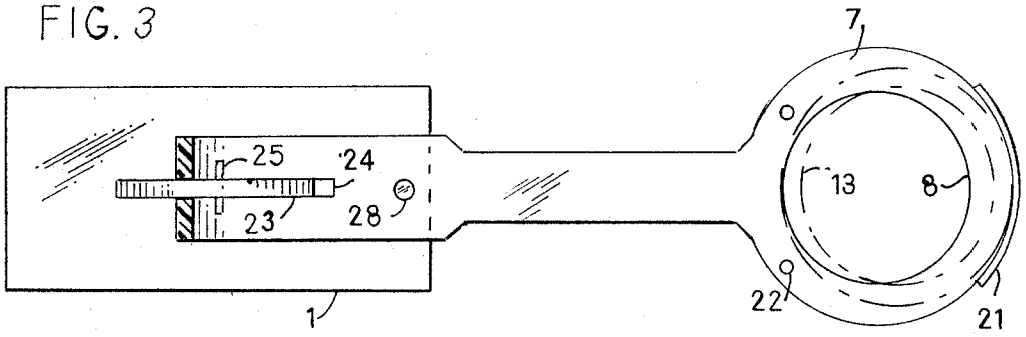
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COMBINED ROLL-OVER TARGET AND AUTOMATIC RING-TOSSING AMUSEMENT DEVICE

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FIG. 3



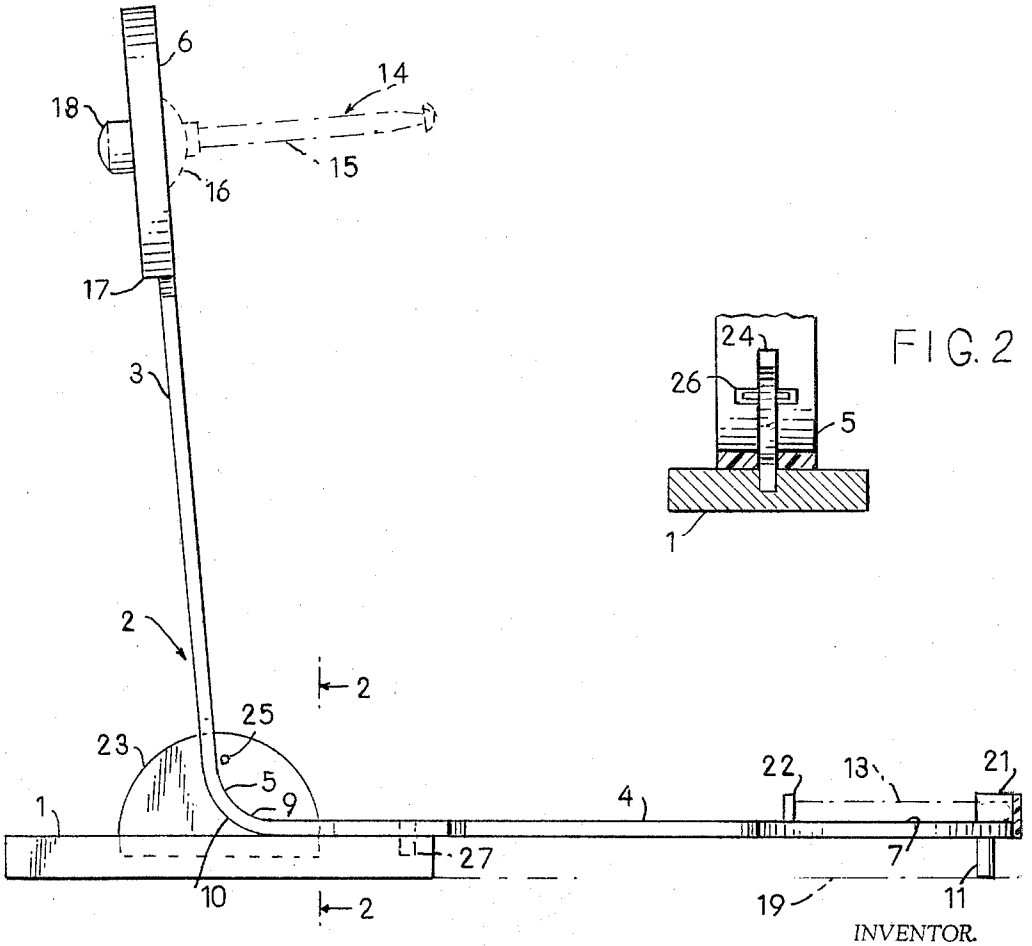


FIG. 1

FIG. 2

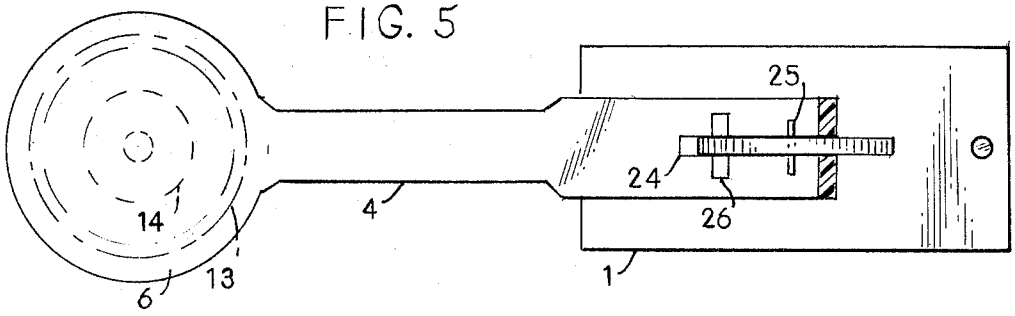
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FIG. 5



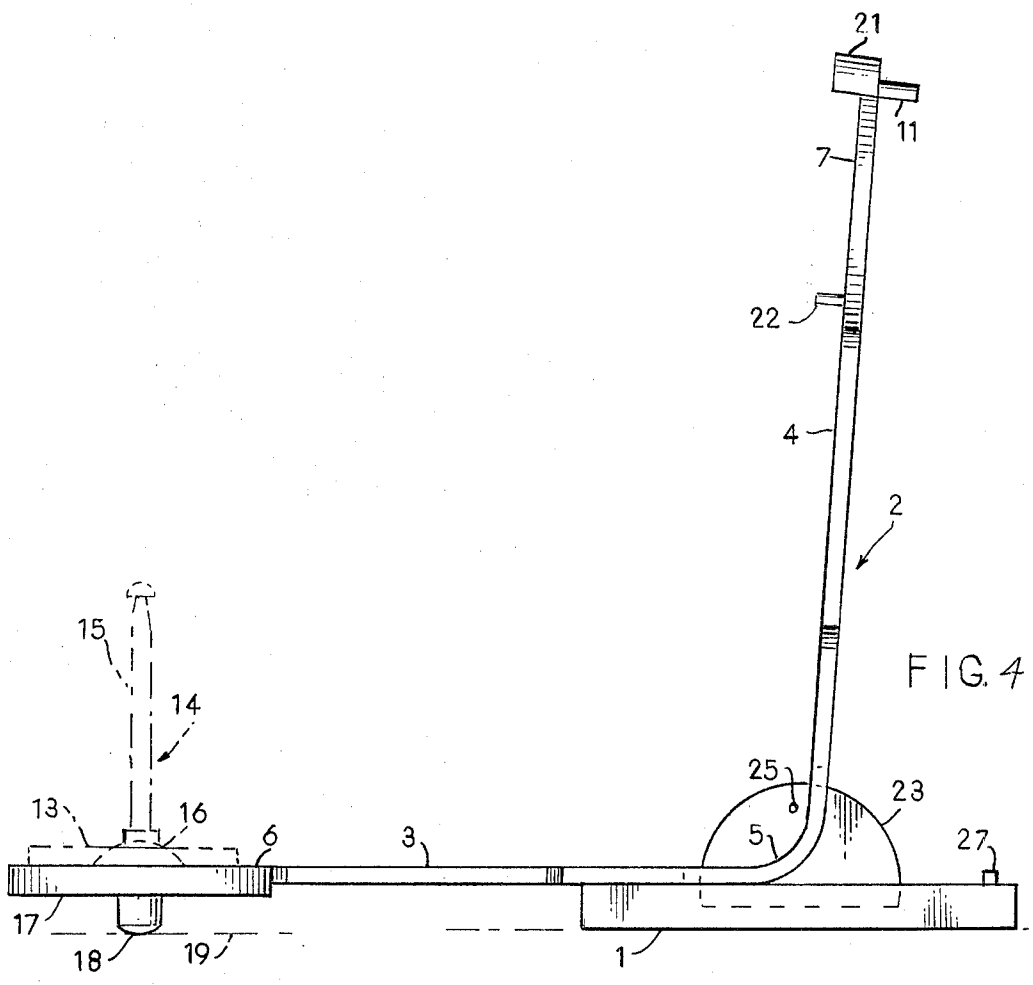


FIG. 4

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COMBINED ROLL-OVER TARGET AND AUTOMATIC RING-TOSSING AMUSEMENT DEVICE

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8 Claims. (Cl. 273—102.1)

This invention relates to ring tossing and dart throwing amusement devices. It is more particularly concerned with an amusement device in which a target is adapted to roll over under the impact of a dart and in doing so to cause a ring to be automatically tossed to ring over the dart.

An object of this invention is to provide an amusement device by means of which one can obtain both practice and pleasure in throwing a dart at a roll-over target and, as a consequence of hitting the target, causing a ring to be automatically tossed relative to the dart and target.

In accordance with this invention there is provided a roll-over angular member having a pair of arms substantially at right-angles to each other and joined by an arcuate vertex portion, one of the arms normally having an upright position and having at its free end a target fact for a dart, the other arm normally having a prone position and having at its free end a rest for a toss-ring, wherein the roll-over member is adapted under impact of a dart against the target face to roll over on its vertex portion and thereby cause the arm having the rest for the toss-ring to rise upwardly and toss the ring in the direction of the target face to ring over the dart.

In the accompanying drawings:

FIG. 1 is a side elevational view showing the normal position of an amusement device embodying the invention, and showing the target face thereof to have just been struck by a dart;

FIG. 2 is a fragmentary sectional view taken on the line 2—2 of FIG. 1;

FIG. 3 is a plan view of the toss-ring arm, this arm being shown in prone position in FIG. 1;

FIG. 4 is a view similar to that of FIG. 1 but showing the roll-over member of the amusement device to have rolled over under the impact force of the dart and in rolling over to have caused a toss-ring to be thrown from the toss-ring arm over the dart; and

FIG. 5 is a plan view of the target arm, this arm being shown in prone position in FIG. 4.

In the accompanying drawings the illustrated amusement device embodying the invention includes a supporting base 1 upon which rests a roll-over member 2. The later has a pair of arms 3 and 4 of substantially equal length disposed substantially at right-angles to each other and integrally connected at their lower ends by means of a vertex portion 5. The arms and vertex portion are formed of a single strip of firm flat material. The arm 3, also called the target arm, terminates at its free end in a disk or circular portion 6 which defines a target face. A bulls-eye may, if desired, by painted centrally of the target face. The other arm 4, also called the toss-ring arm, terminates at its free end in a disk or ring-plate 7 having a diameter corresponding to that of the target face 6. A central opening 8 in the ring-plate serves to lighten the weight of the latter; it also serve as a peep hole through which the target face may be sighted. The vertex portion 5 is arcuate, and has curved or rounded inner and outer surfaces respectively designated 9 and 10.

The roll-over member 2 has a normal position resting on the base 1, as in FIG. 1, in which the target arm 3 and its target face 6 have an upright position, and in which the toss-ring arm 4 and its ring-plate 7 have a prone position lying in part upon the flat surface of the base 1. A peg 11 depending integrally from the under

or outer face of the ring-plate 7 is adapted to rest upon the table surface, indicated by the broken line 19. The peg 11 is desirable, particularly where the toss-ring arm 4 extends substantially beyond the base 1, as it then serves to avoid downward tilting of the toss-ring arm relative to the base 1.

The angle between the arms 3 and 4 is preferably a little greater than, and not less than ninety degrees. It is desired that the target arm 3 in the normal position of the roll-over member will be upright and inclined away from the vertical to such an extent that the roll-over member will readily roll over on its vertex portion 5 when the target face 6 is subjected to a relatively light impact force. Here, the angle between the arms 3 and 4 is about ninety-five degrees.

The inner surface of the ring-plate 7 is designed to serve as a rest or support for a toss-ring 13, shown in broken line in FIGS. 1, 3, 4, and 5. The toss-ring is formed of lightweight material, preferably plastic. The target face 6 is designed to serve as a target for a dart type projectile which is adapted to stick to the target face on impact. A conventional dart suitable to this end is shown at 14 in broken line in FIGS. 1, 4, and 5. It comprises a shank portion 15 having a suction rubber cup 16 at its head end. The dart is adapted to be shot or projected from a conventional spring loaded gun, not shown, against the target face 6. Upon striking the target face the suction cup 16 of the dart will hold fast to the target face and the shank portion 15 will extend at right-angles relative to the target face, as indicated in FIG. 1. The impact force of the dart against the target face will unbalance the roll-over member 2. The latter will thereupon roll over on its vertex 5, dropping the target arm as it does so to prone position and swinging the toss-ring arm to upright position. In this action the toss-ring is caused to be thrown free of the ring-plate 7 in the direction of the target face 6 to ring over the shank 15 of the dart, as indicated in FIG. 4.

The disk portion of the target arm defining the target face 6 is thickened rearwardly as at 17. This provides a solid weighted backing to the target face, and thus serves to prevent the target face from immediately moving ahead of the dart upon the instant of impact; and, consequently, the weighted backing to the target face enables the suction cup of the dart to invariably stick to the target face upon impact. The thickened portion 17 also serves to load the terminal end of the target arm. This added weight causes the target arm to drop rapidly as the roll-over member 2 becomes unbalanced, and thus causes the toss-ring arm to swing sharply to upright position and throw the toss-ring 13 in the direction of the target face to ring over the dart. A rubber member 18 fixed to the center of the underside of the target face serves to abut the table surface 19 and cushion the fall of the target arm as the latter drops during the roll-over action of the roll-over member 2.

The longitudinal axis of the roll-over member 2 extends through the center of the target face 6, the target arm 3, the vertex portion 5, the toss-ring arm 4, and the ring-plate 7.

The toss-ring 13 may be rested anywhere upon the inner surface of the ring-plate 7 that suits the dictates of the player. For example: it may be located with its periphery in abutment with an arcuate member 21 fixed to the periphery of the rear end of the ring-plate, as indicated in FIG. 3; it may be located with its periphery in abutment with a pair of pegs 22 projecting out from the forward area of the inner surface of the ring-plate; or it may be placed anywhere in between the arcuate member 21 and the pegs 22.

Means is provided on the supporting base 1 to guide the roll-over member in its rolling action. This means com-

prises a semi-circular disk 23 which is rigid with the base 1 and extends upright at right-angles to the surface of the latter. Centrally and longitudinally of the vertex portion 5 of the roll-over member extends a slot 24 in which the semi-circular disk or guide member 23 is slidably received. As the roll-over member 2 rolls on its vertex portion 5 relative to the guide member 23, the opposed longitudinal walls of the slot 24 bear against opposite faces of the guide member, thus avoiding any side to side motion of the roll-over member. The slot 24 is relatively longer than the diameter of the guide member 23 so as to enable the roll-over member to roll relative to the periphery of the giude member without dragging.

A stop pin 25 projects through opposite faces of the guide member near the upper end of the latter. This pin serves as an abutment or stop, against which the inner face of the toss-ring arm 4 near the lower end thereof is adapted to rest when the toss-ring arm rises to an upright position. The stop pin 25 prevents the roll-over member from rolling over free of the guide member. To enable the guide member 23 to be received in the slot 24 of the vertex portion 5, a horizontal slot 26 is provided crosswise of the slot 24 in the lower area of the target arm. The stop pin 25 may be freely passed through the slot 26 as the guide member 23 is entered in the slot 24 of the vertex portion 5.

A peg 27 fixed in the supporting base 1 is receivable in a hole 28 of the toss-ring arm when the latter is in its prone position, as appears in FIG. 1. This peg is cooperable with the hole 28 in centering the vertex portion 5 of the roll-over member 2 relative to the guide member 23. The peg fits easily in the hole 28, and permits the toss-ring arm to freely ride clear of the peg when moving to its upright position.

The roll-over member is preferably made from plastic strip material. This material is desired as it is firm and stiff, and is also resilient.

I claim:

1. An amusement device comprising a toss-ring; an angular roll-over member having a first arm provided with a flat inner target face at its terminal end, a second arm provided with a flat inner face at its terminal end serving as a rest for the toss-ring, and an arcuate flat bottomed vertex portion joining the said two arms together, the roll-over member having a normal position in which it is in unstable equilibrium under gravity and in which position the first arm is upright and the second arm is prone; and a dart projectable against the target face having sufficient mass so as to unbalance the roll-over member upon impact and cause said member to roll on its vertex portion and cause the first arm to drop rapidly to a prone position and sharply swing the second arm to an upright position, whereby the toss ring resting on the second arm is tossed toward the target face and the projecting shaft of a dart attached thereto, the dart having a suction cup attachable to the target face upon impact and having a shaft portion which extends perpendicularly to the target face upon attachment of the dart to the latter.

2. An amusement device comprising a toss-ring; a substantially right-angular roll-over member having a first arm provided with a flat inner target face at its terminal end, a second arm provided with a flat inner face at its terminal end serving as a rest for the toss-ring, and an arcuate flat surfaced vertex portion joining the said two arms together, the roll-over member having a normal position in which it is in unstable equilibrium under gravity and in which position the first arm is upright and the second arm is prone; and a dart projectable against the target face, the dart having a suction cup attachable to the target face upon impact and having a shaft portion which extends perpendicularly to said target face upon attachment of the dart to the latter, the mass of the dart being such that the roll-over member is adapted under such impact to become unbalanced and roll over on its vertex portion, and the target face having a mass extending rearwardly thereof which, together with the force of the impact of the dart, is such that the first arm is caused upon the roll-over member becoming unbalanced to drop rapidly to prone position and to sharply swing the second arm to upright position causing the toss-ring resting on the second arm to be tossed in such action toward the target face and the shaft of the projected dart.

3. An amusement device according to claim 2, wherein the two arms are disposed at an angle of not less than ninety degrees.

4. An amusement device according to claim 2, wherein abutment means are provided at the lower area of the flat inner face of the second arm to arrest the toss-ring against sliding movement downward of the second arm as the second arm is caused to swing to upright position.

5. An amusement device according to claim 2, wherein a flat-topped support is provided for the roll-over member upon which the second arm rests in the normal position of the roll-over member, which support includes means cooperable with the roll-over member for guiding the rolling-over action of the latter and arresting it from rolling free of the support.

6. An amusement device according to claim 5, wherein the said means comprises a semi-circular upright disk rigid with the support, an elongated slot extending longitudinally of the vertex portion in which the disk is slidably received, and a stop pin extending from opposite faces of the disk transversely of the inner surface of the first arm in the normal position of the roll-over member, the stop pin being engageable with the inner surface of the second arm so as to arrest the movement of the latter beyond a substantially upright position consequent upon the rolling action of the roll-over member.

7. An amusement device according to claim 2, wherein the roll-over member is formed of a unitary strip of firm, slightly resilient plastic material.

8. An amusement device according to claim 6, wherein means are provided for centering the roll-over member relative to the semi-circular upright disk.

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