

(No Model.)

W. STEERS.
EXTENSION BIT.

No. 296,242.

Patented Apr. 1, 1884.

Fig. 1.

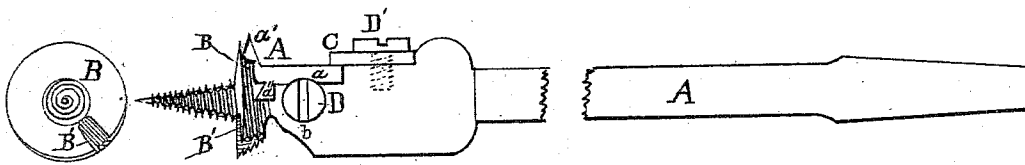


Fig. 2.

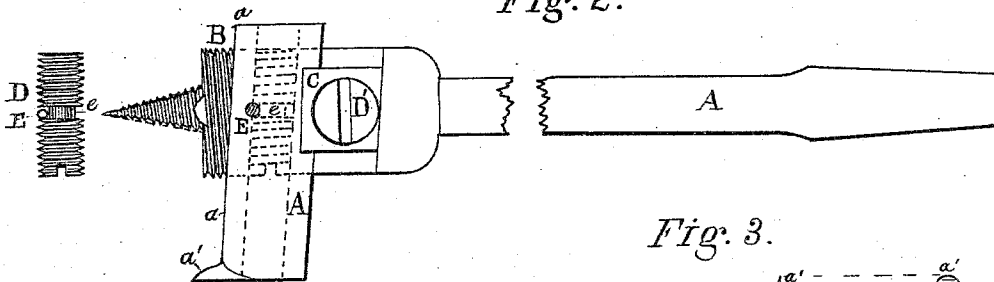
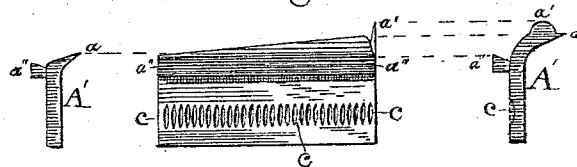


Fig. 3.



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WILLIAM STEERS, OF BRATTLEBOROUGH, VERMONT.

EXTENSION-BIT.

SPECIFICATION forming part of Letters Patent No. 296,242, dated April 1, 1884.

Application filed January 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STEERS, a citizen of the United States, residing at Brattleborough, in the county of Windham and State of Vermont, have invented certain new and useful Improvements in Extension-Bits, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in extension-bits for boring-tools; and it consists in the employment of an adjusting tangent-screw secured in the stock, whereby the extension-blade can be easily, quickly, and accurately adjusted, all of which will be hereinafter more particularly described, and pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a view of a center-bit, showing the ends of the extension blade or bit. Fig. 2 is another view of the center-bit, showing the face of the extension-blade and the tangent-screw detached. Fig. 3 shows the back and two ends of the extension-blade.

A is the shank of an ordinary center-bit, which can be fitted to the brace-socket, or it may be used with a handle, like a common auger. The screw-thread on the gimlet-point is continued around the cylindrical part B, for the purpose of feeding the cutter B'.

A' is the extension-blade, of steel, having a cutting-edge, *a*, and lip *a'*.

On the back of the extension-blade A' is a dovetailed tongue, *a''*, which fits into a corresponding groove, *b*, in the stock A. Also, on the back of extension-blade A' are threads *c*, cut to suit the threads on a tangent-screw, D, which is made to turn in a corresponding non-

threaded groove across the stock A. A clamp, C, is secured by a screw, D', so that when the extension-blade A' is properly adjusted the clamp C is screwed down, but not so tightened as to prevent the sliding of the extension-blade when operated by the tangent-screw D. The dovetailed groove *b* in the stock A keeps the tongue *a''* in the other edge of the extension-blade close to the stock, to prevent the blade from springing when in the act of cutting. In the end of tangent-screw D is a slot for a screw-driver, so that by turning the tangent-screw D in either direction the extension-blade A' is moved correspondingly. The tangent-screw D has a neck, *e*, and is secured by a pin, E, which passes through the stock and into the neck, to prevent the tangent-screw from being moved endwise when turned for the adjustment of the extension-blade, which is moved endwise by means of the threads on the back, and the nicest adjustment is obtained.

I claim—

A center-bit stock having a continuation of the feeding-threads of the gimlet-point around the cylindrical part of the cutter, a tangent-screw secured by a neck and pin, a clamping device, and a dovetailed groove, in combination with an extension-blade having on its back a dovetailed ridge, and screw-threads to match the threads of the tangent-screw, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM STEERS.

Witnesses:

J. G. EDDY,

H. J. BURNHAM.