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2,818,258

ARCHERY TARGET

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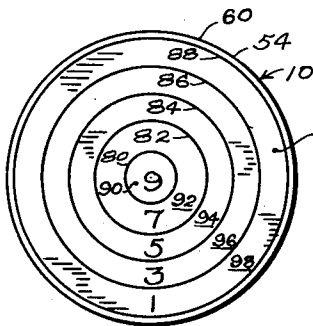


Fig. 1

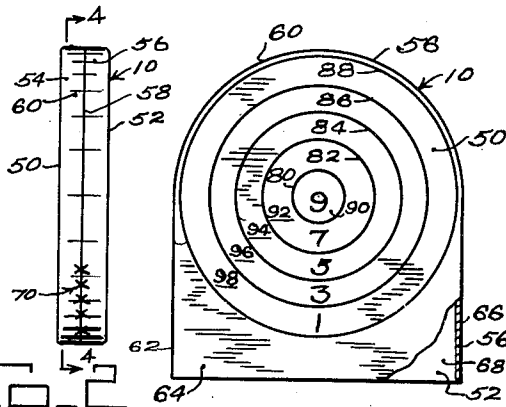


Fig. 2

Fig. 3

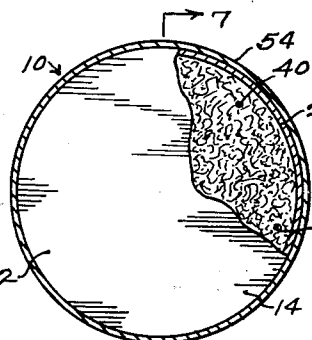


Fig. 4

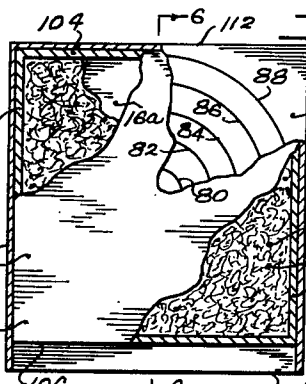


Fig. 5

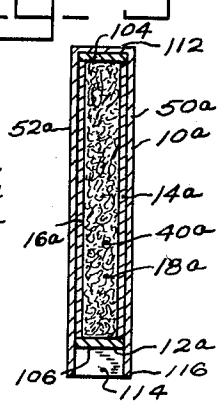


Fig. 6

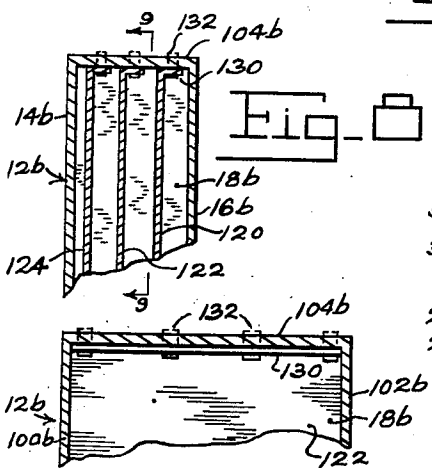


Fig. 7

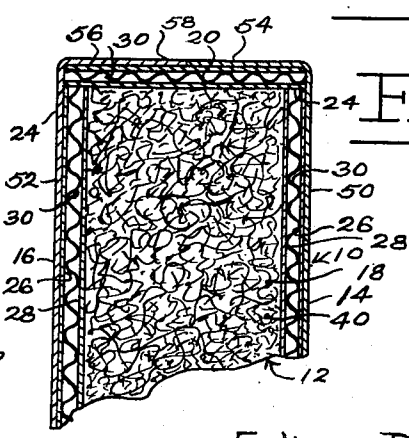


Fig. 8

Fig. 9

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2,818,258

ARCHERY TARGET

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2 Claims. (Cl. 273—102)

This invention relates to archery targets and the construction thereof.

An object of the invention is to provide a novel and improved archery target in which both the target base or butt and the target face are of highly improved and effective construction.

Another object of the invention is to provide a novel and improved archery target and method of making the same, wherein the target face portion of the target is formed of sheet material having superior qualities, improved acceptance of the properly launched arrow, yet resistant to destruction and deterioration therefrom, with highly improved useful life.

A further object of the invention is to provide a novel and improved target base or butt which includes a large number or mass of elongated flexible strips of sheet material disposed within a butt housing or casing, the whole being highly weather resistant, and resistant to damage from the arrows themselves.

Still another object of the invention is to provide a new and novel target butt which is, according to a preferred form of the invention, entirely free from inclusion of straw, grasses and the like in its construction, and thus not subject to the well known disadvantages of such forms of target.

Still a further object of the invention is to provide a novel and improved archery target, the butt of which is much lighter in weight than straw formed target butts, and which is substantially lower in cost of manufacture.

Another object of the invention is to provide a novel and improved archery target outer covering which is formed with two target faces joined together at their edges, so as to permit either or both faces to be used as needed, and at the same time completely covering the target butt or base, and protecting the same from the weather and from any damaging influences, while at the same time presenting an interesting and attractive appearance from either side.

A further object of the invention is to provide a novel and improved archery target cover and face, and improved target butt, making use of plastic sheeting materials for increased strength, wear resistant characteristics, lessened damage from arrow penetration and inherent power to heal such perforations to a large extent, while at the same time improving the general usefulness thereof.

Another object of the invention is to provide a novel and improved target face and butt which is quite rugged and requires less handling and packing care, thus making it less expensive to store or transport in shipment.

These and other objects and advantages of the invention will become apparent from the following description of a preferred embodiment thereof, as illustrated in the accompanying drawings, forming a part hereof, and in which,

Figure 1 is a front elevational view of a target according to my invention, the combined cover and double face being in position enclosing the target butt.

Figure 2 is a right end elevational view of the target

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shown in Figure 1, showing the butt snugly and wholly enclosed inside the cover and face member.

Figure 3 is a view such as might be seen when looking at the right side of Figure 2, with the lower portion of the target face and cover merely hanging down, and not upfolded as in Figures 1 and 2, this being another mode of use of the target face and cover, without upfolding.

Figure 4 is a sectional elevational view taken substantially on plane 4—4 of Figure 2, and also showing the target butt partly broken out to illustrate its construction internally.

Figure 5 is a front elevational view showing a modified form of combined target butt and face and cover member, in assembled relation, the butt being rectangular in shape, and the face and cover member being shaped to fit, the view showing a portion of the one face which is visible, partly broken out, to show the underlying construction and the butt thereunder, and the outer face of the butt being also broken out to show the construction and filling, and a portion of the filling being removed to show the rearward wall of the butt.

Figure 6 is a sectional elevational view taken on plane 6—6 of Figure 5, this view also showing the target with cover member in downhanging position.

Figure 7 is a fragmentary sectional elevational view on an enlarged scale, taken on plane 7—7 of Figure 4.

Figure 8 is a fragmentary sectional elevational view of a modified form of target butt, using sheet walls inside the butt instead of shredded filling, the view being taken on a plane similar to that of Figure 7, and omitting the target face and cover member from the view.

Figure 9 is a longitudinal sectional elevation in fragment, taken substantially on plane 9—9 of Figure 8, showing the same type of sheet walls inside the butt.

In the manufacture and use of archery tackle and equipment, various problems arise, which must be solved in order to make the sport most enjoyable and to bring it within the reach of the greatest number. The targets must be as durable as possible, yet light in weight, and low in cost. Since they are exposed to the weather, they should be resistant to damage from rain, drying out, and the elements.

The present invention provides a very durable target butt, with a casing which is water and weather resistant, enclosing a mass of compacted elongated water resistant material into which the arrows penetrate sufficiently to meet the needs of the archer, the filling being in shredded or narrow ribbon-like form, and selected from materials such as vinyl plastic sheeting, rubber hydrochloride sheeting, and other suitable materials having similar characteristics. Such a butt readily accepts the penetration by the arrow, yet releases it on a reasonable pull, without leaving any substantial permanent opening, being thus ready for continuous use. It is resistant to weathering, and rain, and does not dry out at all, or fall apart. The target cover of the present invention, has double faces, each bearing a full sized target, so that it can be used on one side, and then immediately turned around to be used on the other face, for the next scoring. Further, it totally encloses the target butt, forming an envelope which is closed at the top and sides, and may be closed at the bottom if desired, or allowed to drape downwardly at the bottom, for utmost convenience.

The use of such weatherproof material for the butt and target cover and face, makes it washable and durable, and the lightness in weight of the target makes it not only less expensive, but also easier to handle and ship.

In order to understand clearly the nature of the invention, and the best means for carrying it out, reference may now be had to the drawings, in which like numerals denote similar parts throughout the several views.

As seen best in Figures 1, 2, 3 and 4, there is a target

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which includes a cover and face member 10, and a target butt member 12. The target butt 12, as seen best from Figures 4 and 7, has first and second face walls 14 and 16, which are mutually parallel and spaced from each other to define a hollow chamber 18 therebetween. The edges of the chamber 18 are closed by the cylindrical edge wall 20, which extends all around the perimeter of the circular disc face walls 14 and 16, being secured to them at the corners of abutment, as at 24, by any suitable means, as by adhesives, adhesive tape overlying the joints, staples, or other well known means of joining, and they may also be molded or otherwise formed integral in whole or in part. As seen in the views, especially in the enlarged scale view in Figure 7, the preferred form of the invention employs corrugated cardboard for the walls 14 and 16 and 20. Such corrugated cardboard is commonly formed with a pair of sheets 26 and 28 adhesively secured on opposite sides of the corrugated intermediate wall 30, so as to make for a strong assembly well known in the art of making corrugated cardboard. However, to make it water resistant, I prefer to use waterproof glue in fabricating the corrugated cardboard walls of the target butt, and also to coat the elements such as walls 26, 28 and 30 of the cardboard, or at least some of them, with a waterproof paint, or coating composition, well known in the art, or impregnate them with such waterproof coating or composition, as is well known in the art, to make them substantially impervious to penetration of water therein, from rain and the like.

The sectional view of Figure 7 shows one mode only of joining the walls 14, 16 and 20 at their intersections, but is only illustrative, since the mode of such joining may be modified in any suitable manner, and, in fact, according to one form of the invention, the cylindrical wall 20 may be divided into two cylindrical skirt portions, each of which is integral with either wall 14 or 16, so that they meet on a median line and are secured together in some form of seam, butt, lap or other seam construction. Inside the chamber 18 of the target butt, I place a large mass of shredded or ribbon-like plastic sheeting strips, 40, in matted form or disposition, so that they form a matrix or body into which the arrows can penetrate, and which will stop the arrow, no matter how hard it is launched. Such plastic matrix is water resistant, and self healing, yet will allow the easy penetration of the arrows, so as to hold them firmly, yet permit them to be pulled out readily by the archer when desired, without undue prehension. Said elongated strips or shreds of plastic sheeting, when placed in a pile or mass, tend to mat with each other, somewhat, forming a more or less homogeneous matrix or mass.

The arrows, when launched against the target thus penetrate both the matrix 18, and the outer wall such as either 14 or 16, depending upon which is facing the archer. The target butt is covered by the target cover and face member 10, which is also formed of sheet plastic, such as vinyl plastic, rubber hydrochloride, sheeting, or other sheet plastic composition material, and has a first face wall 50, a second face wall 52, and edge margins or skirts 54 and 56 preferably integral with walls 50 and 52 respectively, and extending inwardly toward the seam line 58, at which line they are joined together, by stitching, seaming, heat welding, or otherwise in any well known manner. As seen best from Figure 3, the cover and face member 10 may be rounded off at the top 60, to fit snugly with the rounded target butt 12 thereunder, and has downhanging lower margins 62, 64, 66, etc., which extend below the target butt, leaving and forming a downwardly open chamber 68 inside which the target butt is received, and so that the envelope comprising the target face and cover member 10 is draped over the target butt.

Thus the lower portion of the target face and cover member may be either allowed to drape loosely in the manner of Figure 3, or it may be upfolded in the manner of Figures 1 and 2, and the upfolded portions fastened in

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position in any suitable manner, as by lacing as at 70, or stapling, or tacking, or other mode of fastening, including forming buttons and buttonholes on opposite margins of the opening to button them in place, or even by use of slide fasteners at 70. It will be understood however, that allowing the lower skirt as thus seen at 64 to hang down, in Figure 3, is quite suitable, since from the distances normally used in archery, the target face rings are most visible, and the rest of the target merely blends with the background, or in any event is not noticeable.

Each of the faces 50 and 52 of the target cover member 10 has imprinted or otherwise marked thereon, a series of circular concentric rings such as at 80, 82, 84, 86, and 88, which delineate the limits of the target ring areas 90, 92, 94, 96 and 98. The areas 90 to 98 may be colored suitably, such as gold, red, blue, black, and white, respectively, and marked with scoring values, such as 9, 7, 5, 3 and 1, respectively, as in Figures 1 and 3, to indicate the scoring value of the arrow which strikes and penetrates into each particular scoring area, the gold or central area being the "bull's-eye" or highest scoring area.

Referring now to Figures 5 and 6, it is seen that there is illustrated a modified form of the invention, in which the target butt and target face and cover member are rectangular in shape, instead of curved as in Figures 1 to 4. Thus, in Figures 5 and 6, there is the target butt 12a, formed with walls 14a and 16a which are mutually parallel and interspaced to define the chamber 18a therebetween, to receive the stuffing or filling matrix or mass 40a of plastic sheeting strips or shreads disposed therein. The chamber 18a is closed by side end walls 100 and 102, which are mutually parallel, and top and bottom walls 104 and 106, which are also mutually parallel. All these walls 14a, 16a, 100, 102, 104 and 106 are preferably formed of sheet material in the nature of corrugated cardboard or the like, similar to that shown for the corresponding walls of Figure 7, wall 20 of Figure 7 being now flattened out into walls 104, 106, 100 and 102 of Figures 5 and 6, and walls 14a and 16a being rectangular instead of circular.

Similarly, in the modified form of Figures 5 and 6, the target cover and face member 10a is similar to that of 10 in Figures 1 to 4, except that it is preferably shaped somewhat to fit the rectangular shape of the target butt 12a, and thus has faces 50a and 52a, mutually interspaced to accommodate the target butt, and interconnecting edge walls 110, 112, and 114, which, like marginal walls 54 and 56 of Figure 2, may be made integral, or secured together in any suitable manner, as by stitching, welding, adhesively, or the like, to form the structure shown. In the form shown in Figures 5 and 6, the lower portion 116 of the cover and face member is similarly allowed to hang downwards, in the manner of Figure 3, forming an envelope encasing the target butt, or, if desired, may be upfolded, as in Figures 1 and 2, to form a smooth outline. Also, each face 50a and 52a of the target cover and face member 10a, has imprinted or otherwise marked thereon, the concentric rings 80 to 88 inclusive, like shown in Figures 1 and 3, which delineate the scoring areas and rings seen in those views.

Figures 8 and 9 may now be examined to see a further modified form of the invention, in which continuous multiple sheets of plastic sheeting are used, instead of the fibrillar mass of plastic shreds or strips of Figures 1 to 7. In Figures 8 and 9, only the target butt is shown, at 12b, and it is formed with walls 14b and 16b which are in mutually parallel and interspaced relation, to define therebetween the chamber 18b. The edges of the chamber 18b are enclosed by walls 100b and 102b at the ends, and 104b and 106b at the top and bottom, corresponding with the similar walls shown in Figures 5 and 6. Inside the chamber 18b, of Figures 8 and 9, I dispose at least one baffle wall, such as 120, 122 and 124, of sheet material like plastic, vinyl plastic, rubber hydrochloride, or other continuous plastic sheeting composition of similar

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characteristics, in mutually interspaced relationship. The baffle sheets 120, etc., may be secured at the top to the wall 104b, by forming flanges 130 therein, and stapling or otherwise securing the flanges by means of staples or the like 132 to the wall 104b, the same mode of fastening being employed for fastening the lower flange to the wall corresponding to wall 106 of Figure 5, to hold the walls 120 etc., in the relation illustrated. For further stiffness, the sides of the panel; 120 etc., may be also flanged over and secured to the walls 100b and 102b, if desired, in a similar manner. While three such baffle panels 120 etc., are shown in Figure 8, I do not wish to be limited to this number, it being understood that there may be only one such panel, or a greater number, depending upon the range and archery operation involved, the number of panels being increased where necessary, to stop the arrows.

Although I have described my invention in specific terms, it will be understood that various changes may be made in size, shape, materials and arrangement without departing from the spirit and scope of the invention as claimed.

I claim:

1. An archery target comprising a target butt, a double faced downwardly opening target cover and face means encasing said target butt, said target butt comprising a hollow housing formed with penetrable walls enclosing a butt chamber, a mass of fibrillar material comprising elongated ribbon-like strips of plastics material disposed in said chamber, and wherein said target cover and face means comprises first and second face walls, edge wall means interconnecting said first and second face walls to define a chamber to receive said target butt, and first

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and second target scoring ring indicia carried on said first and second face walls, including concentric scoring ring areas marked in differential colors.

2. An archery target comprising a target butt, a double faced downwardly opening target cover and face means encasing said target butt, said target butt comprising a hollow housing formed with penetrable walls enclosing a butt chamber, said penetrable walls being formed of corrugated cardboard which is resistant to water deterioration, a mass of fibrillar material disposed in said chamber and comprising elongated fibrillar material in plastic form, and wherein said target cover and face means comprises first and second face walls, edge wall means interconnecting said first and second face walls to define a chamber to receive said target butt, and first and second target scoring ring indicia carried on said first and second face walls, and including concentric scoring ring areas marked in differential colors.

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