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[54] MOVING TARGET GAME

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[52] **U.S. Cl.** ..... **273/108,** 273/127 A

[51] **Int. Cl.** **A63b 71/00**

[58] **Field of Search** ..273/108, 102 R, 127 A, 127 D, 273/102 A, 102 AP, 102 PF, 102 PM, 102 S, 102 B, 127 R, 127 B, 127 C, 105.2, 120 R

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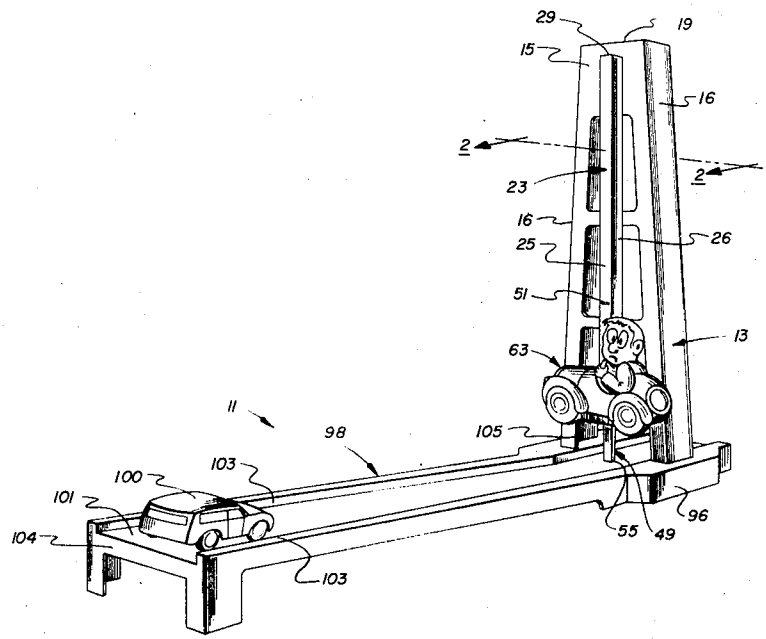
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[57] **ABSTRACT**

A game comprising a swinging pendulum having mounted thereon a segmented assembly whose segments are held together in cooperation with the pendulum. At least one segment of the assembly is spring loaded on the pendulum such that when a movable target section of the pendulum is truck by a toy car or other object properly aimed thereat the segmented assembly will fly apart.

9 Claims, 6 Drawing Figures



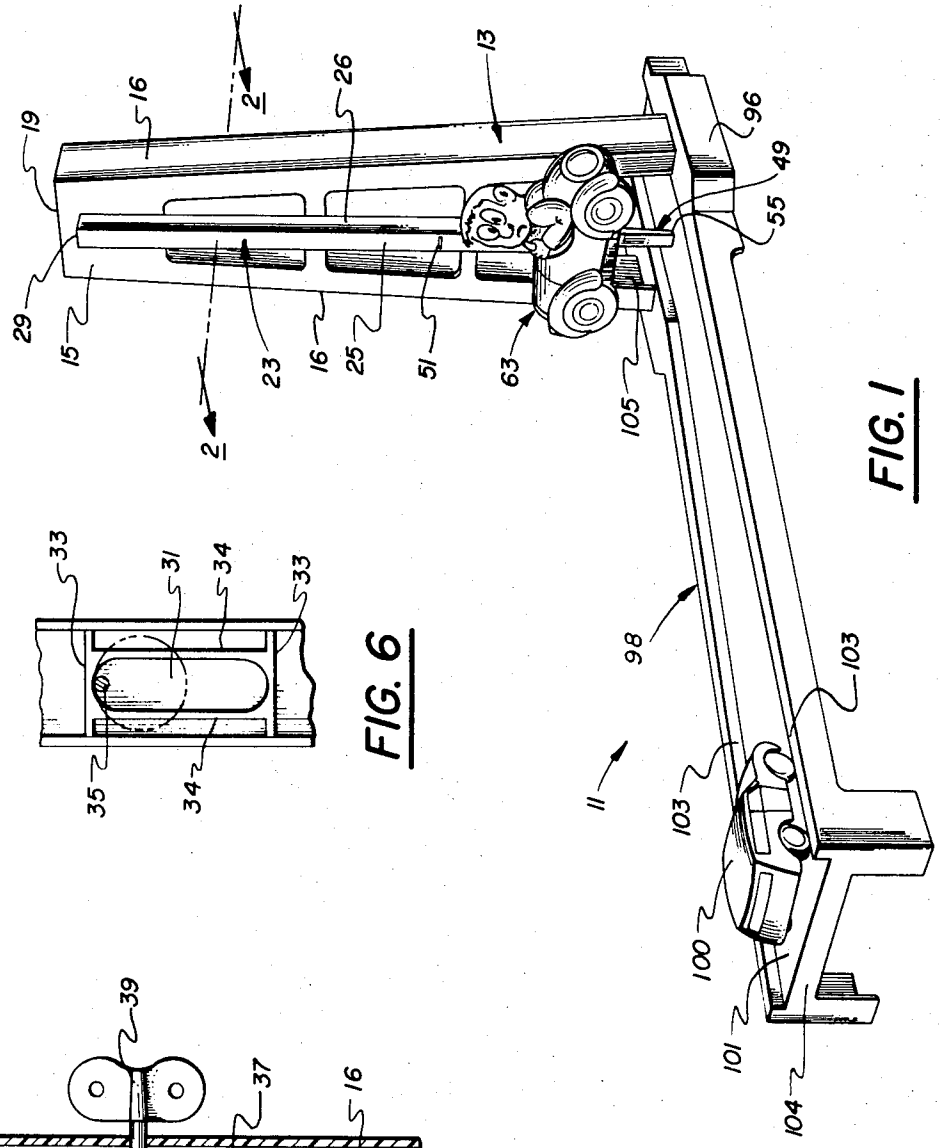


FIG. 1

FIG. 6

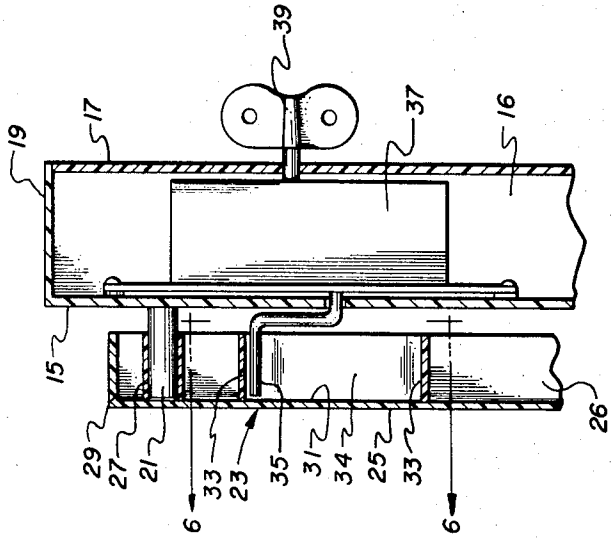


FIG. 2

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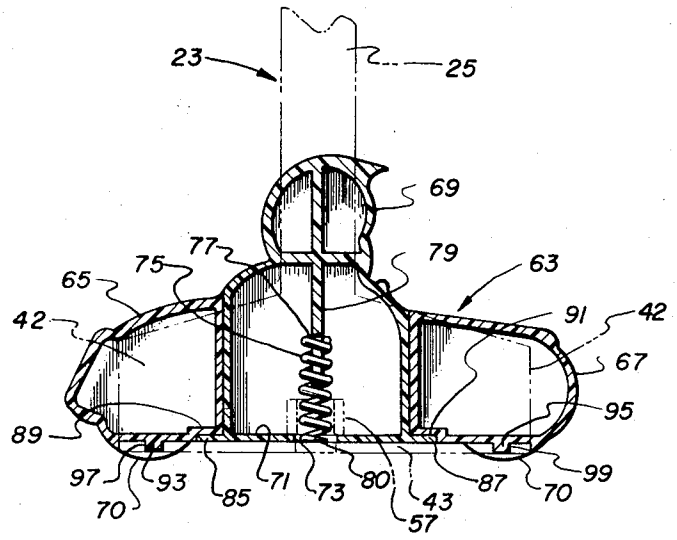


FIG. 4

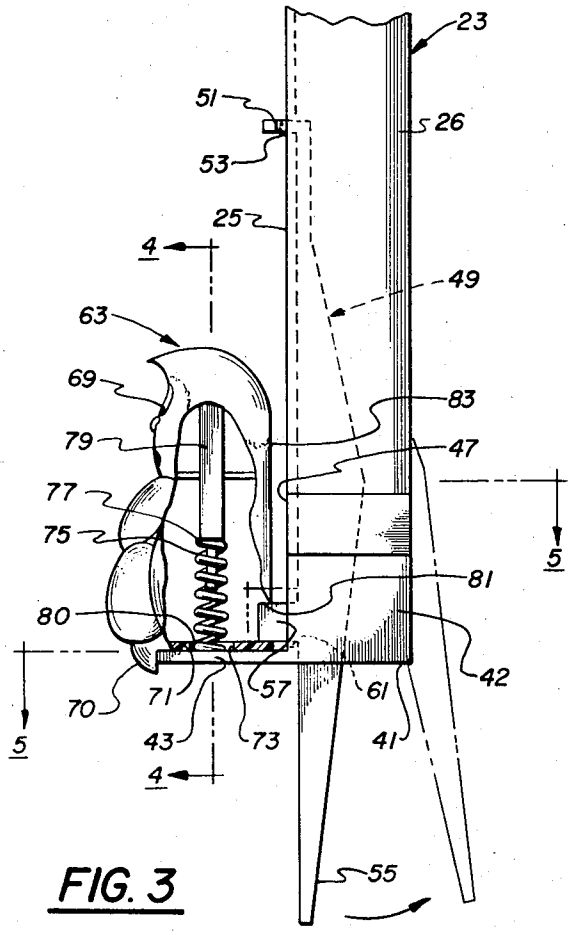


FIG. 3

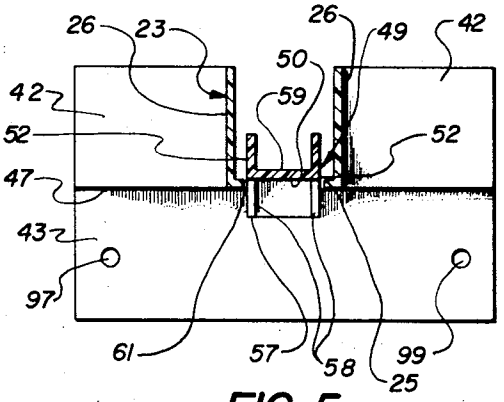


FIG. 5

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MOVING TARGET GAME

There have been various toys or games where a ball or other object is rolled to be aimed at a pin or other target to knock the pin or target down. Further, there have been games with moving targets, however, these games mostly pertain to shooting gallery type operations where a blank is shot from a gun at the moving target attempting to knock it down. In most all of the prior games the target has consisted, as indicated, of a pin or some other type of element which is knocked off its base or into a collapsed position. There have been relatively few games wherein a moving target is utilized which does not require a gun in a shooting gallery type operation. The prior art games involving moving objects have generally not been suitable for small children. Firstly, because the utilization of a gun is often required. Even if the gun were not required, a child could not throw an object accurately enough to strike such a moving object. Additionally, a child's attention span is very short. If a child was repeatedly unsuccessful in aiming at a moving object he would become frustrated and quickly lose interest in the game.

The invention provides an interesting and relatively simple moving target game wherein it is relatively easy for the child to strike the target by rolling a toy car or the like. When the moving target is hit it causes an object to fly into segments which can then be easily and readily reassembled by the child, to be used again. The illustrated device comprises a pendulum suspended for side-to-side swinging movement. The pendulum supports the segmented object or assembly which has one or more of its segments spring loaded to cause the segments to fly outwardly when the assembly is actuated. The lower end of the pendulum comprises a target which moves transversely back and forth across the lower end of a ramp as the pendulum swings. The target is movably mounted and operable when it is moved to actuate the spring loaded assembly. Thus, in playing the game, the pendulum will swing back and forth carrying the segmented object and causing the target to traverse back and forth across the end of the ramp. The child rolls a toy car or ball down the ramp and thereby attempts to strike the target with the car, to cause the object segments to fly outwardly.

It is believed the invention will be further understood from the following detailed description and drawings in which:

FIG. 1 is a pictorial representation of a preferred embodiment of the device of this invention.

FIG. 2 is an enlarged cross sectional view taken generally along line 2—2 of FIG. 1.

FIG. 3 is an enlarged side view (partially broke away) of the lower portion of the pendulum and of the segmented assembly of the device of FIG. 1.

FIG. 4 is an enlarged cross sectional view of the segmented assembly taken generally along line 4—4 of FIG. 3.

FIG. 5 is a cross sectional view taken generally along line 5—5 of FIG. 3.

FIG. 6 is a cross sectional view taken generally along line 6—6 of FIG. 2.

Turning now to FIG. 1, there is seen the device 11 of this invention which comprises an upright vertical support structure 13 having a front wall 15, side walls 16, and a rear wall 17 as particularly seen in FIG. 2. Affixed adjacent the top 19 of the support structure 13

and extending normal to the front wall 15 is a horizontal support pin 21. Rotatably mounted on the pin 21 is an elongated pendulum 23 having a front wall 25 and side walls 26. A receptacle 27 formed adjacent the top 29 of the pendulum 23 receives the pin 21. Thus, the pendulum 23 is suspended on the pin 21 for side-to-side swinging movement. As shown best in FIGS. 2 and 6, an elongated, vertically extending channel 31 having top and bottom walls 33 and side walls 34 is formed on the pendulum a short distance below receptacle 27. The channel 31 receives and cooperates with an offset crank arm 35 of a spring motor mechanism 37 mounted in the upper end 19 of the support structure 13 to cause the pendulum to move. The spring motor mechanism 37 may be wound by a key 39 at the rear of the structure. The space between the side walls 34 of the channel 31 is smaller than the diameter of the circle travelled by the end of the crank arm 35. Thus, the circular motion of the arm 35 in the channel 31 achieves the desired side-to-side movement of the pendulum.

As seen in FIGS. 3, 4 and 5, the lower end of the pendulum has a side section 42 at each side. The bottom 41 of the pendulum has a forward extension 43 which provides a generally horizontal platform, the full width of the pendulum front wall 25 and the side sections 42. Extending upwardly from the rear of the extension 43 and formed by the lower portion of the front wall 25 of the pendulum and by the front walls of the side sections 42 is a vertical backup surface 47.

Pivotally mounted on the pendulum 23 is a vertical arm 49 which has a lower end 55 that extends downwardly from the lower end of the pendulum and forms a target. The arm 49 has a forwardly directed tabular portion 51 at its upper end which passes through an aperture 53 in the front wall 25 of the pendulum to pivotally support the arm. The aperture 53 is proportioned to allow the tabular portion 51 to rotate therein so that the arm 49 can move from a set position coaligned with the rear of the front wall 25 of the pendulum to a rearward actuating position shown in dotted outline in FIG. 3. As shown by the sectional view of FIG. 5, the arm has a front wall 50 and a pair of rearwardly extending side walls 52. The arm 49 is additionally provided with a forward extension 57 having a generally U-shaped cross section with a pair of side walls 58 that provide flat parallel upper and lower surfaces. The extension 57 passes through an aperture 61 in the front wall 25 of the pendulum just above the platform 43 as particularly seen in FIGS. 3 and 5. The bottom surface of the extension 57 is spaced a short distance above the platform 43.

FIG. 4 shows a typical segmented object or assembly 63 in the form of a toy car for mounting on the platform 43 of the pendulum. The segmented assembly 63 can, for example, be comprised of three segments, end segments 65 and 67, and a middle segment 69. Turning first to the middle segment 69, it is seen that it has a base 71 adapted to rest on the platform 43, when the assembly is in set condition. An aperture 73 is formed in about the center of the base 71. A coil compression spring 75 is affixed at its upper end 77 to a vertical support bar 79 which depends downwardly into the center of the open interior of the middle segment 69. When it is unrestrained, the opposite lower end 80 of the spring passes downwardly through the interior of middle seg-

ment 69 and through the aperture 73 in the base 71. When the middle segment 69 is placed on the platform 43, the spring 75 is compressed as shown in FIGS. 3 and 4. The middle segment 69 is held in place on the platform by means of the extension 57 interlocking with an opening 81 provided in a rear wall 83 of the middle segment 69 adjacent its base. This prevents the spring 75 from lifting the segment 69 off of the platform 43. The end segments 65 and 67 are interlocked with the middle segment 69 when the assembly is in its set position as shown in FIG. 4. In this connection, the middle segment 69 has a pair of outwardly extending flanges 85 and 87 on either side of the base 71. The flanges 85 and 87 are received respectively in corresponding recesses 89 and 91 provided at the lower inside of the end segments 65 and 67. Additionally, downwardly protruding extensions 93 and 95 on end segments 65 and 67 are received in corresponding apertures 97 and 99 in the platform 43 (FIGS. 4 and 5). The interlocking of the end segments with the platform 43 in this manner prevents the assembly from being horizontally displaced, while the interlocking of extension 57 with the middle segment 69 prevents the vertical movement of that segment. As shown in FIG. 3, the segments may have a downward extension portion 70 along their lower front edge to lie in front of the front edge of the platform 43 to conceal the platform and to aid in positioning the segments.

The upright pendulum support structure 13 may be positioned at the lower end 96 of a ramp 98 as shown in FIG. 1. The illustrated ramp 99 has a center channel or pathway 101 formed between side walls 103. The front end 104 of the ramp 99 may be elevated so that a toy car 100 can be rolled downwardly along the pathway 101 toward the support structure and the pendulum. The lower end of the support structure 13 has a central opening 105 through which the pathway 101 extends. As the pendulum 23 swings from side to side, the target 55 moves at least from one side to the other of the pathway 101. The target 55 clears the upper surface of the pathway but moves across the path of the toy car rolling down the pathway. The game user attempts to roll the car down the pathway to strike the moving target 55. If the target 55 is struck, the arm 49 will be moved to the dotted rearward position as seen in FIG. 3. This disengages the extension 57 from the middle segment 69 and thereby allows the compressed spring 75 to propel the segment 69 upwardly off the platform 43. When the middle segment 69 moves upwardly, the flanges 85 and 87 concurrently lift the two end segments 65 and 67 due to the engagement of the flanges with the recesses 89 and 91. The overall effect is for the three segments to rapidly lift off the platform and then separate to simulate the impression of the car of the assembly 63 exploding.

After the car 63 has been propelled off of the pendulum, it can be readily reassembled by first placing the middle segment 69 in place and locking it to the pendulum through the extension 57 being seated in opening 81. Once the middle segment 69 is thus locked in place, the two side segments 65 and 67 can then be disposed on either side and properly seated on the platform for repeated use of the toy.

The width of the pathway 101, the size of the rolled car 100, and the movement of the pendulum and target may be controlled to provide the desired degree of skill to hit the target while not making it too difficult so as to frustrate the child user.

I claim:

1. A toy comprising:
a segmented object,
means for moving said segmented object,
means for holding said segmented object together,
a target means which releases said holding means when struck,
said means for moving said object being a pendulum.

2. The toy of claim 1 wherein:
said target means is connected to said pendulum and moves therewith.

3. A game comprising:
a segmented object,
means connected to said object for effecting continuous movement of said object, said means cooperating with at least one segment of said object to interlock with said object so that when said means is separated from said object, said object breaks into its segments,
said means for moving the object including a pendulum,
said pendulum having a target portion depending downwardly therefrom and movable relative to the remainder of said pendulum.

4. The game of claim 3 wherein:
said object is seated on a portion of said pendulum.

5. The game of claim 4 wherein:
said movable target has a portion thereof which cooperates with said object and said pendulum, to hold said object on said pendulum, whereby when said arm is moved relative to said pendulum, said object is released therefrom.

6. The game of claim 3 further comprising:
a ramp means, with said pendulum extending upwardly adjacent one end thereof so that said target moves in the path of said ramp means.

7. The game of claim 6 wherein:
said target supported to move relative to said pendulum parallel to said ramp.

8. The game of claim 6 further comprises:
a toy vehicle for moving down said ramp to strike said target.

9. A game comprising:
a pendulum,
a target means mounted on and depending downwardly from said pendulum for movement relative to said pendulum,
an object cooperatively held on said pendulum by a portion of said target means,
whereby movement of said target means relative to said pendulum releases said object therefrom.

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