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MAGNETIC DART ENTERTAINMENT DEVICE

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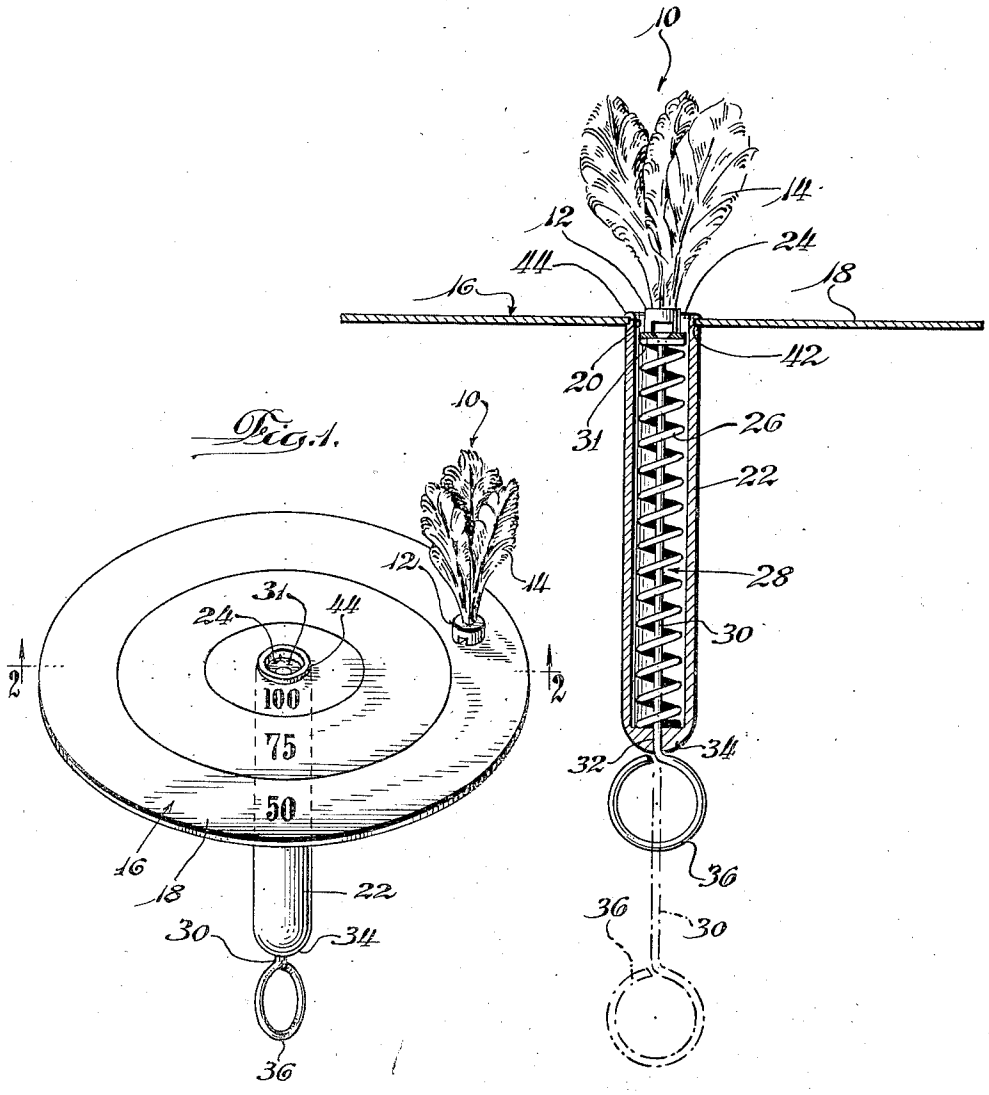


Fig. 1.

Fig. 2.

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MAGNETIC DART ENTERTAINMENT DEVICE

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My invention relates to a novel entertainment device and more particularly to a device which is suited for individual play or for the entertainment of two or more persons as a game; and one object of my invention is, therefore, the provision of a device affording amusement to one or more persons. Other objects and advantages of my invention will be apparent from the following description and drawings, of which:

Fig. 1 is a perspective view of one embodiment of my invention shown with a magnetic dart positioned on the target plate thereof; and

Fig. 2 is a section which may be considered as being taken along the line 2—2 of Fig. 1 illustrating, however, the dart placed on the ejector.

My invention is intended to be used in conjunction with a magnetic dart 10, suitable forms of which are described in my Patent No. 2,477,531, dated July 26, 1949. The dart illustrated herein is characterized by a permanent magnet head 12 and flight stabilizing means, here taking the form of feathers, 14, secured to the back side of the head 12.

The other element of my invention is a combination ejector and target 16 and includes a magnetically susceptible plate 18 having a central aperture 20 formed therein and an ejector housing 22 secured within the aperture 20 of the plate 18. The plate may be circular, as shown, and be marked in target fashion, also as illustrated, in order to afford score differentiations to determine the relative skill of the operators. It will be apparent, however, that the configuration of the plate and the markings thereon may be designed in any fashion within the ingenuity of the maker to simulate the scoring of other games, such as baseball, dart boards and the like. It is likewise not necessary that the ejector housing be fixed centrally of the plate since the device is fully operative regardless of the location of the housing, and the entertainment value of the device will not be affected by variations in this respect.

The ejector housing 22 is an elongated cup-like element having an open end 24, and is preferably formed of a nonmagnetic material, such as a plastic resin, brass, aluminum, or the like. This housing serves as a handle for the device, so avoiding the separate inclusion of such an element. It contains an ejector spring 26 and an ejector 28, which latter in turn is comprised of a rod 30 and a button 31 secured to one end thereof. The button, like the plate, is formed of a magnetically susceptible material. The ejector rod 30 extends through a hole 32 in the

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closed end 34 of the ejector housing 22 distant from the plate 18, and may be bent or formed to provide a ring 36, or similar grasping means, on the outer extremity thereof. The ring 36 also serves to prevent the ejector rod from being expelled through the open end 24 of the ejector housing and to retain the spring 26 therewithin.

The diameter of the ejector housing 22 is somewhat greater than that of the aperture 22 in the target plate 18. That portion of the housing 22 adjacent the open end 24 is reduced in diameter for a short distance to permit the insertion thereof in the aperture 22 of the target plate 18 and to provide a shoulder 42, against which the bottom of the target plate abuts. The part of the reduced end of the housing 22 which protrudes above the surface of the target plate 18 is then rolled as at 44 to grasp the plate firmly. It will be noted that interior cup walls are in this fashion kept smooth.

The device may be used to afford amusement in several ways. In general the magnetic head of the dart is placed on the ejector button 31 and the button is drawn into the housing by the rod 30, thus drawing the dart with it by virtue of the magnetic attraction between the dart head and the button. The rod is then suddenly released and the dart will be thrown upwardly into the air by the spring 28 which should have sufficient strength to impart enough inertia to the dart to cause a separation of the magnetic bond between the dart and the button 31. After the dart has been projected into the air, the target may be manipulated so as to catch the dart on the target face. Because of the magnetic attraction between the impact face of the dart and the target plate 18, the dart will remain on the plate at the point of landing and thus target readings may be obtained to determine the skill of the operator.

Substantial advantages of the magnetic adherence of the dart to target are apparent here in that the target need not be held absolutely horizontally in order to catch the dart, and several darts may be projected and caught without the necessity of dart removal each time or the likelihood of dart displacement during a subsequent ejection. Of course to a child the very act of throwing the dart into the air by the ejector and catching it on the target plate would constitute a high order of entertainment in itself. Two or more persons will find entertainment and a test of skill by so manipulating the target face as to have the dart land in a high scoring area and in comparing scores thus ob-

tained from this ejecting and catching of the dart.

Another use of the device is to provide each of the persons playing the game with one of my ejector and target combinations, and a dart may be thrown by one of the participants to be caught on the target of another participant.

Here again magnetic adherence plays a fundamental part. The trajectory of the dart in such usage at the point of catching will have a substantial horizontal component which necessitates a similarly substantial tilting of the target in order that the dart meet it approximately squarely. Were there not such magnetic adherence, the darts obviously would slide off the target face after striking it.

It will be apparent from the foregoing description that this device and its use may take many forms. Different games with different rules may be devised to take advantage of this structure and, as pointed out, the target plate may likewise take many forms to add variety to the use of my device.

I claim:

1. A combined projector and target adapted to be freely manually manipulated to engage projected darts comprising a hollow guide having imperforate side walls and of a size to be gripped in the hand of the operator, a target plate fixed to said guide, said target plate being of a relatively large area compared to the sectional area of the guide, said target plate being of a magnetically susceptible material, a magnetic dart having flight stabilizing means adapted to be positioned within said guide, and means within said guide for supporting said dart adjacent the upper end of said guide, for withdrawing said dart including said flight stabilizing means into said guide and for projecting said dart forcibly from said guide.

2. A combined projector and target adapted to be freely manually manipulated to engage projected darts comprising a hollow guide having imperforate side walls and of a size to be gripped in the hand of the operator, a target plate fixed to one end of said guide, said target plate being of a relatively large area compared to the sectional area of the guide, said target plate being of a magnetically susceptible material, a magnetic dart having flight stabilizing means adapted to be positioned within said guide, and means within said guide for supporting said dart substantially in the plane of said target plate, for withdrawing said dart including said flight stabilizing means into said guide and for projecting said dart forcibly from said guide.

3. A combined projector and target adapted to be freely manually manipulated to engage projected darts comprising a hollow guide having imperforate side walls and of a size to be gripped in the hand of the operator, a target plate fixed to one end of said guide concentric with said guide, said target plate being of a relatively large area compared to the sectional area of the guide, said target plate being of a magnetically susceptible material, a magnetic dart having flight stabilizing means adapted to be positioned within said guide, and magnetically susceptible means within said guide for supporting said dart substantially in the plane of said target plate, for withdrawing said dart including said flight stabilizing means into said guide and for projecting said dart forcibly from said guide.

4. The combined projector and target for darts of claim 1, wherein the means for supporting the dart for withdrawing the dart into the guide and for projecting the dart forcibly from said guide consists of a rod reciprocable in said guide, a magnetically susceptible dart supporting button carried by said rod, and a compressible spring normally biasing said rod and said button toward the end of said guide fixed to said target plate.

5. The combined projector and target for darts of claim 1, wherein the means for supporting the dart for withdrawing the dart into the guide and for projecting said dart forcibly from said guide consists of a rod reciprocable in said guide, a magnetically susceptible dart supporting button secured to said rod, a shoulder in said guide, a compressible spring positioned between said button and said shoulder and normally extending substantially throughout the length of said guide, said spring normally biasing said rod and said button toward the end of the guide secured to said target plate, and a handle secured to said rod.

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