J. SEIPEL

Rifling Ordnance.

No. 50,502. Patented Oct. 17, 1865.

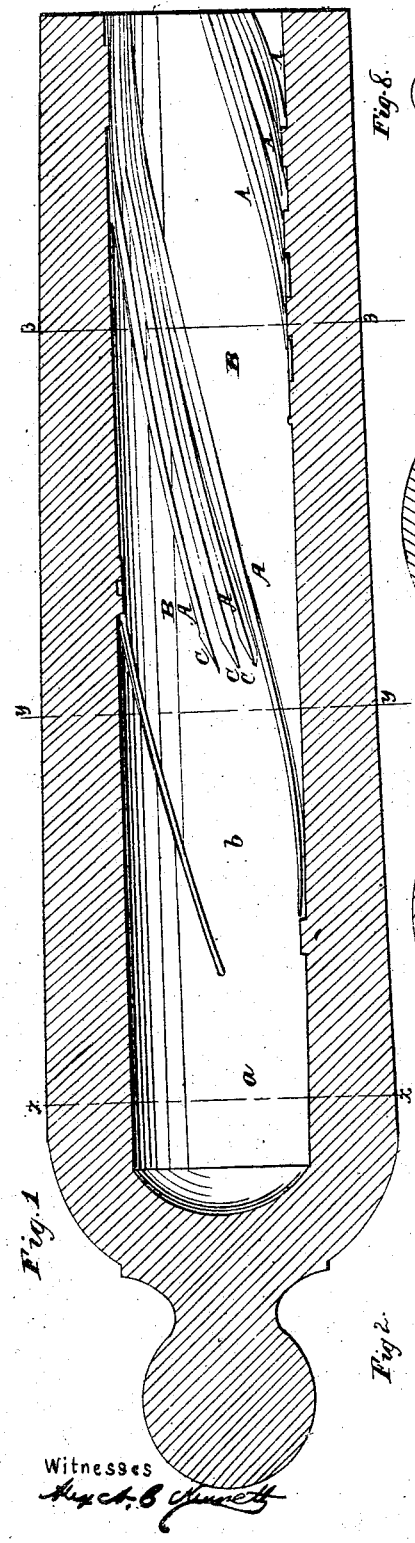

Fig. 1

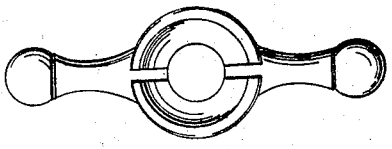

Fig. 6.

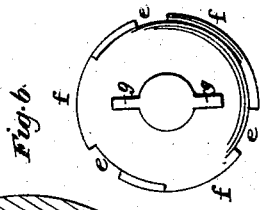

Fig. 6.

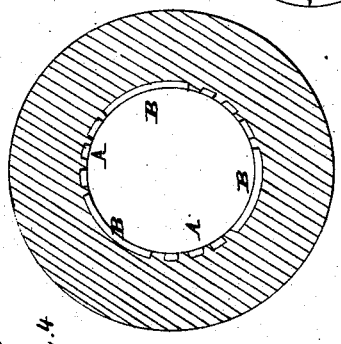

Fig. 4

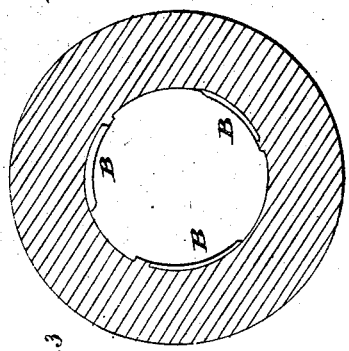

Fig. 3

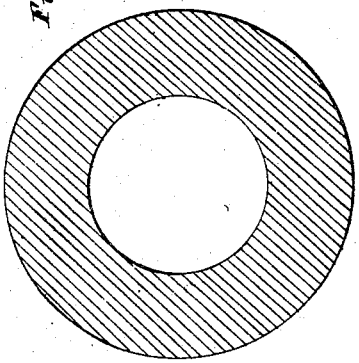

Fig. 2.

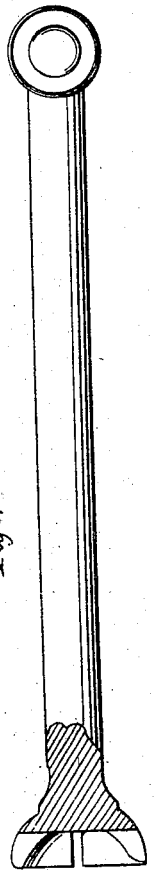

Fig. 7

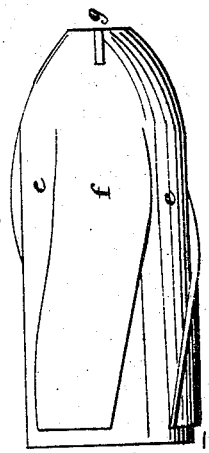

Fig. 5

Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN RIFLING ORDNANCE.

Specification forming part of Letters Patent No. **50,502**, dated October 17, 1865.

To all whom it may concern:

Be it known that I, JOHN SEIPEL, of the city of Washington, in the District of Columbia and United States of America, have made new and useful Improvements in the Mode of Rifling Ordnance; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, reference being had to the accompanying drawings, which are made part of this specification.

To enable one skilled in the branch of manufacture to which my invention appertains to construct and use the same, I will proceed to describe it.

This invention consists in dividing spirally the area of the bore of a cannon into six, more or less, equal parts, preserving an equal number. Each alternate one of these equal parts, being cut away to the required depth, forms the broad entering grooves or channels B. Then each remaining alternate equal part is filled with a set of fine rifle-grooves, A, of any required size, depth, shape, or proportion. The pitch of the rifling may be varied to suit the necessities of the case. Now, the rifle-grooves are all cut away at the bottom of the bore to form the powder-chamber. They are then further cut away forward of the powder-chamber for a distance equal to the cylindrical length of the projectile; and lastly, they are tapered off for a length of about two or three inches, to admit of the projectile entering them easily.

Figure 1 is a longitudinal section of part of the bore of a gun to which my invention has been applied. *a* is the powder-chamber; *b*, the projectile-chamber, and *c* the length of taper from the latter into the rifles. A is one of the three sets of fine grooves. B is one of the three entering-channels through which the projectile is passed into the loading-chamber *b*.

Fig. 4 is a transverse section of the gun, near the muzzle thereof, on line *z z*, Fig. 1, showing the three sets of five grooves, A, and the three entering-channels B. The depth of the channels B should be a shade more than that of the fine rifles A, so that the projectile will go in easily and come out tightly.

Fig. 2 is a transverse section on line *x x*, Fig. 1.

Fig. 3 is a transverse section on line *y y*, Fig. 1, of the gun through the projectile-chamber *b*, showing the three remaining fine grooves *i*, which serve to stop the projectile and hold it in the proper position for firing the piece.

Fig. 6 is a front-end view of the projectile to be used in connection with this new system of rifling.

Fig. 5 is a side elevation.

Figs. 7 and 8 are views of the rammer for loading and turning the ball into position in its chamber.

The lead or composition coating of projectile is also provided longitudinally into a number of equal parts, the same number as the bore of the gun in which it is used. Each alternate equal part of the lead coating is cut away at *e*, thus leaving an equal number of longitudinal ribs or projections, *f*, thereon. *g g* are two ears on the point of the projectile, by means of which it is turned in the chamber *b*, so as to bring the ribs *f* behind the rifles A, ready for firing.

To load a gun thus rifled, enter the projectile with the ribs *f* in the channels B, and shove it home with a rammer having a concave head to fit over the point of the projectile and with two slits therein to receive the two ears *g g*, so that when the projectile is home it is easily turned by the rammer nearly one-sixth of its circumference, either to the right or left, as the case may require. This act rotates the ribs *f* out of the channels B to a position immediately in rear of the fine grooves A when fired. The leaden ribs *f* enter the fine grooves A, and impart to the projectile the necessary rotation. The windage through the broad grooves B keeps them clean, so that the loading is always effected with ease for any required number of rounds.

I sometimes form the rifling, as shown in Fig. 1, with a continuous arrangement of the grooves and entering-channels by means of which the simple act of ramming home the projectile causes it to turn and assume the proper position for firing without the necessity

of turning or rotating it by hand when home.

I do not confine myself to the exact method herein described, as it may be varied without departing from the essential principles of my invention; but

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

The combination of the narrow spiral ridges A and the intervening broad entering-spaces, B, the space back of the ridges forming a chamber for the ball, which is introduced in the manner described.

JOHN SEIPEL.

Witnesses:
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