

J. G. HOPE.
Projectiles.

No. 142,394.

Patented September 2, 1873.

Fig. 1.

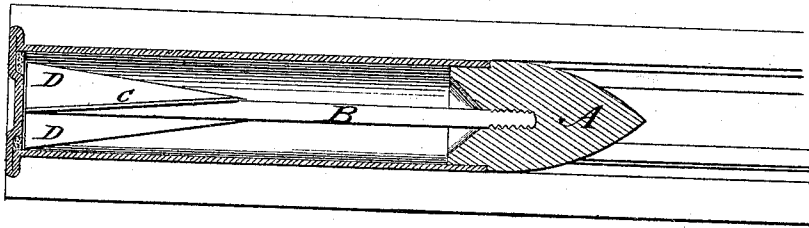
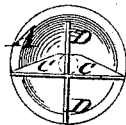


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE

JAMES G. HOPE, OF WICHITA, KANSAS.

IMPROVEMENT IN PROJECTILES.

Specification forming part of Letters Patent No. **142,394**, dated September 2, 1873; application filed April 19, 1873.

To all whom it may concern:

Be it known that I, JAMES G. HOPE, of Wichita, in the county of Sedgwick and State of Kansas, have invented a new and Improved Projectile, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved projectile, and Fig. 2 is an end view of the same.

Similar letters of reference indicate corresponding parts.

The object of my present invention is to furnish an improvement in the class of projectiles provided with winged stems, whereby they are adapted for shooting around corners or angles, or for describing a curve in the air other than that which would result from natural causes, attractions, &c. The invention is more particularly an improvement on the projectile for which Letters Patent were issued to applicant October 4, 1870; and consists in providing the stem of the projectile with a double set of guide-wings, one for preventing its rotation during flight, and the other for causing it to describe a curve of greater or less radius, as hereinafter more fully described.

In the drawing, A represents the ball, of the usual shape, to whose interior part is screwed or otherwise connected the square stem B, of about twice the length of the ball, more or less. The end of stem B is cut diagonally from about the middle of its length to the end, producing thereby a flat beveled end. The triangular wing-plate C is soldered or otherwise placed on the plane produced by the diagonal end of stem B, and projects equally at both sides of the same, forming guide-wings, which widen gradually toward the end of stem B. The guide-wings D, of the form of a right-angled triangle, with acute angle at the apex,

and about the size of the projecting wings C, are placed perpendicularly to the plane of wings C, but in the direction of the longitudinal axis of the projectile on stem B, and suitably connected therewith. Stem B and the wings may be made of any suitable material, connected as described, or cast in one piece, or made of steel, provided that the guide-wings are placed in the position described.

By the use of such projectiles in straight rifles, the loss of energy caused by the friction of the whirling motion is overcome, the ball steadied in its flight by the longitudinal wings without turning, describing at the same time a curve by the action of the slanting wings, and making a stronger effect by the power gained thereby.

It is obvious it will enable a gun or battery to be used with destructive effect upon an enemy or other object, without being itself exposed to view or direct attack. It may also be employed when the object of attack could not be brought in range of a gun or battery using the ordinary projectiles.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

An improved projectile for straight-grooved rifles, formed of a ball, A, having a stem, B, provided with the wings D D parallel to its axis, and with the wings C oblique thereto, and secured to its flat beveled end, as shown and described, whereby said ball is prevented from turning on its axis, but at the same time guided in a curve of greater or less radius, as specified.

JAMES G. HOPE.

Witnesses:

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