

M. S. COLVIN.

Improvement in Rifle-Barrels.

No. 127,849.

Patented June 11, 1872.

Fig. 1.

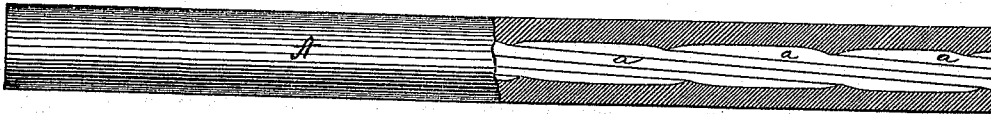


Fig. 2.



Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

MARVIN S. COLVIN, OF EAST RANDOLPH, NEW YORK.

IMPROVEMENT IN RIFLE-BARRELS.

Specification forming part of Letters Patent No. 127,849, dated June 11, 1872.

To all whom it may concern:

Be it known that I, MARVIN S. COLVIN, of East Randolph, in the county of Cattaraugus and in the State of New York, have invented certain new and useful Improvements in Rifle-Barrel; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

Heretofore the bores of gun-barrels have been made polygonal, in which case the projectile to be used therewith had to be made of corresponding form; and the bores of barrels have been rifled or provided with projecting ribs, in which cases the projectile must be either forced outward to fill the grooves or must be cut by the inwardly-projecting ribs and the patch of said projectile broken or cut through, and leading of the barrel resulted; in other cases the bores have been made with a fluted interior surface; but such have failed to give satisfactory results.

The object of my invention is to overcome the above difficulties; and to this end my invention consists in providing a system of rifling having a generally-defined polygonal form, but having what would otherwise be the apex of the angles rounded, and cut deeper on one side of said angle, so as to present a rounded series of channels and shoulders, whereby a patched projectile of a cylindrical or conical form, with a slight cup or depression in its butt, may be used without destroying the patch, and all of the advantages of the "Whitworth" or polygonal system of rifling derived without the necessity of a mathematical or mechanical fit for the projectile.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, part in longitudinal section, of my rifle-barrel. Fig. 2 is a cross-

section of the same; and Fig. 3 is a side view of the ball to be used in or with said barrel.

A represents the barrel, provided with a generally-defined polygonal-twisted bore, having the channels *a a*, as shown. The twist in this case is uniform, and, by preference, making one turn in twenty-three inches. The rounded grooves *a a*, being cut with one long and one short side, leave rounded and regular shoulders, and the form is such that perfect and extremely-rapid rotation is given to a cylindrical-patched projectile without cutting or breaking the patch, and, therefore, not liable to foul or lead. B represents a projectile or ball slightly smaller than the bore, cylindrical, and having a depression or cup about one-sixteenth of an inch deep at the butt thereof.

To adapt the projectile to my improved system of rifling, the point or forward end is compressed or made of hard metal, while the rear end is left or made of soft lead, so as to readily upset upon the explosion of the charge, and thereby tightly fill the bore. The depression in this case is merely provided to hold the patch, which is of a good quality of writing or bank-note paper wound twice around and twisted at the butt.

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

The improved system of rifling, herein shown and described, consisting of a series of grooves or channels and corresponding rounded shoulders with one short and one long side, both being curved, but the curve of the larger side having a radius considerably greater than that of the bore of the barrel, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of January, 1872.

MARVIN S. COLVIN.

Witnesses:

T. L. CAMP,
CHARLES H. HELMES.