer wall of tube 3; the air passes upwards through tube 2. A light ball 4, made for example of cork or of hollow construction, is sustained in mid-air, as shown in Fig. 1, on this air jet.

It is to be noted that this air jet aspirates the air in tube 3, thus causing a flow of air in said tube in the direction indicated by the arrows (Fig. 1). It is thus evident that when ball 4 is adjacent end 6 of tube 3, the ball will be sucked laterally into said tube 3 and travel through said tube in the direction of the air flow within said tube as indicated by the arrows. If the player or person using the device now continues blowing into blow tube 1, the flow of air occasioned, as aforementioned, in tube 3 causes ball 4 to be drawn upwards through tube 3 to a position in said tube directly above the air jet emerging from tube 2, whereupon the ball rises vertically, supported on said air jet. The blowing of tube 1 for the raising of ball 4 out of tube 3 requires the application on the part of the player of a certain degree of skill, inasmuch as if too much blowing force is applied, the danger exists that ball 4 will move laterally off of the air jet rising from tube 2 and fall free. On the other hand, insufficient blowing strength will fail to raise ball 4 out of tube 3. Similarly skill is required once ball 4 is raised out of tube 3 in the variation by the player of the blowing strength, in order that the ball will not have so great a velocity adjacent aspirating end 6 of tube 3 to prevent the ball from being sucked into said tube through said end.

In order to create still more interest and permit the application of still higher skill, tube 3

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may be developed as a branched tube, an additional branch 7 being provided, the open end 8 of which is, for instance, aligned with end 6 of tube 3, thus providing two alternative lateral return routes for ball 4, the selection of which depends on whether ball 4 is supported on the fluid jet emerging from tube 2 adjacent end 8 of branch 7, or end 6 of tube 3. A plug 10 possibly secured by chain 11 to support 12 may be provided to permit end 8 of branch 7 to be plugged, as shown in the drawing, thus making only tube 3 available for the lateral aspiration and return of ball 4. Alternatively, end 6 of tube 3 may be plugged so that only end 8 of branch 7 is free for the lateral aspiration and return of ball 4.

It is evident that this embodiment of my invention constitutes a fascinating and intriguing novel amusement device. Due to the uniqueness of its operation my invention is also extremely well suited as a means to direct public attention to advertising signs, show windows, displays, etc., in conjunction with which it is employed. When used for this purpose tube 1 may, for instance, be connected to a source of pressure air, such as a blower (not shown in the drawing), and tubes 2 and 3 so inter-dimensioned with respect to the weight of ball 4 that a given constant air delivery from the air source causes ball 4 to move upwards out of tube 3 and to move adjacent opening 6 of tube 3 with a velocity insufficient to prevent lateral aspiration of said ball into said tube.

Instead of employing air as the operating fluid to form the jet upon which the ball is suspended, a liquid such as water, possibly colored water, may be caused to rise from tube 2, emerging as a liquid jet of sufficient strength to support ball 4 adjacent end 6 of tube 3, so as to cause said ball to be aspirated laterally into said tube and return to the liquid column, due to the air flow occasioned in tube 3 by the water flow.

Numerous other embodiments of my inventive idea will suggest themselves and it is not my purpose that the foregoing description, given solely by way of illustration and not of limitation, be limited by anything save the appended claims or their equivalent, in which claims I have endeavored to claim broadly all inherent novelty.

I claim:

1. An amusement device comprising a tube adapted for flow of a fluid jet thereout and a tubular conduit, one end of which conduit debouches into said fluid jet and is in aspirated relationship to said fluid jet so as to establish flow

in said tubular conduit, the other end of said tubular conduit being in aspirating relationship to said fluid jet at a point further from the mouth of said tube than said first end.

2. An amusement device comprising a tube adapted for flow of a fluid jet thereout, said fluid jet being adapted to support an object thereon, and a tubular conduit, one end of which debouches into said fluid jet and is in aspirated relationship to said fluid jet so as to establish flow in said tubular conduit, the other end of said tubular conduit being in aspirating relationship to said fluid jet at a point further from the mouth of said tube than said first end, said conduit being of sufficient free cross-section to permit passage of said object therein between said first and second ends.

3. An amusement device comprising a tube adapted for flow of a fluid jet thereout and a tubular, branched conduit, one branch of which debouches into said fluid jet and is in aspirated relationship to said fluid jet so as to establish flow in said branched conduit, each of the ends of the other branches of said conduit being in aspirating relationship to said fluid jet at a point further from the mouth of said tube than said first branch.

4. An amusement device comprising a tube adapted for flow of a fluid jet thereout, a branched conduit, one branch of which debouches into said fluid jet and is in aspirated relationship to said fluid jet so as to establish flow in said conduit, each of the other branches of said conduit being in aspirating relationship to said fluid jet at a point further from the mouth of said tube than said first branch, and at least one closure member for said other branches.

5. An amusement device comprising a tube adapted for flow of a fluid jet thereout and a branched conduit, one branch of which debouches into said fluid jet and is positioned in aspirated relationship to said fluid jet so as to establish flow in said conduit, the other branches of said conduit being in aspirating relationship to said fluid jet at points consecutively further from the mouth of said first tube than said first branch.

6. An amusement device comprising a tube adapted for flow of a fluid jet thereout, a tubular conduit through one end of which said jet passes axially so as to aspirate flow in said conduit, the other end of said conduit being in aspirating relationship to said fluid jet.

7. An amusement device comprising a tube adapted for flow of a fluid jet thereout, said fluid jet being adapted to support an object thereon, and a tubular conduit through one end of which said jet passes axially so as to aspirate flow in said tube, the other end of said conduit being in aspirating relationship to said fluid jet and said conduit being of sufficient free cross-section to permit passage therein of said object between said first and second ends.

8. An amusement device comprising a tube adapted for flow of a fluid jet thereout, said fluid jet being adapted to support an object thereon, a tubular branched conduit, through the end of one branch of which said jet passes axially so as to aspirate flow in said conduit, each of the other branches of said conduit being in aspirating relationship to said fluid jet, said conduit being throughout of sufficient unimpeded cross-section to permit passage therethrough of said object.

9. An amusement device comprising a tube adapted for flow of a fluid jet thereout, said fluid jet being adapted to support an object thereon, a tubular branched conduit, through the end of one branch of which said jet passes axially so as to aspirate flow in said conduit, each of the other branches of said conduit being in aspirating relationship to said fluid jet, said conduit being throughout of sufficient unimpeded cross-section to permit passage therethrough of said object, and at least one closure member for said other branches.

10. An amusement device comprising a tube adapted for flow of a fluid jet thereout, said fluid jet being adapted to support an object thereon, a tubular branched conduit, through the end of one branch of which said jet passes axially so as to aspirate flow in said conduit, the other branches of said conduit being in aspirating relationship to different parts of said fluid jet, the said conduit being throughout of sufficient unimpeded cross-section to permit passage therethrough of said object.

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