

[54] **DART HAVING MULTIPLE DETACHABLE TIPS**

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[51] Int. Cl. **A63b 71/02**

[58] Field of Search 273/106.5 A, 102 R, 95 R, 273/102 B; 46/DIG. 1; 128/DIG. 15

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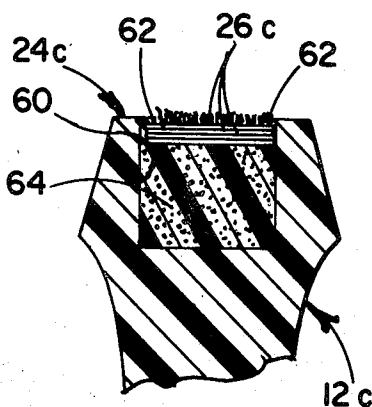
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[57] **ABSTRACT**

A dart for use with a target to play a game. The darts have detachable tips in the form of markers which adhere to the target on impact; the dart then separates from the marker, leaving the marker secured to the target to precisely indicate where the dart had made its hit on the target. The marker may have a strong adhesive means such as "Velcro" hooks on its front surface which will adhere to the target surface when the dart strikes the target. The surface of the target could be particularly adapted to adhere to the marker. Individual darts could also be used as play devices which would attach their markers to various cloth or fabric surfaces against which the dart was thrown.

11 Claims, 8 Drawing Figures



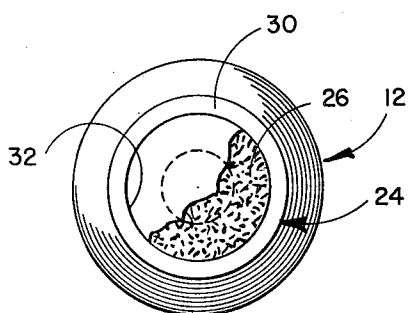


FIG. 3

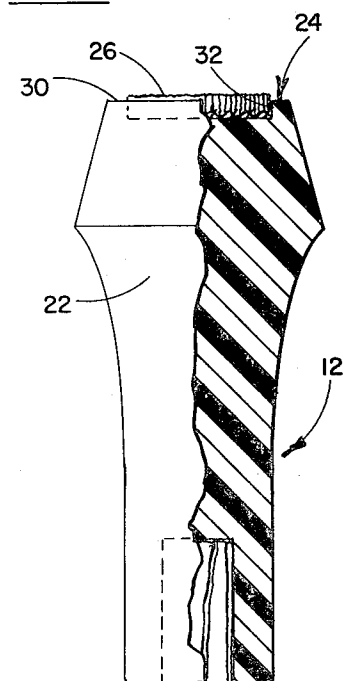


FIG. 2

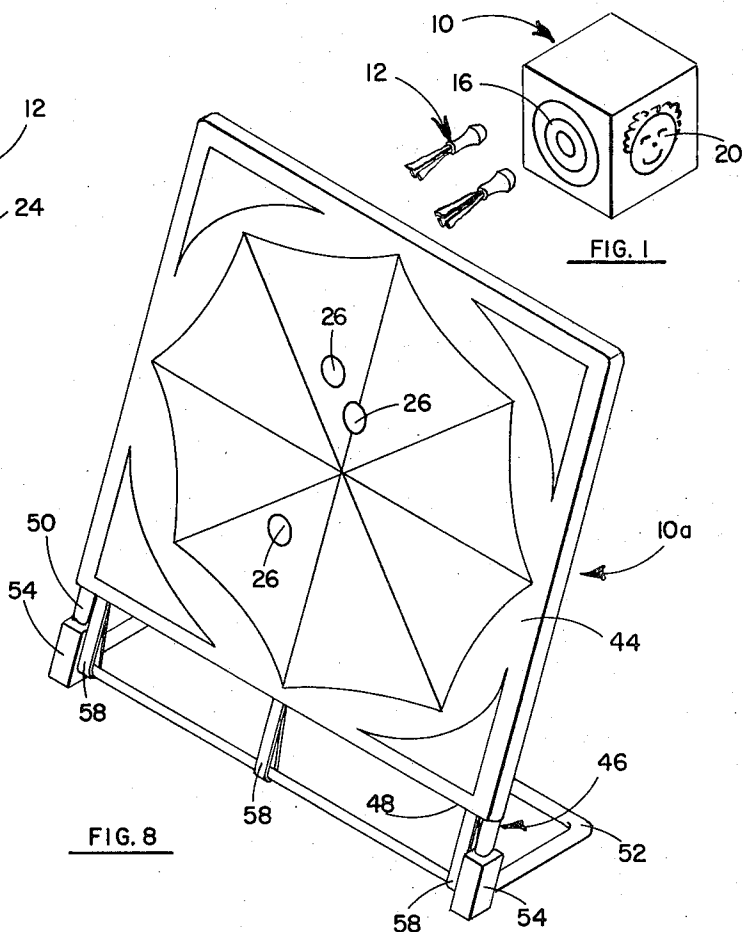


FIG. 8

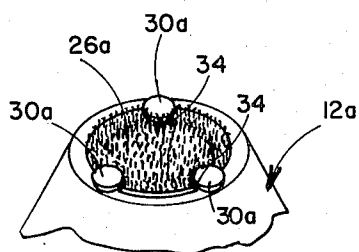


FIG. 4

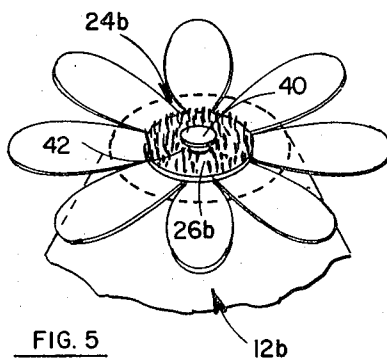


FIG. 5

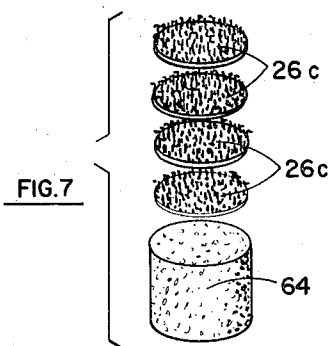


FIG. 7

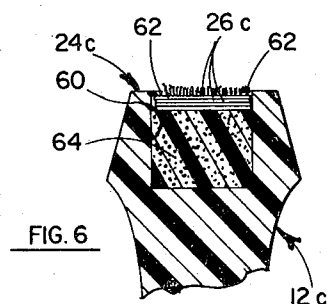


FIG. 6

DART HAVING MULTIPLE DETACHABLE TIPS

Dart games have long been a favorite for adults as well as children. Darts with sharp points provide an obvious hazard, particularly when younger children are involved. Therefore various substitute means have been sought and used. For example, the use of suction cups on the ends of darts is well known in the art. Magnetic means have also been provided to accomplish this purpose. Such prior art devices, with the exception of the extremely dangerous sharp pointed darts, often do not adhere well to the target surface and tend to frustrate the user by not adhering themselves to the target when they strike that surface. Further as in the case of magnetic attachment, the dart will tend to slide from its point of initial contact to some final resting point, and an accurate result of the throw is not achieved. In addition, a dart later thrown may cause an earlier thrown dart to be dislodged or moved relative to the board thereby causing a problem or dispute; on the other hand, a dart already in place may interfere with a substantially thrown dart, and prevent the latter from reaching or adhering to the target. Generally, the prior art does not provide means which adhere to the target after the dart has been thrown to indicate precisely where the dart struck the target, while offering minimum interference with subsequently thrown darts.

In one form, the invention contemplates a dart provided with a detachable tip in the form of a marker which has an adhering quality, such as may be provided by making the front surface of the marker of "Velcro" hook material. At impact the remainder of the dart separates from the marker, to leave the marker as a visually indicator of where the dart struck the target. This also permits a plurality of darts to be thrown sequentially at the same target with a minimum chance of one interfering with another since the marker is much smaller and less likely to interfere with a subsequently thrown dart than would a full dart adhered to the target. In the drawings:

FIG. 1 is a perspective view of a target and several darts which comprise a presently preferred embodiment of the invention.

FIG. 2 is an enlarged sectional view of one of the darts of FIG. 1, with a section being taken lengthwise of the dart.

FIG. 3 is an end view of the dart of FIG. 2.

FIG. 4 is a perspective view of the tip portion of an alternate form of dart.

FIG. 5 is a perspective view of the tip portion of another alternate form of dart.

FIG. 6 is a sectional view of a modified form of dart which incorporates multiple detachable tips.

FIG. 7 is an exploded view of portions of the dart of FIG. 6.

Fig. 8 shows an alternate form of target.

The dart game illustrated in FIG. 1 comprises in general a target in the form of a self-standing pillow 10, and a plurality of darts 12.

As shown in FIG. 1, the illustrated target pillow 10 is a fabric pillow or cushion having one or more target surfaces, which are preferably generally flat and which may have desired indicia provided thereon by means of printing or other known technology. For example, one surface 14 of the pillow 10 has a bulls-eye 16 provided thereon, while another surface 18 has a comic face 20 provided thereon. It is preferred that the pillow be

stuffed with a soft, somewhat pliant or resilient material so that it will be safe to be used by children, and so that it can be used as a regular pillow if desired. On the other hand, the pillow should have a certain degree of dimensional stability which will permit it to react against the impact of the dart, and provide a surface against to which the dart tip can adhere. It has been found that a fabric casing filled with material, such as cotton batting or horse-hair provides a suitable target structure. The target may also be an inflated member which is filled with air, water, or some other fluid. The presently preferred form of target surface is a cloth or fabric which will engage with and releasibly hold a "Velcro" hooked surface, which is impacted against it. There are also certain smooth surfaces to which certain plastic sheet material will adhere, which might be utilized. Pressure sensitive adhesive type surfaces might also be provided, however, their reuseability tends to be more limited as they tend to quickly pick up a coat of dust and dirt which impairs their functioning. Further, this type of adhesive surface tends to have a tacky feel to the touch and therefor would be somewhat less desirable because of packaging requirements and possible adverse user reaction to such tackiness.

Referring to FIGS. 2 and 3, the illustrated dart 12 is elongated, having a cigar shaped body 22 which is blunted at its forward end 24. The construction of front end 24 and of the tip 26 of the dart which is releasibly held on the front end 24 will be discussed in further detail below. A tail 28 or other stabilizer means may be provided at the rear of the body, as for example, by means of feathers, strips of material or the like. Also various decorative features may be provided to the dart; a surface may have indicia thereon or may be colored to be attractive to the child, and also to distinguish a particular dart or set of darts from other darts or sets of darts. The dart preferably has a soft hollow body 12 rotational molded of a plastic such as vinyl. Alternatively, it may be filled or stuffed with a relatively soft and light weight material, such as cotton batting, foam rubber, or foam plastic. A weight may be provided in the dart adjacent its forward end to help maintain the dart in proper orientation when it is thrown, and also to provide adequate impact of the dart against the target to achieve the desired securement. Such weight is desirably placed within the dart so that it is surrounded with soft material. In this way, if the child would be accidentally hit with the dart, he would not be injured. The fill for the dart could also take a form of a particulate fill of plastic pellets, beans, corn, grains or the like, or it could be inflatable and thus filled with air, water, or other fluid.

As discussed briefly above, the flat tip 26 of the dart is adapted to impact with and adhere to the target means 10 to thereby serve as a marker. In a presently preferred form, the tip or marker 26 is separable from the remainder of the dart. Thus, as shown in FIG. 2, the tip or marker 26 is a circular flat disc or layer of material having "Velcro" hooks over its front or forward surface. The front end 24 of the illustrated dart is flat and has an annular lip or ring 30 defining a circular center recess 32 which is generally the same shape and size as the disc 26, and into which the disc is releasibly secured as by friction fit. When the disc 26 is thus removably secured at the tip end of the dart, it provides a forwardly or outwardly facing "Velcro" hooked surface which will engage the target surface when the dart

is thrown against the target, and which will engage with and secure itself to that target surface. In the construction of the preferred form of dart, the "Velcro" bond created between the disc and the target is substantially greater than the frictional bond between the disc and the target. In this way, when the dart is thrown against the target and the disc adheres to the target, the weight of the remainder of the dart will cause it to separate from the disc, leaving the disc secured to the target. As noted above, this indicates the place where that dart struck the target. This also permits a subsequently thrown dart to adhere to a closely adjacent position with its disc partially over-lapping the disc already secured to the target. After a round of play, of course, the discs may be removed from the target by simply pulling or peeling them free, and they may be replaced on their respective darts.

Each player may have one or more darts with tips of a particular color or other indicia, as with conventional darts. The herein construction also permits the use of a single dart with a plurality of tips, the tips of each player having his color or other indicia thereon.

While a relatively large end surface is desired for the tip of the dart, the circular configuration illustrated is just one possibility for a convenient configuration which is symmetrical and therefore does not require orientation of the disc with respect to the dart itself. Straight sided figures such as squares, or triangles, oval configurations and the like may be used. Further, the shaped or configuration of the dart body may also vary so long as it is compatible with the tip surface and the ability of the dart to be thrown and to travel so that it will tend to strike the target with its tip forwardly.

The illustrated disc has the "Velcro" surface over its entire area, which provides maximum securement to the target for a given size dart. Alternatively, the "Velcro" or other adhering material, could be provided over only a portion of the disc front surface, as for example, a center portion, concentric rings, or just around its periphery.

Instead of adhering to the dart by friction, the disc may be adhered by an adhesive or the like so long as it is with a substantially lesser force of adhesion than will develop between the face of the disc and the target when the dart impacts the target.

Further, alternate type of means may be used to secure the disc to the remainder of the dart. FIG. 4 shows a modified form of dart 12a, the peripheral ring 30 being replaced by three circumferentially spaced apart tabs 30a. This configuration may be used to minimize the chance of the dart front end engaging the target at an angle other than a right angle and bouncing away without the disc having a chance to engage the target surface. The disc 26a may be a smaller circle, (not shown) or it may be a larger shape as shown in FIG. 4 with recesses 34 around its periphery to mate with the tabs 30a. FIG. 5 shows another alternate embodiment of dart 12b where a central projection 40 at the front end 24b of the dart is releasibly received in a central hole 42 in the disc 26b. In this arrangement the shape of the disc 26b is virtually independent of the shape of the dart end. Thus, a flower shape is shown in FIG. 5. A mechanical inter-lock (not shown) might also be used which would move a member by virtue of the impact of the dart against the target to mechanically release the disc from the remainder of the dart while the disc remains adhere to the target.

FIGS. 6 and 7 show a modified form of dart 12c which has a plurality of circular discs 26c disposed in stacked relation within a cylindrical recess 60 in the front end 24c of the dart. The discs 26c may be releasibly retained in the recess 60 by a pair of opposed retaining tabs 62 extending inwardly from the outer edge of the recess. Biasing means such as a cylinder of foam rubber 64 disposed in the bottom of the recess 60 urges the stack of discs 26c outwardly toward the end of the dart. When the dart strikes a target, one disc 24c will adhere to the target and will separate from the remainder of the dart. The next disc 24c in the stack is then forwardmost for the next throw, and this repeats until all of the discs have been used.

While the illustrated target 10 is a self standing pillow arrangement, the target may, of course, take the form of a wall hanging or may have other attachments means such as clamps, or a stand for maintaining the target in its desired position.

FIG. 8 shows another alternate form of target 10a which comprises a fabric sheet 44 stretched over and held on an open rod frame 46 in a generally vertical position. The illustrated sheet 44 may be in the form of a rectangular envelope open at its lower edge 48. The sheet slips over an inverted U-shaped upper frame portion 50. The upper frame portion 50 is supported in its upright position by a lower frame portion 52 that is generally U-shaped and disposed in a horizontal plane. The upper frame portion 50 may be releasibly secured to the lower frame portion 52 as by means of connector elements or blocks 54 which have sockets into which the ends of the frame portions are received and held as by friction fit, set screws or other suitable means. A horizontal cross frame portion 56 extends between blocks 54 and passes through loops 58 secured to the open lower edge 48 of the sheet 44; this serves to retain the sheet in a taut position on the frame. Several tips 26 are shown adhered to the face of the sheet 44. When the marker uses a "Velcro" hook surface, the target surface may be a compatible "Velcro" loop surface which is comprised of a plurality of elongated loops that extend outwardly to releasibly engage or interlock with the hooks of the marker surface. The "Velcro" hook surface will also work well with other fabrics and materials that are loosely woven, knitted or otherwise formed to provide loops with which the hooks can releasibly interlock.

We claim:

1. A dart for throwing against a target surface comprising:

a body having a front end,
at least two markers attached to the front end, said
at least two markers being releasibly supported on
said front end in overlying relation to one another,

first attachment means to releasibly hold the markers
to the front end, one marker being positioned most
forwardly to contact the target surface first upon
striking thereof by the dart,

second attachment means on said markers to releasibly hold the markers to a target surface,
said second attachment means providing substantially greater adhesion to said target than said first attachment means has to said front end, whereby on impact of the dart against said target surface one of said markers will adhere to the target surface and the dart will release itself from the

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marker, each time the dart impacts such a surface.

2. The dart of claim 1 wherein said second attachment means is a hooked surface.

3. The dart of claim 1 wherein said first attachment means is a frictional engagement between the markers and the body.

4. The dart of claim 3 wherein said front end includes means defining a recess for receiving the markers in a friction fit.

5. The dart of claim 3 wherein said second attachment means is a hooked surface.

6. The dart of claim 1 wherein said body is of a soft material.

7. The dart of claim 6 wherein said body is hollow and is rotationally molded plastic.

8. The dart of claim 1 in combination with a target means having a target surface adapted to adhere to said second attachment means.

9. The combination of claim 8 wherein said second attachment means is a hooked surface and said target surface is adapted to engage said surface.

10. The combination of claim 9 wherein said target means comprises a fabric sheet supported in a generally

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upright taut condition.

11. A dart for throwing against a target surface comprising:

a body having a front end,

at least two markers releasibly supported on said front end in overlying relation to one another such that one of said markers will adhere to the target surface each time the dart impacts said surface, said front end having a recess therein for receiving said markers in stacked relation, means being provided to releasibly retain said markers in said recess and means for urging said markers to the front of said recess,

first attachment means to releasibly hold the markers to the front end,

second attachment means on said markers to releasibly hold the marker to the target surface,

said second attachment means providing substantially greater adhesion to said target surface than said first attachment means has to said front end, whereby on impact of the dart against said target surface a marker will adhere to the target surface and the dart will release itself from the marker.

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