W. TAGGART.

Projectile.

No. 16,076.

Patented Nov. 11. 1856

Fig 1

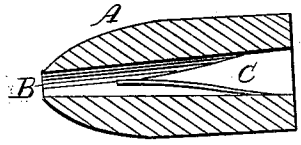


Fig. 2

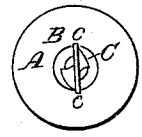


Fig. 3

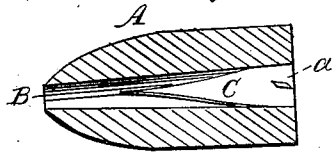
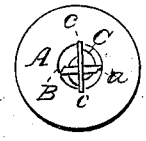


Fig. 4



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM TAGGART, OF HAVERHILL, MASSACHUSETTS.

IMPROVED PROJECTILE FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **16,076**, dated November 11, 1856.

To all whom it may concern:

Be it known that I, WILLIAM TAGGART, of Haverhill, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Balls and Bullets for Cannon and other Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a longitudinal section in the central plane of a cannon-ball constructed in my improved manner; Fig. 2, a view of the rear end of the ball; Fig. 3, a section similar to that in Fig. 1, showing an additional feature; Fig. 4, a rear view of the same.

Like letters designate corresponding parts in all the figures.

The ball may have any suitable external form; but I prefer the cylindrical ball, with the forward end tapering, as represented in Figs. 1 and 3. Concentric with the axis is formed an aperture, B, extending entirely through the ball. The aperture may be cylindrical, or somewhat flaring, from the point to the rear, as shown in the drawings. Across the center of this aperture is secured a thin spiral plate or partition, C, commencing somewhere between the point and the middle of the ball, or even farther back, and extending thence to the rear end, or thereabout. The wind of the partition may be through half a circle, more or less. It may be formed of a separate piece of sheet metal, and its edges embedded within the metal of the ball when cast, as indicated at *c c*, Figs. 2 and 4, or it may be of the same metal as the ball and cast therewith. The object of the partition is to communicate a revolving motion to the ball as it passes through the air.

In Figs. 3 and 4 is represented an additional device, which I contemplate using in connection with the spiral partition. It consists in two wings, *a a*, situated at right angles to the rear end of the spiral partition and in a central position. Each one is placed a little obliquely to the axial plane of the ball in the proper direction to increase the revolving motion given to the ball by the spiral partition; hence the two wings cross the axial plane in opposite directions, as indicated in Fig. 3. They may be cast with the rest of the ball or secured therein in any suitable manner.

The above improvements are intended particularly for cannon-balls or large missiles; but I do not intend to confine their application to balls of any specific size or to any particular kind of fire-arms.

I do not claim the central aperture, nor communicating a revolving motion to the ball by spiral ridges or projections on the inner surface around such an aperture; but

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

1. The spiral partition C, arranged and operating substantially as specified.

2. The wings *a a*, arranged in the manner and for the purpose described.

The above specification of my improvement in balls and bullets for cannon and other fire-arms signed and witnessed this 12th day of September, 1856.

WILLIAM TAGGART.

Witnesses:

ALFRED KITTREDGE,

GEORGE HASELTINE.