2 Sheets—Sheet 1.

D. E. SOMES.

Projectile.

No. 40,958. Patented Dec. 15, 1863.

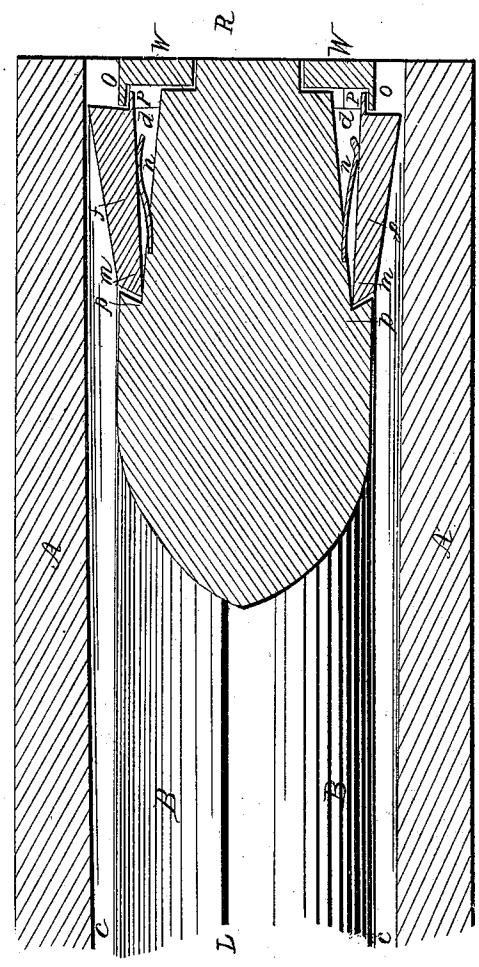

Fig. 1.

Witnesses.

H. Ramsdell
C. Evans Jr.

Inventor.

D. E. Somes

2 Sheets—Sheet 2.

D. E. SOMES.

Projectile.

No. 40,958.

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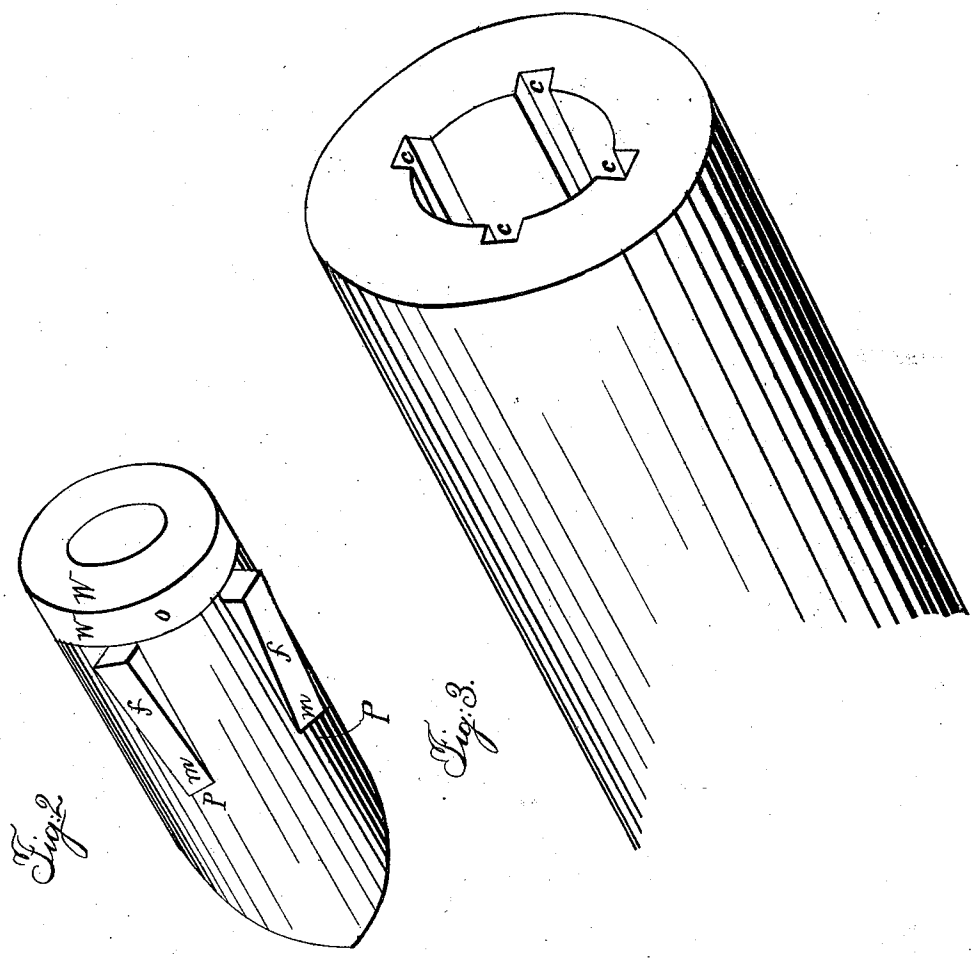

Fig. 2.

Fig. 3.

Witnesses.

H. Ramsdell

C. Evans Jr.

Inventor.

D. E. Somes

UNITED STATES PATENT OFFICE.

DANIEL E. SOMES, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN PROJECTILES FOR ORDNANCE.

Specification forming part of Letters Patent No. **40,958**, dated December 15, 1863.

To all whom it may concern:

Be it known that I, DANIEL E. SOMES, of Washington, in the District of Columbia, have invented a new and useful method of constructing projectiles for fire-arms; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

To carry out my invention I construct a gun and projectile so that when used together the latter may be retarded in its progress through the bore of the former a sufficient space of time to allow the powder to burn and the full strength of the charge to be developed.

Figure 1 represents a longitudinal sectional view of the gun with the projectile inserted in the breech. Fig. 2 represents the projectile in perspective. Fig. 3 is a perspective view of the breech of the gun.

A is the solid metal; B, the bore, and *c c c* the grooves or rifling. These grooves are cut deeper at the breech R than at the muzzle L. The projectile, as shown in Fig. 2, is made with four mortises, *d d d d*, (more or less,) in its sides, into which are fitted pieces *f f f f*, of metal or other suitable material, corresponding therewith in form and size. Under the rear end of these pieces are placed springs *n n*, or some yielding substance, causing the pieces to project beyond the surface of the ball.

To prevent the pieces from falling out of their places, their forward ends, *m m*, are beveled to fit the beveled ends of the mortise *p p p p*, and the shoulder P, in the rear end, is made to rest against the flange *o* of the cap *w*. This cap is put onto the end of the projectile after the pieces *f* are fixed in their mortises.

In loading the gun the projectile is put into the breech, and the projecting pieces fit into the grooves or rifling *c c*, and are gradually pressed in against the springs as they are forced through the gun by the charge, thus increasing the friction in proportion to the stiffness of the springs till the ball leaves the muzzle, when the pieces are again pressed outward by the springs, producing the form of a dart. These pieces, thus projecting beyond the surface of the projectile, assist in giving it direction.

The advantages of having the ball held at any given point in the gun till the maximum force of the charge is exerted upon it are set forth in the Letters Patent granted to me for an improvement in fire-arms, dated August 18, 1863. I claim for this arrangement all the advantages of the patent alluded to, as well as the following, viz: First, it is more simple in construction, and consequently less liable to get out of order; second, the rifling of the gun and the dart-like shape of the projectile enable the latter to reach the object aimed at with a greater degree of accuracy; third, the rifling or grooves may be made spiral in form and the pieces *f f f f* may be held in the mortises by means of catches or their equivalents flush with the surface of the projectile after it has left the gun, giving to it the same rotary motion produced by the common rifled gun; or said pieces may be made oblique in form, corresponding with the spiral grooves, and, not being fastened in the mortises by catches, will aid in rotating the ball in its flight through the air; fourth, in the method and arrangement herein described the projectile is gradually forced through the gun instead of being held at any given point.

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

1. Restraining a ball or projectile in a gun on its outward passage by means of friction till the powder shall have time to burn and the maximum or any desired amount of its power developed, substantially in the manner described.

2. A projectile with mortises *d d d d* and pieces *f f f f*, springs *n n*, and cap *w*, made and used substantially as described.

Witnesses: DANIEL E. SOMES.

H. J. RAMSDELL,

E. EVANS, Jr.