Jan. 24, 1967 E. HAECKER 3,300,216

DARTBOARD WITH EXPANDED PLASTIC BASE

Filed Sept. 4, 1964 2 Sheets-Sheet 1

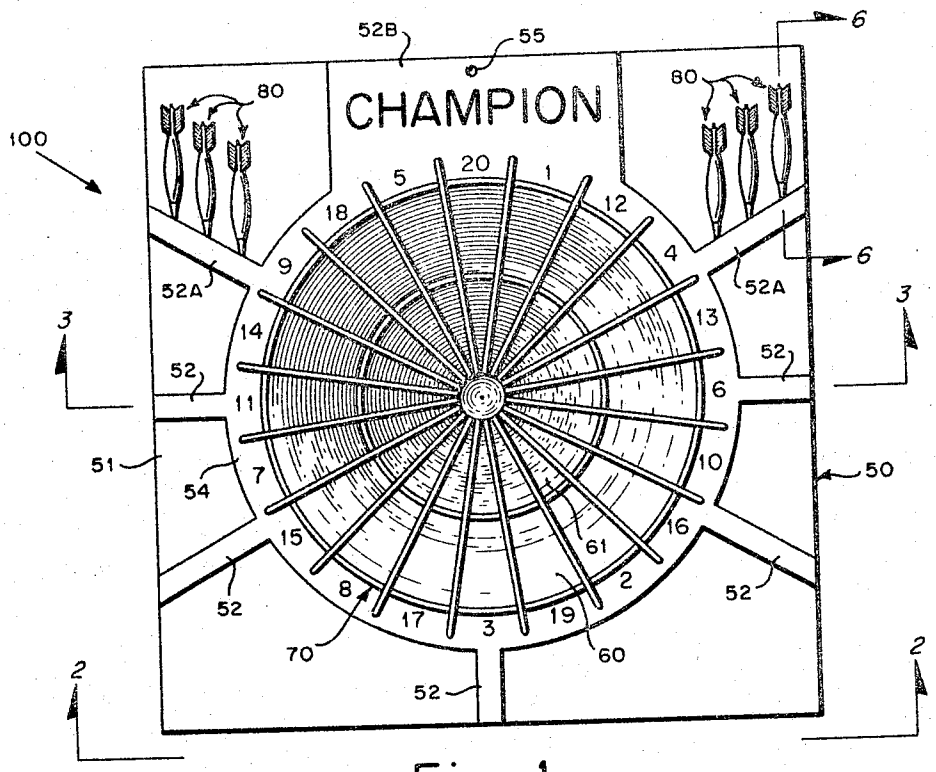


Fig. 1

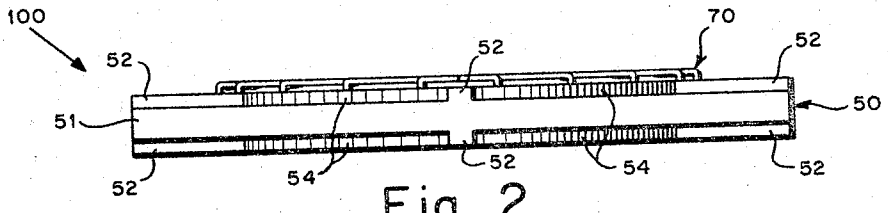


Fig. 2

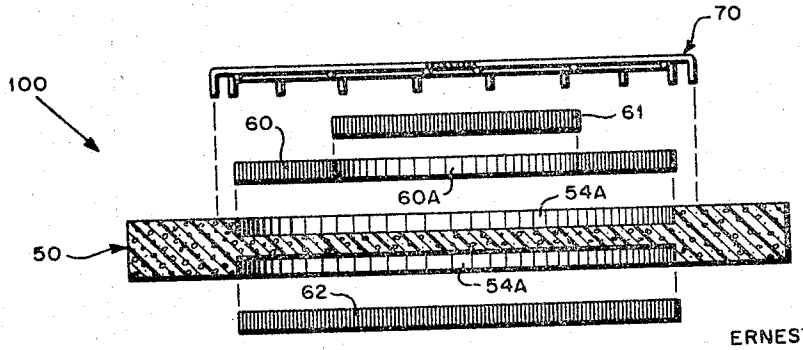


Fig. 3

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DARTBOARD WITH EXPANDED PLASTIC BASE

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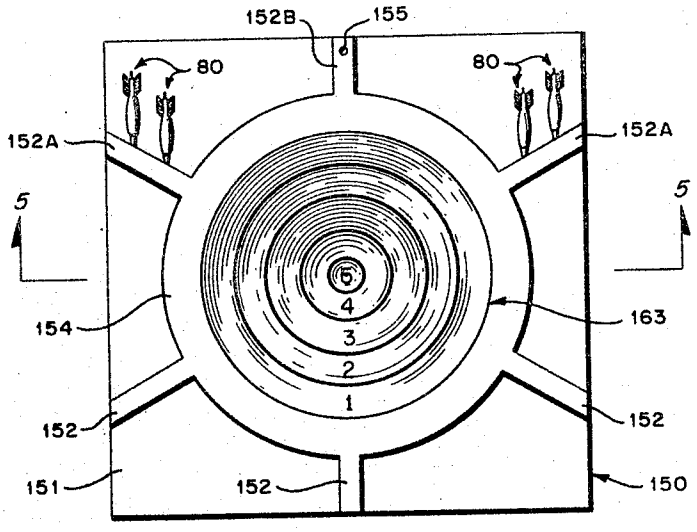


Fig. 4

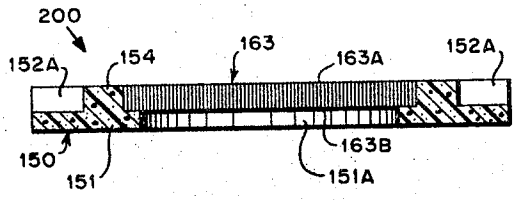


Fig. 5A

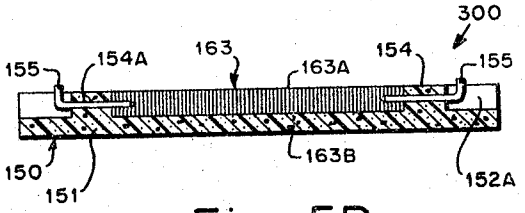


Fig. 5B

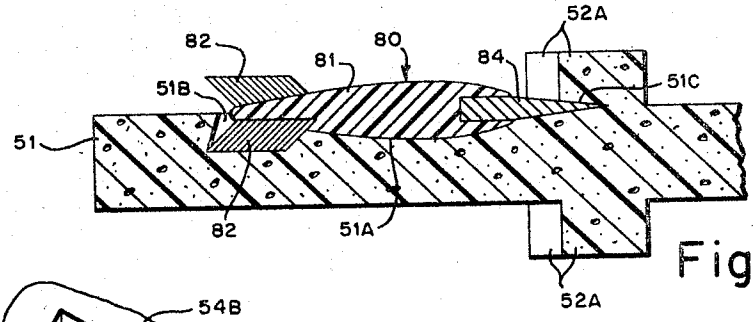


Fig. 6

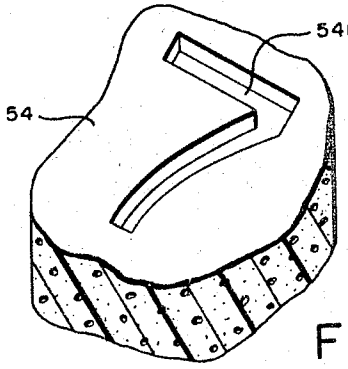


Fig. 7

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DARTBOARD WITH EXPANDED PLASTIC BASE

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This invention relates to a dartboard. More particularly it relates to several alternative forms of a dartboard in which a foamed plastic base or backing is utilized, and in which target faces of rolled paper are utilized. It relates to a dartboard in which elements formerly required may be eliminated with no loss of function. It relates to a dartboard which is more advantageous to construct and to ship than previously known dartboards. It further relates to a dartboard in which a permanent backer is provided for the target face, said permanent backer also serving the functions of the major portion of the shipping package, wall protector, and dart storage means.

It is an object of this invention to provide a dartboard.

It is an object of this invention to provide a dartboard having a foamed plastic backer and a rolled paper target.

It is another object of this invention to provide a dartboard having a foamed plastic backer and a rolled paper target wherein there are a plurality of target surfaces that may be exposed to selective dart throwing.

Yet another object of this invention is to provide a dartboard comprising a permanent backer which also serves as a major portion of a shipping package, a wall protector, and a dart storage means.

Other aims and objects of this invention are made apparent in the following specification and claims.

The invention is best understood in connection with the accompanying drawings, in which like reference numerals refer to like parts and in which:

FIGURE 1 is a front elevation of a preferred embodiment of the dartboard.

FIGURE 2 is a side view taken along line 2—2 of FIGURE 1,

FIGURE 3 is a cross-sectional exploded view taken along line 3—3 of FIGURE 1,

FIGURE 4 is a front elevation of an alternate embodiment of a dartboard,

FIGURE 5A is a cross-sectional view taken along line 5—5 of FIGURE 4,

FIGURE 5B is a cross-sectional view of another embodiment of a dartboard taken along line 5—5 of FIGURE 4,

FIGURE 6 is a partially fragmented enlarged cross-sectional view taken along line 6—6 of FIGURE 1,

FIGURE 7 is a fragmented, partly cross-sectional expanded view of part of FIGURE 1.

In general, elements in the embodiments of FIGURES 4, 5A and 5B are numbered substantially like the corresponding elements in the embodiment of FIGURE 1 except that the numerals of FIGURES 4, 5A and 5B are preceeded with numeral 1.

The invention may best be initially explained in connection with FIGURES 1, 2 and 3. A dartboard, generally designated 100 is provided. An important component of dartboard 100 is the backer or base 50. Another important component is the target or targets, shown in this embodiment as targets 60, 61 and 62.

The structure of the backer 50 is explained first. It is made of foamed or expanded plastic, and a preferred such plastic is foamed or expanded polystyrene. The configuration of backer 50 may be obtained by molding the polystyrene, all in accord with well known techniques. Other well known or functionally equivalent materials may be used instead of the polystyrene. The backer 50 is a generally planar element, here shown as substantially

rectangular. As best shown in FIGURE 3, a plurality of circular indentions or partial apertures 54A are provided. These apertures 54A are centrally located on the backer 50 and positioned on opposite sides thereof. They extend only part way through the thickness of backer 50.

Another feature of the configuration of backer 50 are the plurality of ribs 52. As best shown in FIGURES 1 and 2, these ribs are integral parts of the backer 50 the thickness of which is greater than that of the larger adjacent areas. Another feature of the configuration of backer 50 is the inner rim 54 which surrounds the aperture 54A and, as shown in FIGURE 1, is provided with a plurality of spaced numerals. As best shown in FIGURE 3, which is taken along line 3—3 of FIGURE 1, the thickness of backer 50 at the ribs 52 is the same as the thickness at inner rim 54. At the top of FIGURE 1, inner rim 54 is expanded in the planar dimension of backer 50 to provide what may be termed an inner rim extension or expanded rib 52B, also of the same depth as rim 54 and 52. This expanded rib 52B may bear a legend, as the trademark Champion for example, and also as provided therethrough a support aperture 55. The support aperture 55 goes all the way through the depth of backer 50, and it is adapted to receive a nail or other hanging means therethrough so that the dartboard 100 may be hung on a wall or other surface for use.

The parts of backer 50 which are not ribs or rims or extensions thereof are generally designated as body portions 51. A pair of the ribs and adjacent parts of body portion 51 are modified so as to comprise dart holding means. The over-all arrangement of darts 80 on dartboard 100 is best shown in FIGURE 1. The darts 80 as shown are in the position in which the dartboard is shipped or displayed for sale and also in the position in which the darts are kept after the dartboard 100 has been hung. Thus, a convenient and valuable dart holding means to keep the darts when the board is not actually in use is provided.

The modifications in the structure of a rib to hold a dart are perhaps best shown in FIGURE 6. This modified rib is a dart holding rib 52A. Dart 80 is shown comprising a dart body 81, feathers or fins 82, and a point 84. Dart holding rib 52A is provided with a point receiving hole 51C. As shown in FIGURE 6, this point receiving hole 51C is preferably configured to snugly accommodate point 84.

Near the point receiving hole 51C, the body portion 51 is provided with its own recesses to accommodate other portions of the dart 80. Thus, a body receiving depression or recess 51A is provided, shaped to accommodate at least part of dart body 81. A fin or feather receiving recess or depression 51B is provided in body portion 51 to accommodate at least part of the fins or feathers 82. The recesses or holes 51B, 51A and 51C are so disposed as to coincide with the dimensions of the dart 80 and are arranged on the dartboard 100 so that a plurality of darts 80 may be provided therein as shown for example in FIGURE 1. The structure in which these recesses are provided together comprise dart holding means. A target is provided in the circular indention 54A. One of the indentions 54A is provided with target 62, as shown in FIGURE 3. This target is preferably made of a tightly wound thin roll of paper. The target is manufactured by tightly winding a roll of paper in spiral form and then slicing the relatively long roll into thin segments, each of the segments forming a circular disk-like target 62. The separate pieces of paper are indicated in drawings by the plurality of parallel vertical lines. Target 62 is a simple disk. The target on the other side of dartboard 100, the upper side as shown in FIGURE 3, shows a slightly different possible arrangement. In this arrangement, there is an inner target disk 61 and an outer target

60. The outer target 60 is a disk with a central circle removed, the central circle just accommodating the inner target disk 61. Together, as shown in FIGURE 1, they make a target 60, 61.

Such ruled paper targets are in themselves known in the art, and machinery for rolling and cutting such targets are known in the art. They provide a desirable target face. Such targets, when provided in the usual manner by themselves, generally are between ½ inch and ¾ inch thick. The targets 60, 61, 62 of the present invention may be sliced from the main roll to a thinner dimension, for example between ¼ inch up to ½ inch. The reasons for and advantages of this change in dimension are explained below in this patent.

The targets may be held in the indentions 54A by any convenient means, as by a touch of adhesive. They can also be held in place by a close frictional fit. A purpose of a compound target 60, 61, is that a variation in the color or other pattern of the over-all target face may be thus provided. That is, target 60 may be from a disk which has been printed, painted, stenciled, or otherwise marked in one way and target 61 may be from a disk which has been similarly marked in some other way, as with a different color combination.

A cage 70 may, and preferably is provided on at least one of the targets. The cage 70 is an arrangement of relatively heavy gauge bent wire so shaped and assembled as to form a plurality of pie-shaped segments around the circular target, and preferably also one or more concentric rings. The cage may be cut from a length of wire, bent, and soldered or welded together. Such cages are in themselves well known, and the techniques for making them are well known. The purpose of cage 70 is to provide an unmistakable differentiation between adjacent scoring sections on the face of the target. That is, since a dart cannot stick on a wire of the cage 70, it must deflect to one side or the other, or bounce off, which is rare. This provides positive scoring. The cage 70 may simply be pressed into the material of dartboard 100 and be held in that manner. As shown in the embodiment of FIGURES 1, 2 and 3, the cage 70 is provided on one side only, and the other side is left without such a cage. It should also be understood that the arrangement of ribs 52, inner rim 54, expanded rib 52B and dart holding rib 52A, as shown in FIGURE 1, are substantially repeated on the other side of the dartboard, that is, the side holding target disk 62. Thus, it is apparent that the dartboard may be used with either side presented outwardly. Preferably, the section numbers arranged around inner rim 54 are provided during the molding operation, as is the word or other legend on the expanded rib 52B. A typical such section numeral is shown in FIGURE 7. The numeral 54B is indented or depressed into rim 54. In the same manner, the legend on expanded rib 52B is depressed or indented into that member. This can be done in the same molding step that forms the backer 50. The advantages of this, and of the other structural features described above, are set forth in this patent after the description of the alternate embodiments of FIGURES 4, 5A and 5B.

The embodiment of FIGURE 4 is very similar to that of FIGURE 1. The differences in the number of darts accommodated, the different pattern on the target, the absence of an expanded rib and of a cage are not the critical differences between the embodiments for the purposes of this patent. Backer or base 150 is provided with a body portion 151 and a plurality of ribs 152. Some of the ribs are dart holding ribs 152A. An inner rib 154 is provided. Rim extension 152B is provided with a support aperture 155. A target 163 is provided within the circular indention or aperture 163A. The important difference between this embodiment and the embodiment of FIGURE 1, for the purposes of this patent, is best seen by examination of FIGURE 5A.

The circular aperture 163A accommodates the target 163. On the opposite of dartboard 150, a concentric circular aperture 163B is provided. Aperture 163B is smaller in diameter than aperture 163A. The depth of the two apertures are such that they meet, and form a continuous opening from one side of the dartboard to the other. Thus, a step or seat is formed on which the rolled paper target 163 is seated. Access to a surface of this taget may be had from either side. Thus, the dartboard 150 may be hung with either the surface shown in FIGURE 4 outwardly, or the reverse surface. In each case a fresh target surface is presented. The desirability of this function which is had in the embodiment of FIGURE 1 is, thus, also available in the embodiment of FIGURE 4 and 5A, while only a single rolled paper target is required, instead of two of them.

In FIGURE 5B, a slight modification is shown, which looks the same as the embodiment of FIGURE 5A insofar as the view of FIGURE 4 is concerned. In the FIGURE 5B embodiment, the circular aperture 163A accommodates a target 163, but the circular aperture 163A extends only partially through the dartboard 150. It is, thus, substantially the same as the circular indention or partial aperture 54A as shown in FIGURE 3. In the FIGURE 5 embodiment, only a single such target-receiving circular aperture is provided. By having a continuous expanse of the foamed plastic material backing target 163, a firmer and more reliable mounting of target 163 is obtained than is available in the embodiment of FIGURE 5A. The advantage of having more than a single target face may be obtained, however, in the embodiment of FIGURE 5B as well as in the other embodiments. In this case, the two surfaces of target 163 may selectively be outwardly presented by removing target 163 from base 150 and reversing it. Thus, the holding means by which the target is held in the base are mechanical in this embodiment. A rim hole 154A is provided through rim 154, preferably radially of circular aperture 163A. A slidable locking pin 155 is provided through this hole 154A, and extends into a matching hole drilled, punched, or otherwise provided in the edge of target 163. Preferably, a plurality of these mechanical holding means are provided, and it is apparent that by withdrawing the locking pins 155, the target 163 is released, so that it may be removed, reversed, replaced, and relocked by sliding the pins 155 in again. Of course, if the mechanical holding means are dispensed with, the embodiment of FIGURE 5B would simply be a simpler version of the embodiment of FIGURE 1.

Pecularities of structure described in this patent have particular functional advantages over previously known expedients, and some of these advantages are now discussed. It has previously been the practice to provide a relatively thick paper roll target, as has been described above, and to surround this roll with a metal rim to protect and stabilize it. A hanger has commonly been attached to the metal rim. In the present invention, a thinner slice of paper roll may be used, as has been described, since the necessary stability is provided by the base. This is important since the cost of the paper roll is a significant factor in the mass production of these items, and the ability to use a thinner slice for the target is significantly important. The present invention permits the elimination of the separate metal rim and hanger. This elimination is important from the point of view of material, fabricating and assembly cost, and also in the reduction of weight. Reduction of weight is important in shipping cost considerations.

Another important aspect of this invention is that the provision of the base 50 or 150 serves several functions. As has been described, it serves to permit a thinner target and the elimination of the metal rim. It also provides a substantial extension of the area of the over-all dartboard from the dart face itself and, thus, protects the wall or other surface upon which the dartboard is hung.

Rolled paper targets have not heretofore been provided with any such extension or base. This base also permits the elimination of a separate hanger, since a simple aperture may be provided therethrough, as has been described. Furthermore, dart holding means may be provided on the base. Such dart holding means have not heretofore been available in connection with targets of the rolled paper type. Furthermore, the base provides a highly desirable element to be used in shipping, storing and selling the dartboard. By simply providing a transparent sheet over the surface of the dartboard, a suitable package is provided, with the darts already stored. It has heretofore been necessary to provide separate boxing or other packaging means to protect and contain the target and the accompanying darts.

Another advantage lies in the molded indention of the numerals and other printed material. Instead of it being necessary to apply such legends with a separate silk screen of other impressing step, it is only necessary to apply a simple coat of color as by wiping a roller across the surface of the base. The upper surfaces of the ribs and rim will, thus, be colored, and the depressed areas, including the numerals and other molded indentions will escape this coloring. Thus, the impressing of necessary numeral or other information on the dartboard is simplified, which is a matter of significance in the mass production of the items. It is apparent that the plastic material of the base may itself be colored before molding, so that constrasting colors may be provided. It is also apparent that for even more economic production, the indentions 54B may in themselves be relied upon to provide all marking, without any other coloring step. These recited advantages are not necessarily exhaustive.

The scope of the invention is to be determined by the appended claims and is not to be limited to the accompanying description and drawings, which are illustrative.

I claim:

1. A dartboard comprising (a) a generally planar expanded plastic base, said base having (1) a circular aperture therein, generally centrally positioned on said base, (2) a support aperture near one edge of said base, (3) a plurality of ribs on said base, at least one of said ribs also comprising dart holding means, (4) a raised inner rim portion surrounding said circular aperture; and (b) a thin circular rolled paper target disk firmly fitted into said circular aperture.

2. A dartboard as set forth in claim 1, wherein said circular aperture extends only partly through said base from one side thereof, and a second circular aperture is provided on the other side of said base, said second circular aperture also extending only partly through said base and extending less than the distance required to intersect said

first circular aperture, and a said target is provided in each of said apertures.

3. A dartboard as set forth in claim 2, wherein a wire cage is provided over the surface of at least one of said targets.

4. A dartboard as set forth in claim 1, wherein said circular aperture extends only partly through said base from one side thereof, and a second circular aperture, concentric with the said first circular aperture but of smaller diameter extends from the other side of said base and intersects said first circular aperture, and said target is firmly fitted in said first aperture and on the seat resulting from said intersection of said two circular apertures.

5. A dartboard as set forth in claim 1, wherein there is only one said circular aperture, and said circular aperture extends only partly through said base from one side thereof, and mechanical holding means are provided through said rim and into said target, said mechanical holding means being manually operable to selectively release said target from said base.

6. A dartboard as set forth in claim 1, wherein said dart holding means comprises a plurality of recesses in said base, said recesses being shaped and positioned to receive different parts of a dart, at least one of said recesses being provided in a rib.

7. A dartboard as set forth in claim 6, wherein said recesses are shaped and positioned to respectively partly receive a dart point, a dart body, and a dart fin, and said recess shaped to receive said dart point is provided in a rib.

8. A dartboard as set forth in claim 1, wherein a legend is indented into said inner rim of said base.

9. A dartboard as set forth in claim 8, wherein said inner rim and said ribs are of equal height, and said inner rim has an extension, and a legend is indented into said extension.

10. A dartboard as set forth in claim 9, wherein only the uppermost surface of said ribs, said inner rim and said inner rim extension are coated with color, whereby said legends contrast with said color.

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