

(No Model.)

A. E. SPANGLER.
FLYING TARGET.

No. 248,362.

Patented Oct. 18, 1881.

Fig. 1.

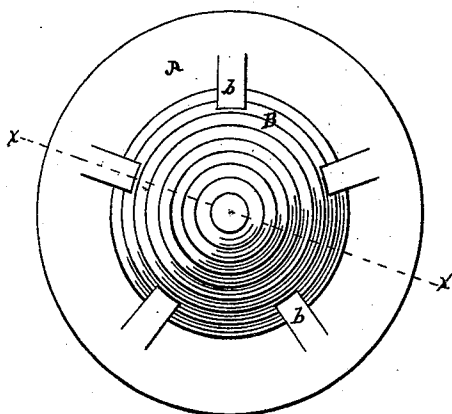


Fig. 2.

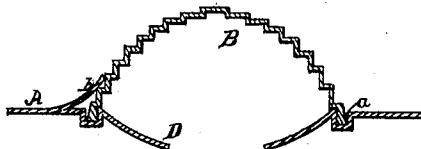


Fig. 3.

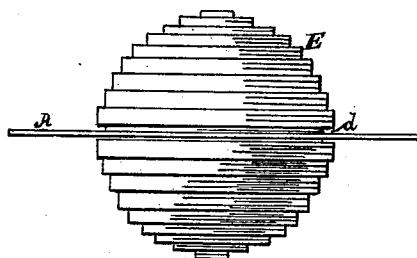
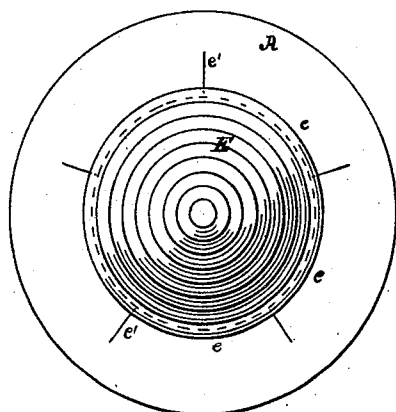


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

ALBERT E. SPANGLER, OF CINCINNATI, OHIO, ASSIGNOR TO THE LIGOWSKY
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FLYING TARGET.

SPECIFICATION forming part of Letters Patent No. 248,362, dated October 18, 1881.

Application filed May 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. SPANGLER, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Flying Targets, of which the following is a specification.

My invention relates to that class of flying targets which are projected or thrown from a trap or similar ball-elevating machine.

One feature of my invention consists in a detachable annular collar or rim, in combination with a concave disk or sphere, the rim being united to the disk or sphere in such a manner that when one disk or sphere is broken by the shot or ball a new disk or sphere can be combined therewith, the collar being thus rendered capable of being used a great number of times.

The novel provisions for enabling the disk or sphere to be connected to the annular rim or collar constitute various subordinate features of my invention.

In the accompanying drawings, making a part of this specification, Figure 1 is a view of a target embodying my invention, and showing that side thereof which is the upper one in Fig. 2. Fig. 2 is a vertical central section taken at the dotted line XX of Fig. 1; and Fig. 3 is an elevation of my improved annular rim or collar applied to a ball of glass or similar brittle material, and Fig. 4 a plan or top view of device shown in Fig. 3.

A indicates an annular rim or collar, made of metal or other stiff and tough material.

B designates a concave target, preferably made of glass or other similar brittle material, so that when shot at the impact of the shot or rifle-ball will break it to pieces, or of a soft material which will receive the shot or ball and indicate where either of the latter penetrated it.

Various means and modes of connecting the annular collar A to the concave disk may be employed; but the preferable method is that herein shown. The metal rim A has an annular groove, *a*, formed therein, in which the periphery of the concave disk B is placed and secured therein by glue or other cement. The edge of the concave disk B which is inserted

in the groove *a* is preferably dovetailed, as shown in Fig. 2, in order that the disk may be the better secured to the rim A.

As a further or separate means of securing the disk B to the rim A after the edge of the disk B has been inserted in the groove *a*, the side of the groove is preferably battered or pressed in, so as to secure the dovetailed edge in position in the groove.

As a further means of securing the concave disk B to the rim A, I employ the ears *b*, which may be either stamped from the rim or be otherwise secured thereto in such a position that they press down against the disk, as shown in Figs. 1 and 2.

The portion of the rim A which is interior to the groove *a* is preferably bent down, as shown at D, in order to enlarge the air-chamber between the disk B and the rim A, and secure a more direct movement of the target through the air. This portion D may, however, be omitted, if desired, without materially interfering with the object of my invention.

The concave disk B is preferably corrugated in the novel manner shown, the corrugations encircling the disk, so that the shot which may strike it will not glance off without breaking it. These corrugations are useful upon disks or spheres as targets, even when employed without the collar.

A modification of my device as above described is shown in Figs. 3 and 4, in which I employ a hollow ball or sphere, E, instead of the concave disk B, the said ball being surrounded by the rim A. In this modification the ball E has a groove, *d*, extending around its greatest circumference, and in this groove the annular rim A is secured by means of the ears *b*, which in this latter construction are formed from the inner edge of the annular rim A, as shown in Fig. 4, so that when the ears are in a line with the rim the central opening will be of the same diameter as the ball, measuring from the bottom of the groove *d*. The inner edge of the rim A is divided into several ears, *b*, by the slits *e'*, as shown, and when a ball is to be inserted in the rim these ears are slightly bent up, so as to allow the ball to enter

the opening in the rim, and the ears are then bent down into the groove *d*, thus securely fastening the rim A and ball E together.

It will be obvious that the precise method of attaching the rim A to the remainder of the target may be somewhat varied without materially altering my invention. For instance, the ears *b* may be omitted from the device shown in Figs. 1 and 2, as may also the dovetailed edge of the concave disk B, in which event I depend solely upon the cement.

By the employment of a target constructed as above described several advantages are obtained. The target may be spun into the air, receiving a rotary motion from the trap, and the rim A will cause the target to imitate the movements of a flying bird much more closely than the targets as now constructed can be made to do. The rim A may be used a number of times, and thus the target may be very cheaply constructed. The fragile portion of the target is not so liable to be broken by the trap when thrown or by striking the ground when not hit by the shot or rifle-ball.

When desired the collar may be specially formed or have a suitable provision for ena-

bling it to be thrown from traps not otherwise adapted to throwing such a description of target.

What I claim as new and of my invention, 30 and desire to secure by Letters Patent, is—

1. A flying target consisting of a hemispherical or similar corrugated shell or cup, as B, of frangible material, having a non-fragile flange surrounding the periphery thereof and at- 35 tached substantially as described.

2. A flying target of frangible material having a non-fragile rim, as A, attached thereto by ears, as *b*, embracing the body of the target, substantially as described. 40

3. The combination, in a flying target, of a shell or cup of frangible material, the rim A, having groove *a* and ears *b*, interlocking with the shell or cup, substantially as described.

4. A collar of non-frangible material pro- 45 vided with the groove *a* and the ears *b* for the attachment of a frangible shell or cup, substantially as described.

A. E. SPANGLER.

Witnesses:

WM. E. JONES,

J. WM. STREHLI.