

[54] REUSABLE TARGET PIGEON

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[51] Int. Cl. **F41j 9/00**

[58] Field of Search..... 273/105.4, 102.1, 106 R, 273/106 C

[56] **References Cited**

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[57] **ABSTRACT**

First and second circular body members are formed from an elastic material to provide a reusable target pigeon and in a configuration that is aerodynamically stable when launched into the air. The body members are releasably connected together in axial alignment for release subject to an external impact force after the target is launched into the air. A tie member loosely secures the body members together so that upon release, the aerodynamic stability of the target is upset and the body members simulate a wounded bird as they fall to the ground together, indicating a hit on the target pigeon.

7 Claims, 4 Drawing Figures

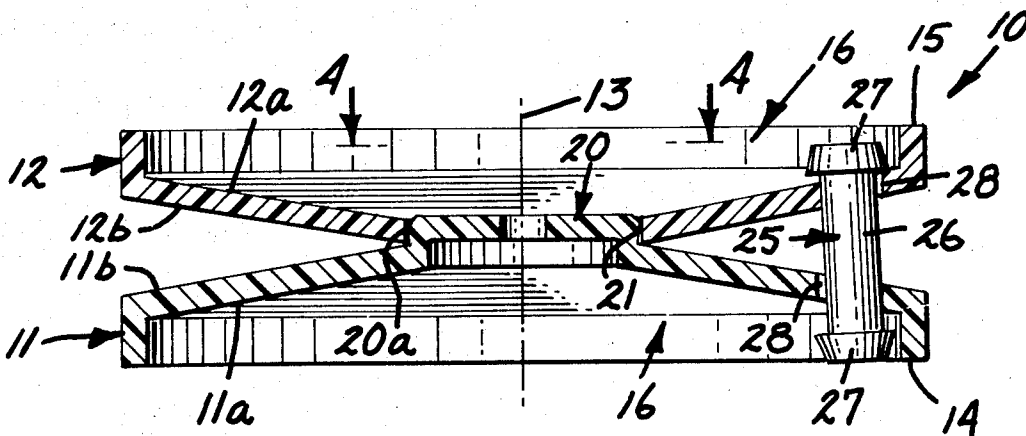


FIG. 1

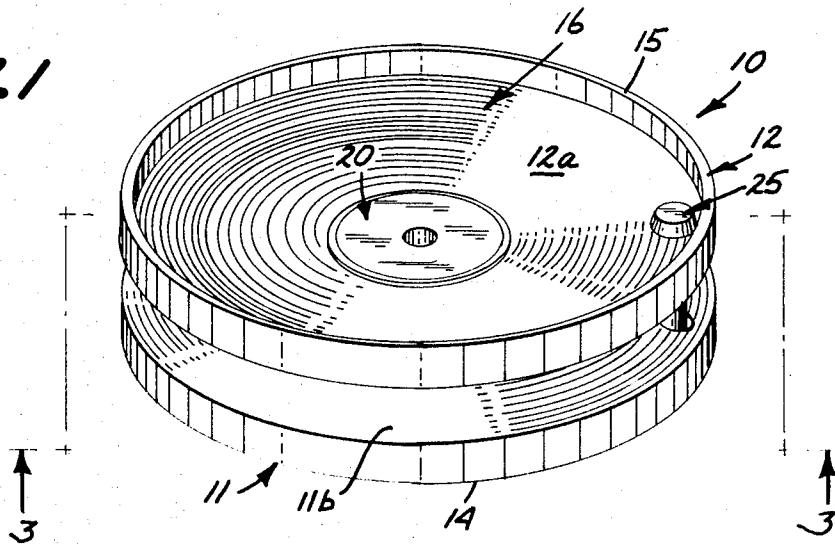


FIG. 2

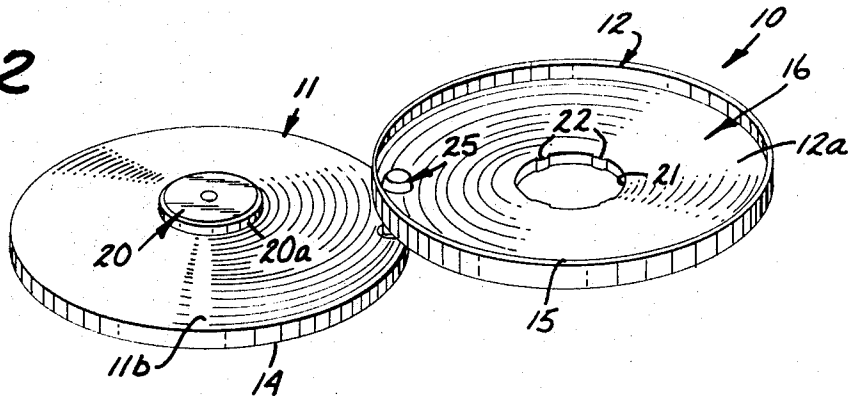


FIG. 4

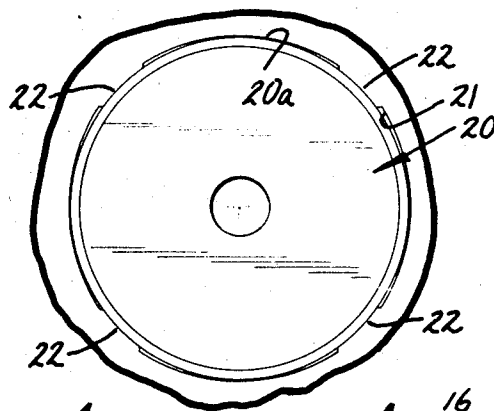
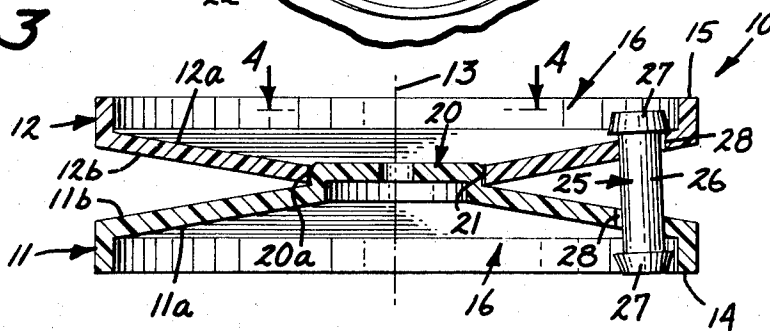


FIG. 3



REUSABLE TARGET PIGEON

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to trap shooting targets and is specifically directed to a retrievable and reusable target pigeon.

2. Description of the Prior Art

For many years now, trap shooters have used targets commonly known in the art as clay pigeons. Such targets are extremely fragile so as to easily shatter or fly apart and visually indicate a hit from a trap shooter's gun after they have been launched into the air. The fragile nature of such targets, as well as the particular material from which they are made, has led to a variety of problems. For example, the extremely fragile nature of these targets has not only made it difficult to ship, store and handle such targets, but has made it extremely difficult to launch these targets into the air to be shot at. This accidental breakage has resulted in much undue expense and waste.

As for the material from which the conventional clay targets have normally been heretofore made, it has been found that the clay material is toxic to humans as well as wild and domestic animals. Should fragments of the clay pigeons be ingested either accidentally, or by livestock while grazing in the fields formerly used for trap shooting events, serious illness and even death could follow. In addition, it is a continuing expense to clean the areas being used for these trap shooting events. Should these fields not be cleaned, a source of increasing litter and dangerous contamination, not conducive to good ecology practices, occurs.

SUMMARY OF THE INVENTION

The present invention provides a retrievable and reusable target pigeon which is simple in construction, relatively inexpensive to construct and use and fool-proof in operation. The target pigeon includes first and second circular body members, formed from an elastic material, which are releasably connected together in axial alignment. The body members are designed so as to be aerodynamically stable when propelled through the air and to become disconnected when struck by an external force, such as the pellets from a trap shooter's gun. A tie member loosely secures the body members together so that, upon disconnection due to the external impact of the trap shooter's pellets, the aerodynamic relationship of the body members is upset and they fall to the ground together in a manner closely simulating a wounded bird, to indicate a hit by the shooter. The material from which the target is made is nontoxic and the target pigeon is retrievable and reusable.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view in perspective of a reusable target pigeon constructed in accordance with the present invention;

FIG. 2 is a view in perspective thereof on a reduced scale showing a different position of some of the parts;

FIG. 3 is a view in axial section thereof as seen generally from the line 3—3 of FIG. 1; and

FIG. 4 is an enlarged detailed fragmentary plan view as seen generally from the line 4—4 of FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring in detail to the drawings wherein like reference numerals indicate like parts throughout the views, the numeral 10 generally indicates a reusable target pigeon. As illustrated, the target pigeon 10 includes first and second body members 11, 12 respectively, having opposite outer surfaces 11a, 12a, opposed inner surfaces 11b, 12b and a central axis 13 indicated by a broken line in FIG. 3. As shown, each body member 11, 12 has a circular configuration with a frusto-conical cross section for a reason which will become apparent hereinafter. Flanges 14, 15 project axially outwardly from the peripheral edge of respective body members 11, 12 to define, with respective body members 11, 12, axially outwardly opening recesses 16. Each of the body members 11, 12 is formed from an elastic material, such as a synthetic plastic, to give a degree of resiliency to the members 11, 12 for reasons which will also become apparent hereinafter.

A connecting means releasably connects the body members 11, 12 in axial alignment with at least a radially outer portion of the inner surfaces 11b, 12b spaced apart in a diverging relationship. The connecting means includes an axially projecting boss 20 formed on the first body member 11 generally centrally thereof. Boss 20 is positioned to extend axially away from the surface 11b for reception within an axial opening 21 formed in the second body member 12. The shape and size of the boss 20 and opening 21 are such that the boss is received therewithin with an interference fit. In the preferred embodiment, the opening 21 is formed with a slightly larger diameter than that of the boss 20 and includes a plurality of circumferentially spaced radially inwardly extending projections. When the boss 20 is received within the opening 21, these projections 22 project radially inwardly a sufficient distance to distort the shape of the opening 21, in the manner illustrated in FIG. 4 of the drawings. The projections 22 extend inwardly a sufficient distance to engage the boss 20 and cause the interference fit. That is, a circle described by the innermost portions of the projections 22 would have a diameter slightly less than that of the boss 20. While I have shown a preferred connecting means, it will be appreciated that modified connecting devices could be utilized which would function essentially in the manner of the connecting means heretofore described. By way of example, more or less of the projections 22 may be utilized or either the boss 20 or opening 21 may be slightly elliptically shaped, the only criteria being that the connecting means be easily separable subject to an external impact force.

In present trap shooting events, extremely fragile clay targets are normally launched into the air, either singly or in groups, to serve as targets for trap shooters. Such targets, normally shatter or fly apart to indicate a hit from the gun of a shooter or alternately upon contact with the ground. In either case, the debris therefrom is deposited over a large area in the vicinity where the trap shooting event is taking place. On many occasions, these events take place in farmers' fields which serve also to provide grazing areas for livestock. The particular material from which the clay pigeons are now made has been found to be toxic, not only to humans, but also to both wild and domestic animals. Thus, when any of the debris from such events is ingested, either acciden-

tally or while grazing, serious illness and often death results. Also, in fields or areas specifically used for target practice only, a source of increasing litter and dangerous contamination, not conducive to good ecology practices, occurs if these fields are not continuously cleaned.

In practice, the present invention is assembled to axially align the body members 11, 12 in the manner shown in FIGS. 1 and 3. This provides a target pigeon 10 which is adaptable for use with present target launching devices and one which can be easily retrieved for subsequent use many times over. The resilient or elastic nature of the material from which the body members 11, 12 are made prevents any undue damage thereto when struck by pellets from a shooter's gun under normal conditions. However, an exception to this fact may occur under conditions wherein the target 10 receives a direct hit at extremely close range.

In operation, a spin is imparted to the target 10 on the central axis 13 when the target is launched. This, together with the particular configuration of the target imparts an aerodynamic stability to the target 10 as it flies through the air, so the target 10 will closely resemble a bird in normal flight. The diverging relationship of the inner surfaces 11b, 12b and the flanges 14, 15 provide surface areas which may be struck by pellets from the trap shooter's gun. The impact of such an external force is normally sufficient to cause a release of the boss 20 from the opening 21 causing the body members 11, 12 to become disengaged and aerodynamically unstable. This, of course, indicates a hit by the trap shooter and as the target pigeon 10 continues to the ground, it simulates the erratic flight generally associated with a wounded bird.

For the purpose of securing the body members 11, 12 loosely together, to facilitate retrieval and subsequent reuse thereof, there is provided a tie member indicated generally by the numeral 25. Tie member 25 is formed from a relatively light plastic material in the shape of a pin 26 having enlarged head portions 27 at opposite ends thereof. As shown, particularly in FIG. 3, each of the body members 11, 12 is provided with an opening 28 radially outwardly of the central axis 13. The pin 26 and openings 28 are dimensioned so that the pin 26 is loosely received within the openings 28 with one of the enlarged heads 27 disposed outwardly of each of the outer surfaces 11a, 12a but within the confines of a respective one of the outwardly opening recesses 16. This arrangement assures that the tie member 25, not only does not interfere with working mechanisms of various launching devices on which the target 10 may be used, but does not interfere with the aerodynamic flight thereof when the target member 10 has been launched into the air. Also, the tie member 25 not only permits the easy retrieval of the target 10 but retains the body members 11, 12 in a closely spaced relationship such as that shown in FIG. 2 which serves to accentuate the unstable gyrations of the target 10 as it falls to the ground.

While I have shown a preferred configuration of the body members 11, 12 which lends to the aerodynamic stability of the target 10 in its assembled form when it is launched, other shapes may occur to those skilled in the art. For example, instead of the frusto-conical cross sectional shapes and flanges shown, the body members 11, 12 could provide the diverging inner surfaces 11b, 12b through the use of a pair of oppositely disposed

concave circular body members. Thus, it is believed that the shape is critical only in that, it must provide sufficient surface area for impact by pellets from the trap shooter's gun to cause the members 11, 12 to become separated, must be such as to be aerodynamically stable when launched into the air in the assembled condition and must fit presently used launching devices. Therefore, while I have shown and described a commercial embodiment of my reusable target pigeon, it will be understood that the same is capable of modification without departure from the spirit and scope of the invention, as defined in the claims.

I claim:

1. A reusable target pigeon comprising:

- a. first and second cooperating generally circular body members each having an annular axially inner surface and an axially outer surface;
- b. connecting means releasably connecting said body members together at their central portion in axial alignment and disposing said inner surfaces thereof in opposed radially outwardly diverging relationship;
- c. and tie means connected to said body members for limiting movements of said body members away from each other beyond a closely spaced apart relationship when said body members are disconnected from each other at said central portions thereof.

2. The structure of claim 1 wherein said connecting means includes an axially projecting boss formed on said first body member generally centrally thereof and wherein said second body member has an axial opening formed therein for the reception of said boss with an interference fit.

3. The structure of claim 2 wherein said opening in said second body member has a slightly larger diametric dimension than that of said boss and wherein one of said boss and opening has at least one radial projection which engages the other of said opening and boss and deforms said opening to create said interference fit when said boss is received within said opening.

4. The structure of claim 1 wherein said first and second body members each have a circular configuration and a frusto-conical cross section and wherein each body member includes a peripheral flange projecting axially outwardly therefrom, said flanges cooperating with said outer surfaces of respective first and second body members to define axially outwardly opening recesses.

5. The structure of claim 4 wherein said tie means comprises a pin having an enlarged head at opposite ends thereof, wherein each of said first and second body members has an opening formed therein radially outwardly of said central axis thereof and wherein said pin is loosely received within said openings with one of said enlarged heads disposed outwardly of each of said outer surfaces and within the confines of a respective one of said outwardly opening recesses.

6. The reusable target pigeon defined in claim 1 in which said tie means is connected to said body members radially outwardly of said central portions of the body members.

7. The reusable target pigeon defined in claim 6 in which said tie means comprises a pin disposed in generally parallel relationship to the axes of said body members, at least one of said body members having a transverse opening therethrough, said pin extending loosely through said opening and having an enlarged head on an end thereof axially outwardly of said opening.

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