No. 835,482. PATENTED NOV. 6, 1906.

H. VULPIUS.

RIFLING.

APPLICATION FILED AUG. 8, 1903.

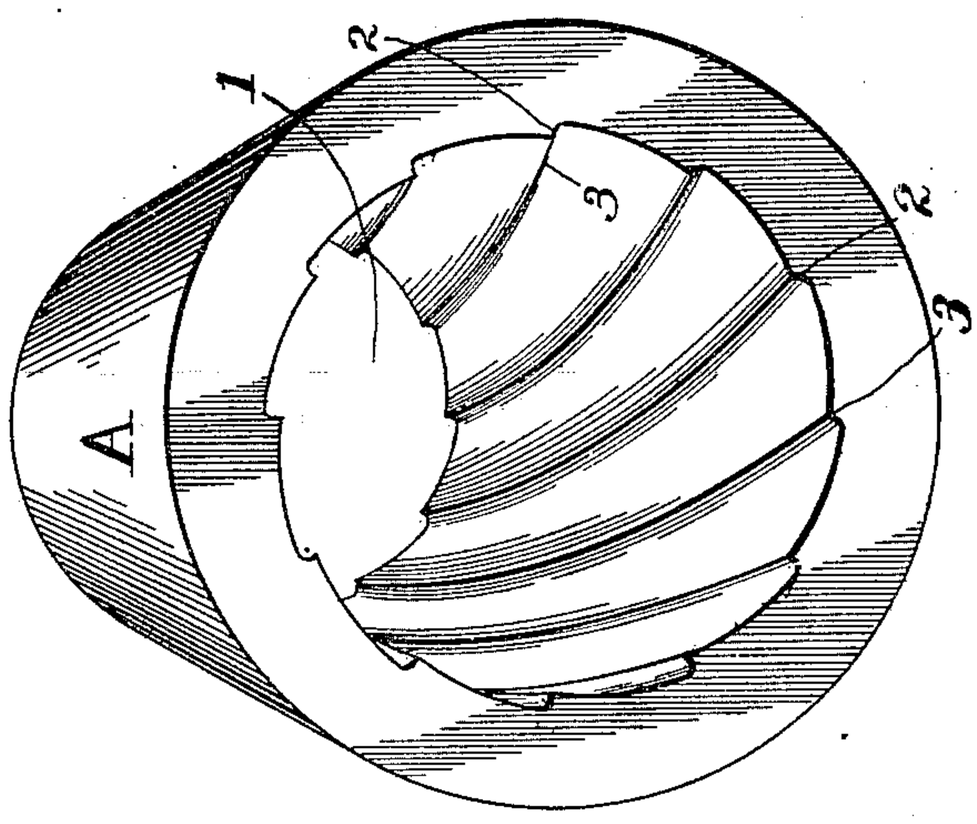

Fig. 2.

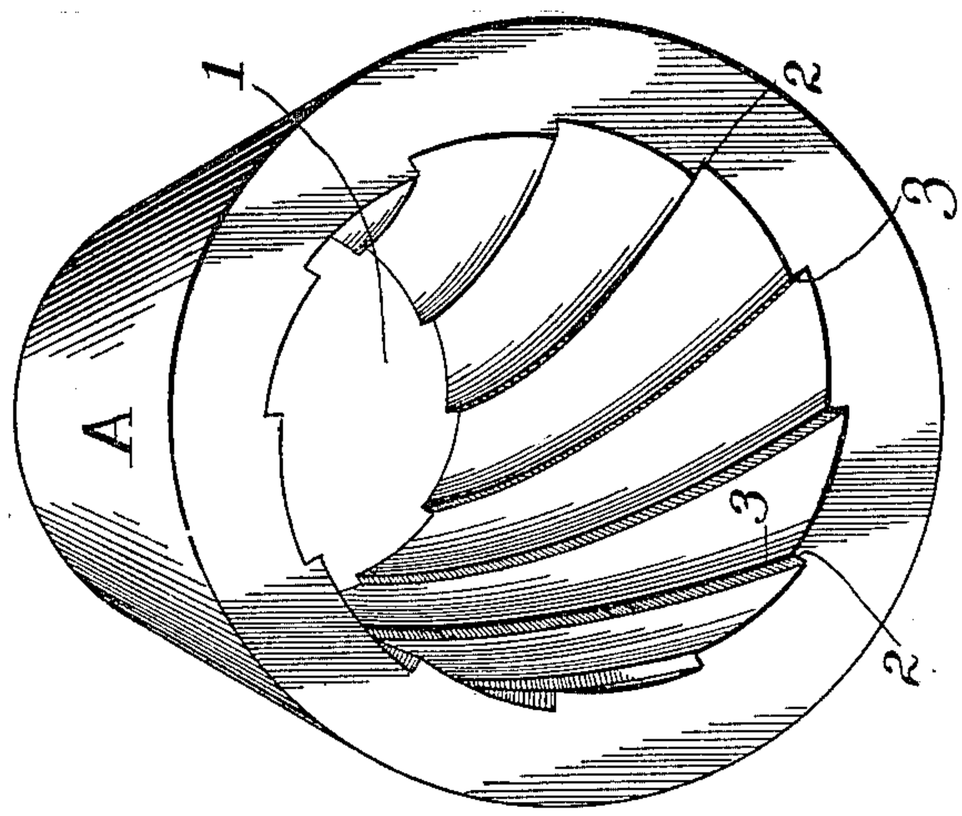

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

HERMAN VULPIUS, OF LEADVILLE, COLORADO, ASSIGNOR OF ONE-HALF TO PETER MULOCK, OF LEADVILLE, COLORADO.

RIFLING.

No. 835,482. Specification of Letters Patent. Patented Nov. 6, 1906.

Application filed August 8, 1903. Serial No. 168,783.

To all whom it may concern:

Be it known that I, HERMAN VULPIUS, a citizen of the United States of America, residing at Leadville, in the county of Lake and State of Colorado, have invented certain new and useful Improvements in Rifling, of which the following is a specification.

My invention relates to an improvement in firearms, and more particularly to rifle-bores, a primary object being to prevent windage, to provide greater accuracy in shooting, to utilize the full force of the powder, to provide a firearm which will shoot with accuracy for a longer distance than heretofore, to increase the life of the firearm, and to provide one which may be cleaned with greater ease than heretofore.

With these several objects in view my invention consists in a twisted bore having sharp angular formations after the manner of ratchet-teeth, whereby to increase the friction on the ball or projectile and prevent the projectile from jumping the rifling, preventing windage, and increasing the velocity of the bullet while lessening the trajectory and at the same time increasing the accuracy in shooting.

My invention further consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in perspective, illustrating my improved rifling; and Fig. 2 shows a slightly-modified form.

A represents the barrel of the firearm, in which the rifling is given a twist either to the right or left, as preferred. In lieu of the old-style rifling, in which a groove is formed with two straight walls, in my invention I virtually omit one of these walls, making the groove taper from its greatest depth adjacent to one sharp ridge 2 to nothing at the next ridge 3, and so on, thus giving a ratchet-toothed formation in cross-section, the surfaces of the teeth being straight or rounded accordingly as desired.

In the old style of rifling every alternate shoulder or side of a groove has no friction and loses in the travel of the projectile its adherence to the groove in the bullet and is therefore liable to windage on account of these grooves being cut to the same depth on both sides, whereas in my improved rifling with every alternate shoulder left out and the one remaining being a sharp one it gives more friction, pressing harder against the grooved sides, preventing windage and jumping over grooves, thus giving to the projectile more power of penetration and less trajectory in its travel of long distances.

By the omission of the alternate grooves hitherto employed it is possible to make the remaining groove a trifle deeper in my present invention, which renders the guide-grooves or rifling somewhat stronger, and thus the firearm will be in good accurate shooting condition for a much longer time than with the old style of rifling. In short, it will be observed that every groove performs a function in my present invention, whereas in the old style of rifling the alternate shoulders were drones and did not accomplish any service or purpose.

By the use of this present form of rifling old worn-out rifles can be sharpened up and be made as good as new. Also by the use of this style of rifling double the number of active grooves can be employed in the space occupied by the old number of grooves.

As a slight modification of this invention I propose to slightly round the inner angles of the grooves, as shown in Fig. 3. Grooves of this shape can be cleaned with greater facility.

From the foregoing it will be seen that the sharp ridges grip the ball, retaining it in perfect position without any possibility of jumping the grooves throughout the entire length of the rifle-barrel, not permitting a particle of gas to escape, thus producing a perfect-shooting firearm, rendering it possible to increase the number of grooves, thus adding to the life of the firearm and increasing its accuracy. In other words, the entire force of the powder is utilized in discharging the bullet from the barrel. It may be added that the rifling does not have to be cut so deep as heretofore, thus making a saving in the cost of the firearm, while increasing its strength and at the same time making it easier to clean the barrel.

It is evident that other slight change might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my in-

vention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

As an article of manufacture, a firearm having a twisted rifling with a sharp angular edge, said angular edge being slightly acute and less than a right angle, one edge being radial, and the surface extending therefrom gradually increasing in depth to the point where it joins the extreme outer juncture of the next rifling.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMAN VULPIUS.

Witnesses:
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JOHN C. KINSMAN.