(No Model.)

W. H. CRUTTENDEN & M. E. CARD.

FLYING TARGET.

No. 356,929. Patented Feb. 1, 1887.

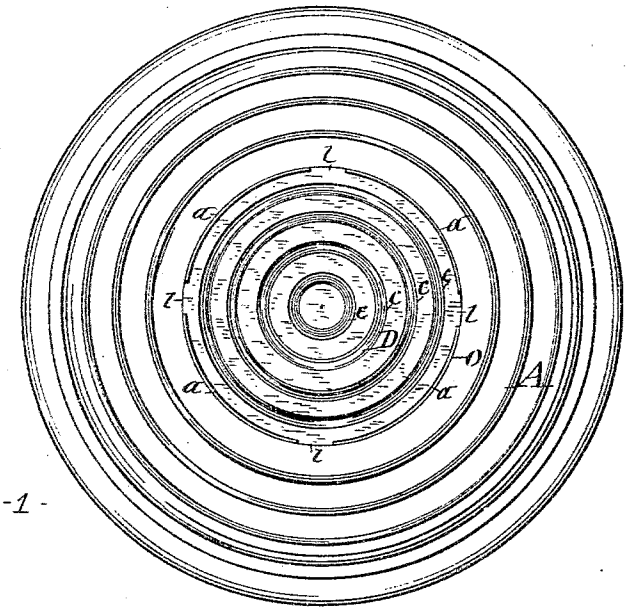


FIG-1-

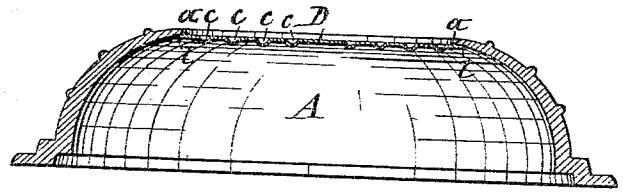


FIG-2-

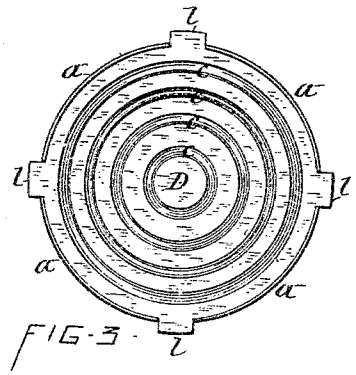


FIG-3-

WITNESSES

C. Bendixon

W. F. Wulf

INVENTORS

Will H. Cruttenden

& Milton E. Card.

per Bond, Lauss & Hoy

attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILL H. CRUTTENDEN AND MILTON E. CARD, OF CAZENOVIA, NEW YORK.

FLYING TARGET.

SPECIFICATION forming part of Letters Patent No. 356,929, dated February 1, 1887.

Application filed July 6, 1886. Serial No. 207,207. (No model.)

To all whom it may concern:

Be it known that we, WILL H. CRUTTENDEN and MILTON E. CARD, of Cazenovia, in the county of Madison, in the State of New York, have invented new and useful Improvements in Flying Targets, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of flying targets which are composed of a concavo-convex shell, either of fragile material, which is easily broken when struck by a shot, or of metal with a signal connected therewith in such a manner as to be thrown into view when the shell is struck by a shot. This class of targets are designed to sail in a horizontal position and with a whirling motion through the air, and to impart to them capability of such motion the center of the target must be as light as possible. The result is that when the thin and frail center of the target is struck by a shot such shot will penetrate the center of the target without breaking or tearing therefrom any perceptible fragment, and consequently such a shot is not accredited to the marksman.

The metallic target has its sailing quality impaired by the incumbrance of the extra signal connected therewith.

In an attempt to obviate the aforesaid defects, flying targets with the center piece weakly attached thereto have been formed of one and the same brittle or fragile material, and said center piece was made of sufficient thickness to prevent its breaking when hit by a shot, and cause it to be knocked completely out of the shell of the target. This latter construction, however, has also its defects in that the increased thickness of the center piece adds too much weight to the center of the target, and thereby impairs its sailing quality. Furthermore, in such targets the edges from which the center piece is disrupted are left so rough or denticulated as to render it exceedingly difficult to reset the center piece in the shell for future use.

Our invention is designed to obviate all of the aforesaid defects, and at the same time provide a flying target which shall have its center piece adapted to be easily reset in the shell after it has been knocked out of the same, and thus render the target capable of repeated use; and to that end our invention consists in the novel construction of the target, as hereinafter fully described, and specifically set forth in the claims.

The invention is fully illustrated in the annexed drawings, wherein Figure 1 is a plan view of our improved flying target. Fig. 2 is a transverse section thereof, and Fig. 3 is a detached plan view of the center piece of the target.

A represents the annular concavo-convex shell of a target, which shell is composed of any of the usual well-known fragile materials or compositions which easily break when struck by a shot. This shell we form with a central opening, *o*, and across this opening we place a horizontal disk, D, of tin or other light and infrangible material, which disk spans and closes said opening, and is weakly sustained in its position by a seat formed immediately around the opening.

The attachment of the disk we prefer to make by providing the disk with narrow marginal flanges *a a*, turned up at right angles therefrom, and with intermediate lips, *l l*, projecting from the edge of the disk and in the same plane therewith, the disk being inserted into the opening *o* from the concave or inner side of the shell, against which latter the lips *l l* are made to rest, while the flanges *a a* abut against the edge of the opening *o*, and by the frictional hold of the latter the disk is prevented from dropping out of the opening *o* toward the concave side of the shell. We do not, however, limit ourselves to the aforesaid method of inserting the metal center piece into the shell, inasmuch as the former may be attached by molding the shell around the metal center pieces.

In order to prevent the shot from glancing on the disk when striking the same at an acute angle, we press into the disk grooves *c c*, which arrest the shot and insure the dislodgment of the disk from the shell. The marginal flanges *a a* form outward projections along the junction of the disk with the shell, which projections also serve to arrest the shot in its glancing on the disk, and either cause the shell to be broken or the disk to be knocked out of it

It will be observed that the described metal disk does not present sufficient resistance to the shot to cause the disk to be injured when struck, and it can readily be applied to another shell, A, provided with the opening *o*, and thus permit of its being used repeatedly.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A flying target composed of a fragile shell provided with a central opening and an infrangible disk spanning said opening and sustained therein by a frictional hold of the marginal portion of said disk on the edge of the central opening of the shell, substantially as set forth.

2. A flying target composed of a fragile shell provided with a central opening and an infrangible disk spanning said opening and weakly sustained therein by flanges projecting from the disk and abutting against the edges of the opening, substantially as described and shown.

3. A flying target composed of a fragile shell having an infrangible center and an outward projection around the center at its junction with the shell, substantially as and for the purpose specified.

4. A flying target composed of a shell of fragile material provided with a central opening and a sheet-metal disk spanning said opening and weakly sustained therein and having grooves pressed in it, substantially as set forth and shown.

5. In combination with the fragile shell provided with a central opening, the sheet-metal disk D, spanning said opening and having flanges *a a* abutting against the edge of the opening, and lips *l l*, engaging the concave side of the shell, substantially as described and shown.

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Cazenovia, in the county of Madison, in the State of New York, this 2d day of July, 1886.

WILL H. CRUTTENDEN. [L. S.]
MILTON E. CARD. [L. S.]

Witnesses:
JOHN W. HOWSON,
W. L. AREMUS.