

(No Model.)

W. T. CHAMBERLAIN.

AIR PROJECTILE.

No. 279,539.

Patented June 19, 1883.

Fig. 1.

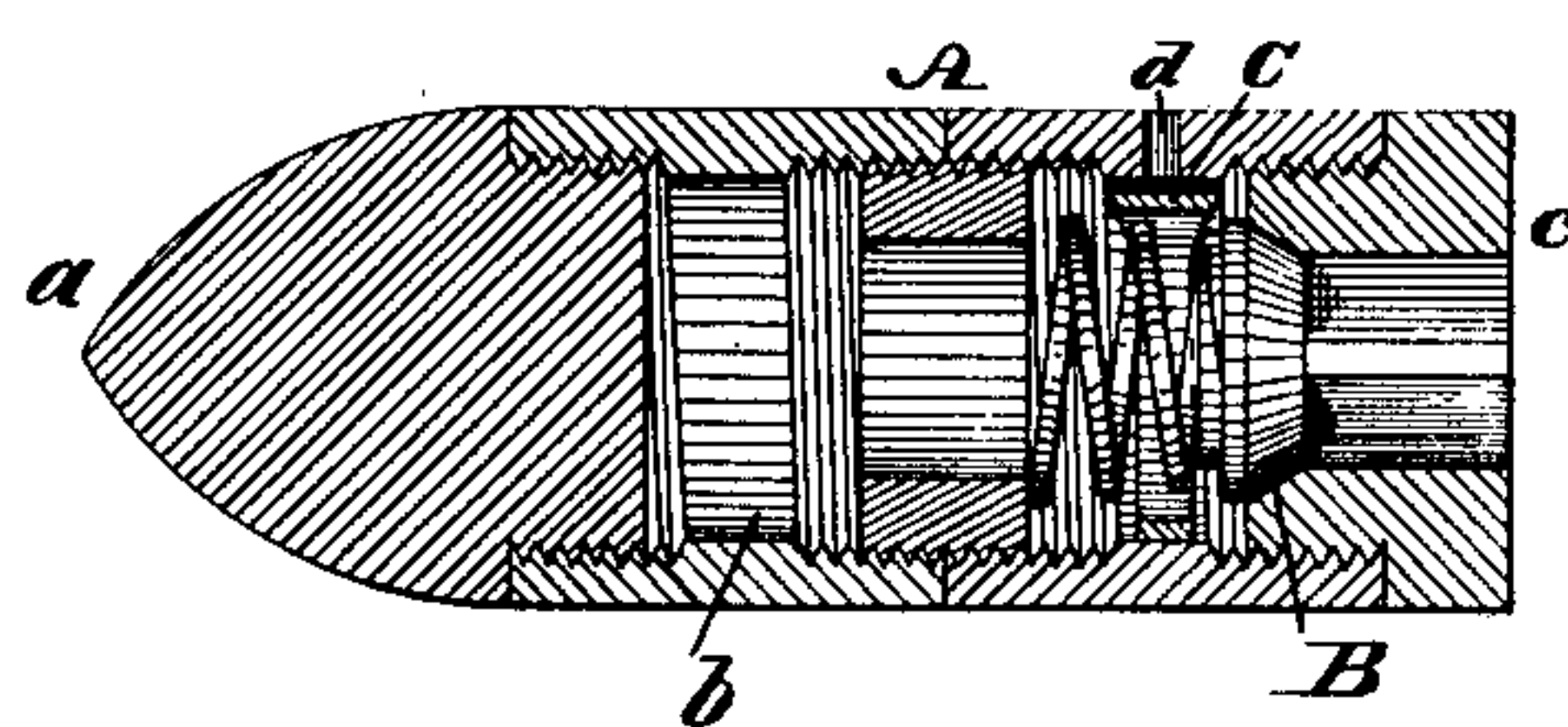
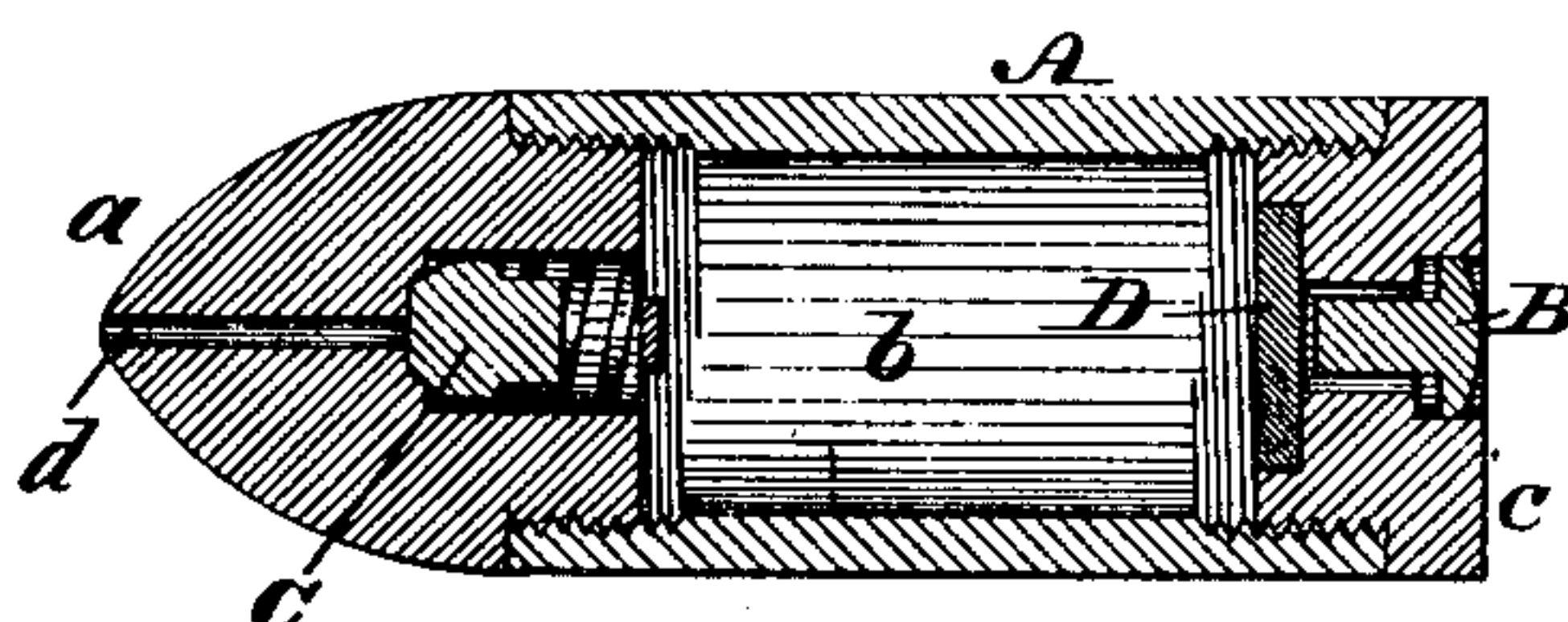


Fig. 2.



WITNESSES:

A. P. Grant,
H. F. Fischer

INVENTOR:

Wm T Chamberlain,
BY John A Wiedersheim,
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM T. CHAMBERLAIN, OF NORWICH, CONNECTICUT, ASSIGNOR OF ONE-HALF TO BENJN. M. PRINCE, OF SAME PLACE.

AIR-PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 279,539, dated June 19, 1883.

Application filed March 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. CHAMBERLAIN, a citizen of the United States, residing at Norwich, in the county of New London, State of Connecticut, have invented a new and useful Improvement in Air-Projectiles, which improvement is fully set forth in the following specification and accompanying drawings, in which the figures are longitudinal sections of air-projectiles embodying my invention.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in discharging a projectile from a gun or other similar arm by the action of compressed air, which is introduced into a chamber of the projectile and released when within the arm, as will be hereinafter set forth.

Referring to the drawings, A represents a projectile which is formed with a suitable point, *a*, a chamber, *b*, and a base, *c*, the latter having an opening communicating from without with the air-chamber, said opening being occupied by a movable plug, B. In the wall of the chamber *b* is an opening or air-inlet, *d*, which is covered on the inner end by an inwardly-opening valve, C, which is properly secured within the chamber. To the rear of the chamber *b*, or in front of the plug B, is secured a diaphragm or disk, D, of slate or other brittle or friable material, sufficiently strong, however, to endure the pressure of the air within the chamber *b*, and adapted to break when struck, which is accomplished when a blow is imparted to the plug B. Air is forced

into the chamber *b* through the inlet *d*, which may be best accomplished by placing the projectile into a receiver for compressed air, the latter thus opening the valves and charging the projectile. When the pressure in the receiver is reduced, the valves of the projectile quickly close and confine the charge in the chamber *b*. The projectile is then introduced into a gun or other suitable fire-arm similar to a cartridge, said arm having a firing-pin adapted to strike the plug B. As soon as said plug is struck, the diaphragm is broken and the compressed air liberated, escaping through the opening in the base, the reaction whereof in the bore of the arm forcibly impels the projectile from the arm, the result being accomplished without the smell, smoke, heat, and fouling tendency of explosives heretofore in use.

Another advantage of the invention is that the danger of transporting and handling explosives is avoided.

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

A projectile having a chamber for compressed air, an inlet for the air, a diaphragm of friable material closing the air-outlet, and a plug adapted to break said diaphragm, substantially as and for the purpose set forth.

WM. T. CHAMBERLAIN.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.