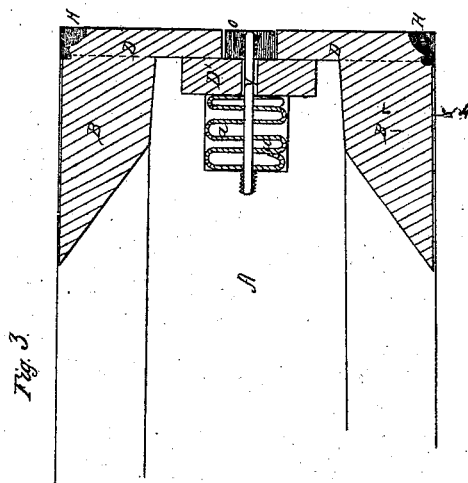
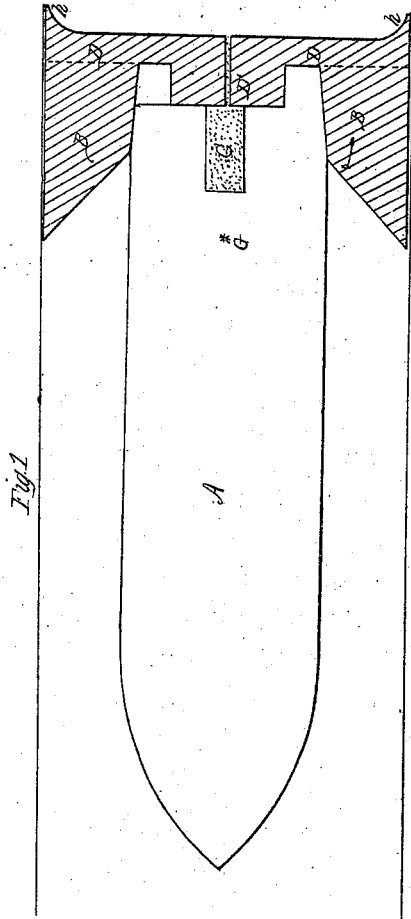
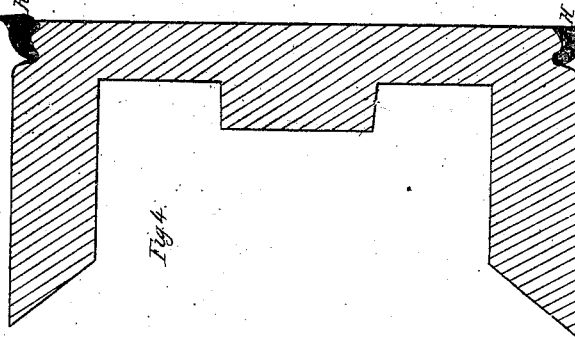
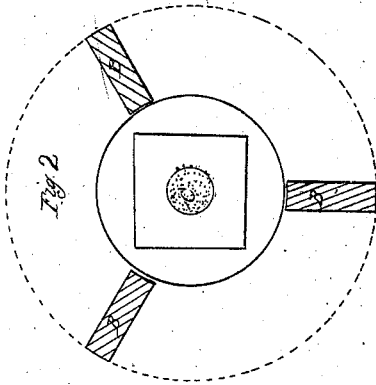


J. L. Henry.
Projectile.

N^o 45462.

Patented Dec. 13. 1864.



Witnesses:
Wm F. Poole
Ernest C. Bell

Inventor:
J. L. Henry

UNITED STATES PATENT OFFICE.

J. L. HENRY, OF KENTUCKY.

IMPROVEMENT IN SUB-CALIBER RIFLED PROJECTILES.

Specification forming part of Letters Patent No. 45,462, dated December 13, 1864.

To all whom it may concern:

Be it known that I, J. L. HENRY, of the State of Kentucky, have invented certain Improved Projectiles for Rifled Cannon; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention will be best understood by the following description thereof, such projectiles being generally known as "sub caliber shot."

Figure 1 represents a sectional view of a shot adapted to a six-pounder field-piece, in which A is the "bolt" or projectile, having a base, D, of malleable metal, on which a cup or expansive portion, *h*, is formed for well-known purposes. The principle upon which such shot depend for effectiveness is too well understood to require any reference to it here. The base or sabot has three (or more) supporting ribs, B, forming with the base an integral. A square recess in the rear end of the shot receives a corresponding projection, D', on the sabot, and serves to turn the shot as the rifles impart rotation to the sabot. The body of the shot tapers slightly backward to allow the ribs to slip off easily; but, for fear the air may not cause this, I place a charge of suitable composition (or powder) in a small chamber, C, in the shot, which, being ignited on firing, will blow off the base soon after leaving the gun.

Fig. 2 is a plan of Fig. 1.

Fig. 3 shows a spring, *a*, intended to detach the sabot, in lieu of powder as above. A small wire, *c*, is firmly secured to the shot, and passes through the base, where a wooden (or other equivalent) nut or button is so put on it as to securely hold the base to its place;

but on firing, this button is destroyed instantly, and the spring (being in tension strongly) forces off the base immediately after leaving the gun. The nut may be itself explosive.

As a cup is liable to get out of form, I prefer using a ring of soft brass or the like, as seen at H, Figs. 3 and 4. It may be cast around the disk very easily, and will be mashed up sufficiently at firing for all purposes.

The ribs and also the projection D', should fit easily the shot, the whole to be held on by any slight device which is to be broken or destroyed by firing. A steel sabot formed as herein shown, with the ring H on it, may answer best. The construction shown may not be the best, but is rather intended to illustrate the general mechanical form of my sabot.

The center of gravity is intended to fall about the location given it at G*, Fig. 1, when the sabot is upon the shot. If desired, the shot may be hollowed inward from the rear, so as to throw forward this point.

What I claim is—

1. So combining with a projectile a metallic sabot as to cause it to fly off on leaving the gun by a force other than the action of the atmosphere alone, substantially as described.

2. Securing the sabot to the shot by a device which shall be broken or destroyed on firing, thereby leaving the sabot free to drop from the projectile after leaving the gun, substantially as described.

3. The combination of a ring, H, with the disk of a sabot or base of a projectile, for the purposes and substantially as set forth.

J. L. HENRY.

Witnesses:

DAN. ROWLAND,
A. MOORE.