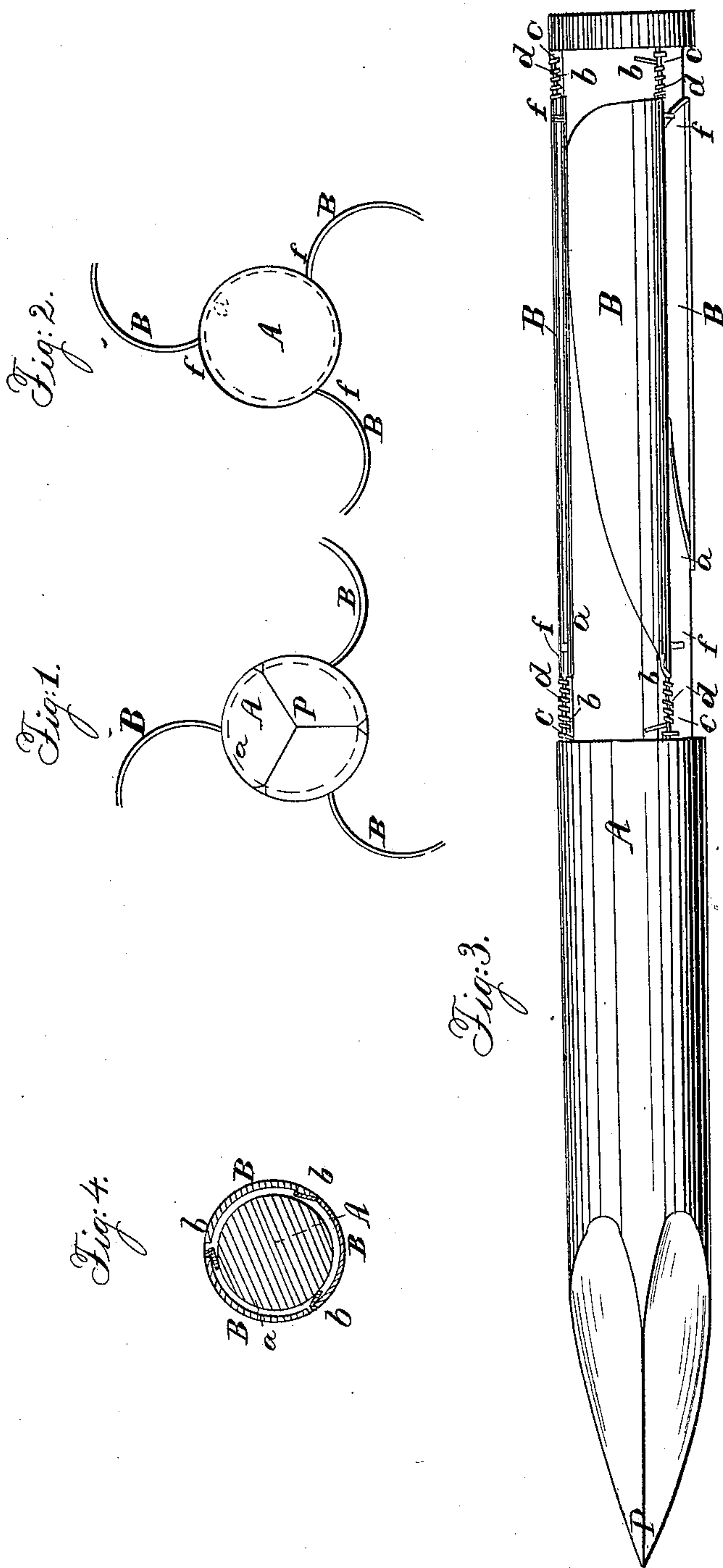


R. SIBLEY.  
Bomb Lance.

No. 17,407.

Patented May 26, 1857.





# UNITED STATES PATENT OFFICE.

RUFUS SIBLEY, OF NORWICH, CONN., ASSIGNOR TO CHRISTOPHER C. BRAND.

## IMPROVED PROJECTILE FOR KILLING WHALES.

Specification forming part of Letters Patent No. 17,407, dated May 26, 1857.

*To all whom it may concern:*

Be it known that I, RUFUS SIBLEY, of Norwich, in the county of New London and State of Connecticut, have invented an Improved Projectile to be Discharged from a Gun or Fire-Arm; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 denotes a front view, and Fig. 2 a rear-end view, of it.

The nature of my invention consists in providing the body of the projectile with thin sheet-metal wings arranged on and so applied to said body as to be capable of being turned down laterally upon the same and to turn upon pivots, journals, or wires, the wings having springs applied to them, by which, when they are left free, or immediately after the projectile leaves the fire-arm, they may be thrown or forced out into radial or approximating positions with respect to the axis of the projectile, or, in other words, take positions as exhibited in Fig. 2.

In Fig. 3, which is a side view of the projectile, the wings are represented as folded or turned down laterally or in transverse directions upon the body A. They are likewise so exhibited in Fig. 4, which is a transverse section of the projectile.

In the drawings, A denotes the body of the projectile, it being generally of a cylindrical shape, except at its front end, where it terminates in a lance or cutting-point, *p*. The rear half of the body, or that part of it to which the wings are applied, is made somewhat less in diameter than the front half or portion, or so that when the wings are folded down close against the body their outer surfaces may be even with the cylindric surface of the surface of the front half of the projectile, or may be in proper positions to enable the projectile to be inserted in the bore of the gun or fire-arm destined to receive it.

The reduced or recessed part of the body, and to which the wings are directly applied, is exhibited at *a*, the several wings being shown at B B B.

Each wing should be constructed of thin sheet-brass or other suitable metal, and have its lower edge or part bent around or fastened to a wire, *b*, the ends of the wire being pro-

jected beyond those of the wing in order to constitute journals, which may be inserted in staples or bearings *c c*, extended from the body of the projectile.

One or more springs, *d d*, may be applied to each wing, or to it and the body A, so as to operate in such manner as to raise the wing off the body or cause it to turn on its hinges or journals into the position shown in Fig. 2.

In carrying out my invention each wing is to be hinged or jointed to the body of the projectile in such manner or by such means as will enable it to be turned laterally through an arc of about ninety degrees, and from the position with respect to the body as shown in Figs. 1 and 2 into that exhibited in Figs. 3 and 4, or from one of such positions to the other, as the case may require.

The wings, being made of sheet metal, are not liable to be injured by the explosion of the charge of the fire-arm, and, furthermore, being constructed of metal, they can be made very thin, so as to insure strength with lightness—two important requisites in the wing of a projectile of this description.

In order that each wing, when thrown out into the position shown in Fig. 2, may be estopped in such a position, it may bring up against a stop or stud, *f*, suitably applied to the body.

In the drawings the journals of each wing are shown as arranged in a line parallel to the axis of the body. They, however, may be disposed in a line slightly inclined thereto, if desirable.

Previous to inserting the projectile in the gun or fire-arm the wings should be folded or turned down upon the body, each wing being curved or bent so as to fit closely thereto. As soon as the projectile is ejected from the gun the wings turn up into radial, or nearly radial, directions on the body, and by so doing operate to maintain the projectile in its proper course of flight, and if the wings are slightly inclined to the axis of the implement they will, by their action against the air during the flight of the projectile, impart to it a rotary motion on its axis, whereby it will be prevented from deviating from its proper path or course.

I claim—

An improved projectile (to be fired from a gun) constructed with sheet-metal wings hav-

ing journals or turning on wires or journals arranged so that the said wings may be turned down transversely or laterally on the body of the projectile, or in a recess or space made therein to receive them, each wing being arranged either parallel or inclined to the axis of the projectile, as described.

In testimony whereof I have hereunto set my signature this 7th day of March, A. D. 1857.

RUFUS SIBLEY.

Witnesses:

JOHN V. MURPHY,  
WM. L. BREWER.