J. G. HOPE.

Projectile.

No. 107,909. Patented Oct. 4, 1870.

Fig. 1.

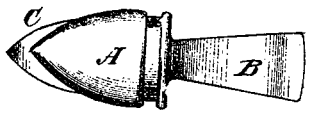
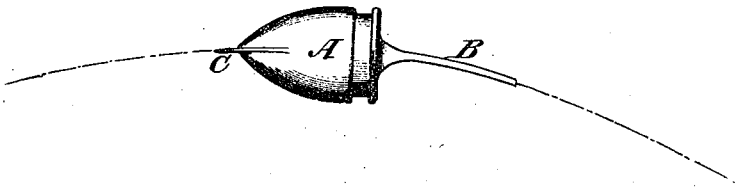


Fig. 2.



WITNESSES

Gustave Dieterich

D. S. Dalbee

INVENTOR

James G. Hope

per Munn & Co

ATTORNEYS.

United States Patent Office.

JAMES G. HOPE, OF TOPEKA, KANSAS.

Letters Patent No. 107,909, dated October 4, 1870.

IMPROVEMENT IN PROJECTILES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES G. HOPE, of Topeka, in the county of Shawnee and State of Kansas, have invented a new and useful Improvement in Projectiles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figures 1 and 2 are detail views of balls made in accordance with my invention.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improvement in balls and other projectiles, by means of which the ball or other projectile may be fired in curved lines with the same accuracy as in straight lines; and

It consists in constructing the ball with a curved flat piece upon its base, whether used with or without a curved flat point, as hereinafter more fully described.

A represents the body of the projectile, which may be made in any of the well-known forms used in the construction of projectiles.

Upon the base of the body A is formed a rearwardly-projecting piece or plate, B, which is made flat, as shown in fig. 1, to take a good hold upon the air, and is curved, as shown in fig. 2, to cause it to move upon a curved line.

The piece or guide B should be curved to exactly correspond with a portion of the line upon which it is desired to have the projection move.

The forward end or part of the projection may have a flattened point, C, formed upon it, as shown in fig. 1, which flattened point should be curved to correspond with the curve of the guide B, as shown in fig. 2, as an additional guide in causing the projectile to move in the desired line.

The projectiles may be made with or without the curved flattened points C, as may be desired.

The projectiles thus formed must be used in arms made with straight grooves or rifles, or in arms having smooth bores, as the guide B or guides B C will prevent the projectile from twisting or revolving during its flight, which greatly increases the range and accuracy of the fire.

It should be observed that the projectile must be placed in the arm with the guide or guides in the exact position in which it is desired to have the said projectile travel, whether it be to the right or left, or in any other direction.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The curved and flattened piece or guide B, formed upon the base of a projectile, substantially as herein shown and described, and for the purpose set forth, whether the curved and flattened point C be used or not.

2. The curved and flattened point C, formed upon the forward end of a projectile, when used in connection with the curved and flattened guide B, formed upon the base of said projectile, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me this 15th day of August, 1870.

JAMES G. HOPE.

Witnesses:

JAMES T. GRAHAM,

T. B. MOSHER.