This invention relates generally to targets, and more particularly is directed to an improved target of the type formed of several pieces which are assembled together and which separate or break apart when the target is hit.

Although targets of the described character have been proposed, particularly for use as toys, existing targets are not completely satisfactory, in that the several pieces thereof do not reliably remain assembled and are relatively costly to make.

Accordingly, it is an object of the invention to provide a target of the described character, particularly intended for use as a toy, and wherein the several pieces forming the target are reliably and securely held together in assembled relationship until the target is subjected to a sharp impact, at which time the pieces forming the target separate from each other.

A further object is to provide a target having the above advantageous characteristics, and wherein the several pieces may be easily assembled together to form the target.

Still another object is to provide a target of the described character which is formed of several assembled together identical pieces so that such pieces may be conveniently and inexpensively mass produced.

In accordance with an aspect of the invention, a target consists of several pieces which are preferably congruent or identical, each of the pieces having irregular or serrated edges adapted to mate with corresponding edges of adjacent pieces when assembled together with the latter, and each of the pieces further having, at the back surface thereof, an apertured bridging member or eye extending beyond one of the edges and a pin adjacent the other of the edges so that when the several pieces are assembled, the eye of each piece receives the pin of the adjacent piece and presses together the mating edges of the adjacent pieces for frictionally holding the several pieces in assembled relationship.

Further, in accordance with the invention, each of the pieces of the target has a generally V-shaped bearing member projecting from its back surface along the inner ends of its edges for bearing engagement with the corresponding bearing members of the adjacent pieces in the assembled target, and each piece preferably also has a lug extending from the back surface thereof between the related eye and bearing member and also projecting beyond the edge of the piece so as to engage in back of the adjacent piece of the target when the several pieces are assembled.

The above, and other objects, features and advantages of the invention, will be apparent in the following detailed description of an illustrative embodiment thereof which is to be read in connection with the accompanying drawings forming a part hereof, and wherein:

FIGURE 1 is a front elevational view of a target embodying the present invention;
FIGURE 2 is an enlarged rear elevational view of the target of FIGURE 1;
FIGURE 3 is a perspective view of one of the pieces which are assembled to form the target of FIGURES 1 and 2; and
FIGURE 4 is an enlarged fragmentary sectional view taken along the line 4-4 of FIGURE 2.

Referring to the drawing, and initially to FIGURES 1 and 2, it will be seen that a target 10 embodying the present invention includes a number of pieces 11a, 11b and 11c of any suitable material of construction, preferably a rigid plastic, such as, phenol formaldehyde, urea formaldehyde, polyethylene, polypropylen or poly-styrene. These pieces are, preferably, of congruent or identical configuration so as to facilitate the inexpensive mass production of such pieces in a single mould assembly.

In the illustrated target 10, the three pieces 11a, 11b and 11c are of generally sectorial configuration so that, when such pieces are assembled together, as in FIGURES 1 and 2, they cooperate to define a disk or plate-like target, but it is to be understood that the pieces may have a shape other than that indicated in the drawing so as to require the assembling together of a different number of such pieces to form the target or to form a target having a different shape from that shown in the drawing.

With reference to FIGURE 3 which illustrates the piece 11c, and with the understanding that the described piece 11c is identical to the other cooperating pieces 11a and 11b, it will be seen that the sectorial piece 11c has irregular or serrated angularly related edges 12 and 13 which meet at an inner corner 14 and which are similar so as to be adapted for those mating edges of the edges 13 and 12, respectively, of the adjacent pieces when the pieces 11a, 11b and 11c are assembled together to form the target, as in FIGURES 1 and 2.

Further, as shown in FIGURE 3, each of the pieces has an integral, apertured bridging member or eye 15 extending from the back surface thereof along the edge 12 and projecting beyond the latter so that the opening 16 of bridging member or eye 15 is clear of the adjacent portion of edge 12. A bearing member 17 also extends from the rear surface of each piece at the corner 14 and preferably has a V-shaped surface coinciding with the inner portions of edges 12 and 13. A pin or projection 18 extends from the rear surface of each piece adjacent the edge 13 thereof and is spaced from the corner 14 by a distance substantially equal to the distance from this corner to the opening 16 of the bridging member or eye 15.

Each piece of the target 10 also has a bridging lug 19 extending from the rear surface thereof between bridging member 15 and bearing member 17 and projecting beyond the adjacent edge 12. A foot 20 projects from the rear surface at a location spaced a substantial distance outwardly from corner 14 and is spaced an approximately equal distance from the bearing member 17.

In assembling the several pieces 11a, 11b and 11c to form the target 10, the bridging member 15 of each piece is position in back of the adjacent piece and receives the pin or projection 18 of the latter in its opening 16. Opening 16 and pin 18 are located with respect to the mating edges 12 and 13 of the related pieces so as to urge such mating edges into tight frictional engagement with each other. The V-shaped surfaces of bearing members 17 meet at the center of the target, as shown in FIGURE 2. By bearing against each other, members 17 prevent any tendency of the mating edges 12 and 13 to overlap in response to the force exerted by the cooperative engagement of each bridging member or eye 15 with a pin 18. Further, the lug 19 of each of the assembled pieces bridges the engaged mating edges 12 and 13 of contiguous pieces, as is apparent in FIGURE 2. and, by engaging against the back surface of an adjacent piece, tends to stabilize the pieces in the assembly.

As long as pieces 11a, 11b and 11c remain generally planar, the cooperating engagement of the described parts of the several pieces produces a rigid assembly.

However, when the target formed of the assembled pieces is struck, or otherwise subjected to an impact
tending to rock such pieces relative to each other, or even tending to rock one of the pieces relative to the other pieces, such rocking displacement of any one of the pieces relative to the others relieves the frictional engagement between the mating edges and effects separation or breaking apart of the pieces.

As is illustrated in FIGURE 4, each pin or projection 18 preferably tapers at the side thereof facing toward the adjacent edge 13 of the related piece so as to provide a clearance in the opening 16 of the bridging member or eye 15 receiving the pin 18 which avoids binding of the pin 18 in opening 16 when the related pieces, for example, the pieces 11b and 11c are rocked or angularly displaced relative to each other in the directions indicated by the arrows on FIGURE 4, thereby ensuring breaking apart of the assembled pieces under impact.

The feet 20 are provided on the rear surfaces of pieces 11a, 11b and 11c so that, when such pieces are assembled together, as in FIGURE 2, feet 20 cooperate with bearing members 17 at the center of the target 10 to support the latter on an underlying surface or in stacked relation to other similar targets without inducing the rocking or angular displacement of the several pieces which would cause separation or breaking apart thereof.

It will be apparent that, after the several pieces forming a target have been separated or broken apart by an impact on the pieces, such pieces can be easily reassembled together for reconstituting the target. Since the several pieces assembled together to form a target are preferably congruent or identical, the pieces which are reassembled to form a target need not have originally come from the same target, that is, the pieces of a number of targets are conveniently interchangeable so as to greatly facilitate the reassembly of the targets, when a plurality of the targets are used concurrently. It will be understood that, in use, the plate or target may be suspended by a tape or other member in any desired location or placed in an upstanding position on a suitable support to form the target.

Although an illustrative embodiment of the invention has been described in detail herein with reference to the accompanying drawing, it is to be understood that the invention is not limited to that precise embodiment, and that various changes and modifications may be effected therein without departing from the scope or spirit of the invention, except as defined in the appended claims.

What is claimed is:

1. A reusable target comprising a plurality of separately assembled together pieces each having angularly related irregular edges mating with corresponding edges of adjacent pieces, an apertured bridging member extending from one side of each piece and projecting beyond one of said angularly related edges of said piece, a projection extending from said one side of each piece adjacent another of said angularly related edges of said piece and being received by said apertured bridging member of an adjacent piece so that said bridging member and projection of adjacent pieces cooperate to hold the mating edges of the adjacent pieces in tight frictional engagement with each other, and a bearing member also extending from said one side of each piece along adjacent inner portions of said angularly related edges and engaging the bearing members of said adjacent pieces to stabilize said pieces in assembled together relation until said pieces are subjected to an impact.

2. A reusable target comprising a plurality of separably assembled together identical pieces having angularly related, irregular mating edges radiating substantially from the center of the target, an apertured bridging member extending from one side of each piece and projecting beyond one of said angularly related edges of said piece, a projection extending from said one side of each piece to engage said one side of said adjacent piece to hold the mating edges of the adjacent pieces in tight frictional engagement with each other, and a bearing member also extending from said one side of each piece along adjacent inner portions of said angularly related edges and engaging the bearing members of said adjacent pieces to stabilize said pieces in assembled together relation until said pieces are subjected to an impact.

3. A reusable target comprising a plurality of separably assembled together, identical sectorial pieces each having irregular generally radial edges extending from substantially the center of the target and mating with the generally radial edges of the adjacent pieces, an apertured bridging member extending from one side of each piece and projecting beyond one of said generally radial edges of the said piece, a pin also extending from said one side of each piece adjacent the other of said generally radial edges and being received in said apertured bridging member of an adjacent piece to hold the mating edges of adjacent pieces of the target in tight frictional engagement with each other, and a bearing member extending from said one side of each piece to the junction of said generally radial edges of the said piece and engaging against the bearing members of adjacent pieces in the target to stabilize said pieces in assembled together relation until the target is subjected to an impact.

4. A reusable target comprising a plurality of separably assembled together identical pieces having angularly related, irregular mating edges radiating substantially from the center of the target, an apertured bridging member extending from one side of each piece and projecting beyond one of said radiating edges of said piece, a pin extending from said one side of each piece adjacent the other of said radiating edges of the said piece and being received in said apertured bridging member of an adjacent piece to hold the mating edges of adjacent pieces of the target in tight frictional engagement with each other, a bridging lug extending from said one side of each piece and projecting beyond said one radiating edge of said piece to engage said one side of said adjacent piece across said mating edges, and a bearing member extending from said one side of each piece at the junction of said radiating edges of said piece and engaging against the bearing members of adjacent pieces of the target to stabilize said pieces in assembled together relation until the target is subjected to an impact.

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