

J. O. MARTIN.  
Boring-Bit.

No. 216,202.

Patented June 3, 1879.

Fig. 1.

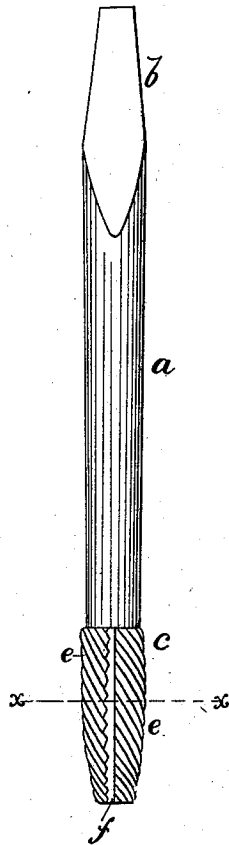
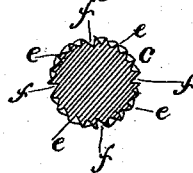


Fig. 2.



WITNESSES:

*Henry N. Miller*  
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INVENTOR:

*J. O. Martin*  
BY *Mumford*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES O. MARTIN, OF OAK LEVEL, VIRGINIA, ASSIGNOR TO HIMSELF AND WILLIAM A. SEMONES, OF SAME PLACE.

## IMPROVEMENT IN BORING-BITS.

Specification forming part of Letters Patent No. 216,202, dated June 3, 1879; application filed September 30, 1878.

*To all whom it may concern:*

Be it known that I, JAMES O. MARTIN, of Oak Level, in the county of Henry and State of Virginia, have invented a new and Improved Bit for Boring Rifle-Barrels, of which the following is a specification.

My invention relates to a bit for boring out the barrels of rifles to render them smooth and of uniform size; and my invention consists in a bit of cylindrical shape, formed at the end of the bit-rod. The cutters are made by grooving the bit-rod at an angle of forty-five degrees to the length of the rod, and the cutters thus formed are intersected by grooves cut parallel with the axis of the rod, equidistant from each other.

In the accompanying drawings, Figure 1 is an elevation of my improved bit, and Fig. 2 is a cross-section on line *x x*.

Similar letters of reference indicate corresponding parts.

*a* is the bit-rod, having a square end, *b*, as usual. *c* is the bit proper, formed at the end of rod *a*, and it is by preference about three times as long as its diameter at the longest portion. The bit *c*, at its inner end, is slightly larger than the rod, and it tapers to the outer end, where it is about one-half the diameter of the largest part.

*e* are the cutting-edges, that are parallel with each other, and run diagonally across the bit at an angle of about forty-five degrees. These cutters *e* are formed by cutting V-shaped grooves in the surface of the bit.

*f f* are grooves cut the whole length of bit

*c*, parallel with the axis of the same, and equidistant from each other. The grooves *f* are three or more in number. I have shown and prefer four, and they are cut with one side straight or radial with the bit, and the other side sloping at about an angle of forty-five degrees, as shown, the sloping side being the leading one.

These grooves *f* will carry off the shavings cut by the bit, the bit thereby clearing itself.

The number of cutters *e* will be according to the size of the bit, the number decreasing in proportion to increased size of bit; and I do not limit myself in that particular.

The bit above described will cut rapidly without heating, and will not "hang" and twist upon the rod. The rod may be larger in proportion to size of bit than when the ordinary square bit is used, and the bit can be tempered as high as a common edge-tool with slight risk of breaking, and the cutters will consequently not need to be sharpened as often as bits heretofore used.

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

The rifle-boring bit *a b c*, tapered at the lower end, having diagonal cutters *e*, and provided with grooves *f*, the latter parallel to the axis of bit, straight on one side and inclined on the other, as shown and described.

JAMES O. MARTIN.

Witnesses:

J. P. MARTIN,  
T. A. BARNES.