(No Model.)

A. C. REUSS.

FLYING TARGET.

No. 395,996. Patented Jan. 8, 1889.

Fig. I.

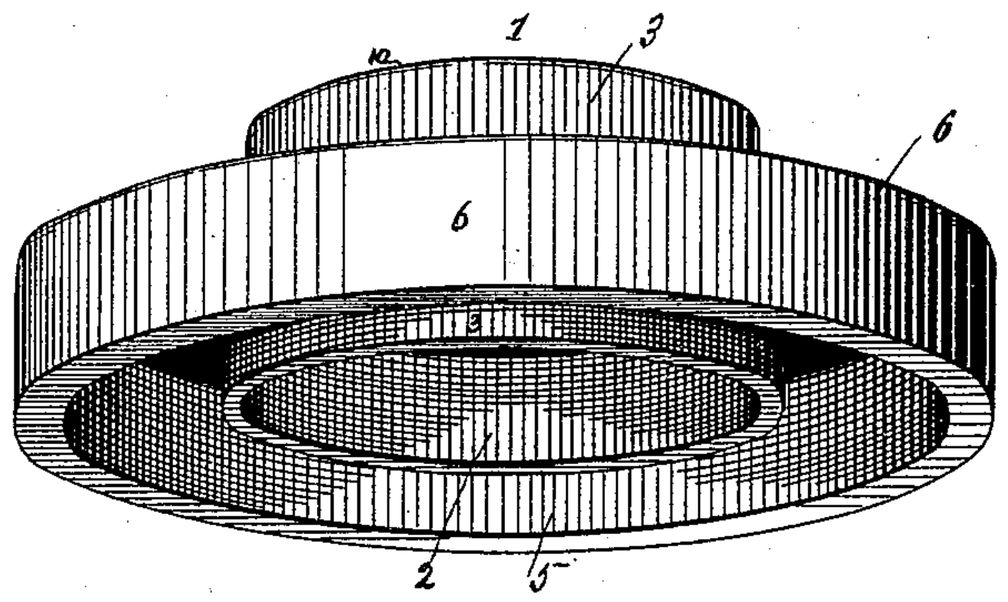
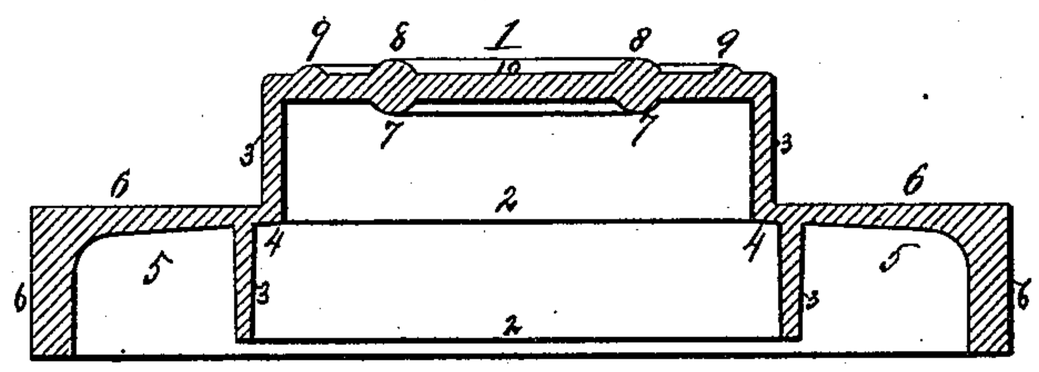


Fig. II.



Attest;
G. N. Hinchman Jr;
Emma Arthur.

Inventor;
Albert C. Reuss.
By Knight Bro's.
Atty's.

UNITED STATES PATENT OFFICE.

ALBERT C. REUSS, OF BELLEVILLE, ILLINOIS.

FLYING TARGET.

SPECIFICATION forming part of Letters Patent No. 395,996, dated January 8, 1889.

Application filed March 29, 1888. Serial No. 268,776. (No model.)

To all whom it may concern:

Be it known that I, ALBERT C. REUSS, of Belleville, in the county of St. Clair and State of Illinois, have invented a certain new and useful Improvement in Flying Targets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a perspective view of the target, and shows the circumferential chambers beneath it, that give additional buoyancy to its rotary flight; and Fig. II is a vertical section, showing the interior construction of the target.

This invention relates to a device for utilizing air-chambers in the construction of a rotary flying target, to add buoyancy and a steady equilibrium to its flight; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, in which similar figures of reference indicate like parts in both the views, 1 represents my flying target, which may be discharged on its flight by any suitable spring-trap. The target is provided with a round central chamber, 2, that is confined within a peripheral casing, 3, and surmounted by a disk, 10, integral with said part 3. The lower portion of said chamber is expanded to a slightly-increased diameter, making a circumferential understep, 4, in its internal arrangement, from which descends the lower section of the casing 3 of the central air-chamber, which forms a circumferential partition between said lower section of the central chamber and the annular air-chamber 5, which is inclosed at top and around its periphery by the casing 6. The rotary movement of the air in these chambers, especially its friction against the interior surface of its upper parts as the flying target is sent spinning through the air, gives it additional buoyancy and causes it to float and soar upward, and thus make a much more extended flight than could otherwise be obtained.

The greater height of the two-story central chamber and its central ascent above that of the annular chamber tend to steady the target in its flight. An inner circular rim, 7, in the ceiling of the central chamber and similar rims, 8 and 9, on the top casing of said chamber, the aforesaid step 4 in the casing 3, and all the circumferential surfaces assist to steady the target in its rotary flight to present an undeviating mark to the marksman.

The target is preferably made of pitch and carbon of about equal proportions in weight, and when at a suitable temperature is pressed in a mold to the form shown and described. The structure of the target is then complete, and when removed from the molds it will harden by cooling in a few minutes, so as to be in a right condition for use or packing for shipping; but I do not confine myself to any one material in its construction, for it may be made of pottery-clay, wood, or any other suitable material. When of pottery-clay, it would, of necessity, require to be baked.

The flying target can be projected from any suitable spring-trap such as are used for that purpose, and as it is sent spinning round from the buoyant effect of the rotary current within its chambers it floats and soars through the air to a much greater distance than it could were it not for the peculiar construction of the buoyant air-chambers beneath it. The vertical capacity of the central chamber being greater than the peripheral one that surrounds it, and also being elevated above it, tend to steady the target in its flight, for the more centralized is the buoyant tendency and the more elevated its dominant position relatively to the surrounding portion of the target the more steady is the movement of said target.

The elevated position of its buoyant tendency acts under exactly reverse conditions in steadying the target to that of ballast in a vessel, for the self-evident reason that while the ballast in the lower hold of the vessel dominates from the depression of its own gravity, the buoyant effects within the rotory air-chambers are vested in their ascendant power.

Another important feature in the device is that, for reasons given and means provided, the target in its flight so nearly maintains its equilibrium as to provide a steady mark and present itself sufficiently near edgewise to register the shots that strike in clear view of the marksman and others. On the other hand, where flying targets, as some do, present part of the time a broadside mark for the shot, it

will frequently pass through the target without breaking it or leaving any registry that is seen that the target was hit. Besides, it is not a fair test of marksmanship to strike a flying target that is sometimes presented broadside and at others with an edge side to the marksman.

I claim as my invention—

1. In a flying target, the combination of the cylindrical casing 3 and disk 10, forming the central air-chamber, 2, and the casing 6, forming an annular chamber, 5, concentric with the chamber 2, whereby when the target is rotated and sprung buoyancy is added to its flight, substantially as and for the purpose set forth.

2. In a flying target, the combination of the cylindrical and annular faces, the circumferential cylindrical walls forming central and annular air-chambers, the understep 4, and circular rims 7, 8, and 9, all arranged when the flying target is rotated and sprung to add buoyancy and stability to its flight, substantially as and for the purpose set forth.

3. A flying target consisting of a circular solid face and concentric cylindrical and annular air-chambers extending from one side thereof, substantially in the manner herein set forth.

4. A flying target consisting of a circular solid disk, a concentric cylindrical air-chamber extending therefrom, a concentric annular disk formed on said cylindrical air-chamber in a different plane from the circular disk, and a concentric annular air-chamber extending from said annular disk, as herein shown and described.

5. In a flying target, a circular or annular solid face having formed thereon cylindrical rims or flanges forming cylindrical or annular air-chambers, and thus affording buoyancy and stability to the flight of the target, as herein explained.

ALBERT C. REUSS.

In presence of—
BENJN. A. KNIGHT,
EDWD. S. KNIGHT.