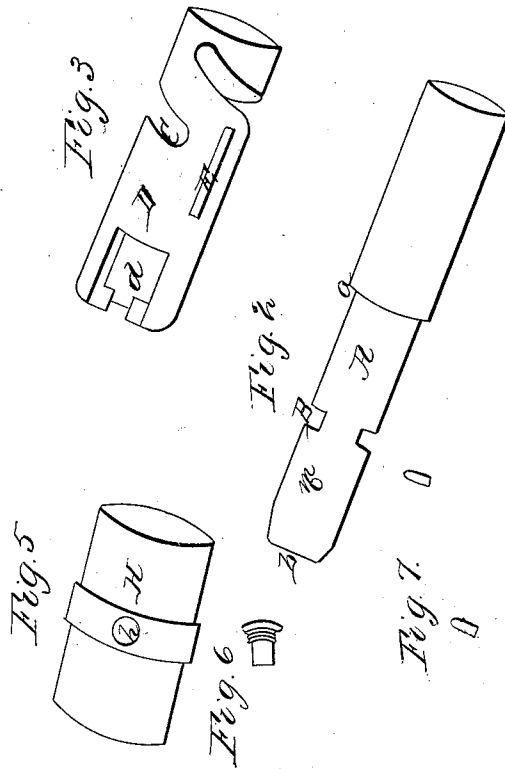
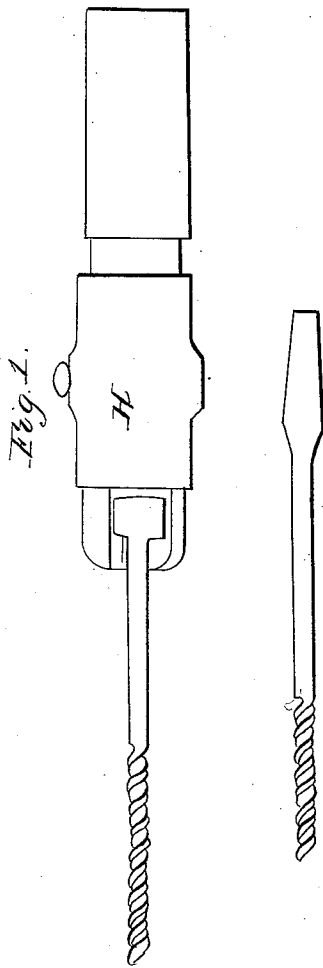


*F. A. Wood,*  
*Bit Stock.*

*N<sup>o</sup> 84,523.*

*Patented Dec. 1, 1868.*



*Witnesses:*  
*A. Sprier*  
*G. S. Lackpole*

*Inventor:*  
*Frederick A. Wood*



FREDERICK A. WOOD, OF JERSEY CITY, NEW JERSEY.

*Letters Patent No. 84,523, dated December 1, 1868; antedated November 19, 1868.*

**IMPROVEMENT IN BIT-BRACES.**

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, FREDERICK A. WOOD, of Jersey City, in the county of Hudson, and State of New Jersey, have invented a new and useful Improvement in Bit-Braces; and I do hereby declare the following to be a full and exact description thereof, that will enable others skilled in the art to make and use my invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing a bit-brace with a thimble-shaped ring or clamp to press against the shoulders of a bit and hold it into its socket, when said thimble-shaped ring or clamp can be moved longitudinally without being revolved on its bearing, said thimble-shaped ring or clamp having a spiral slot around it, and being connected with a ring outside of itself, by means of a pin or screw made fast to the inside of the outer ring, and projecting into the spiral slot, so that when the outer ring is revolved the thimble-shaped ring or clamp will move longitudinally.

In the accompanying drawings—

Figure 1 is a perspective view of my invention, with a bit attached ready for use.

Figure 2 is an extension of the body of the brace, having a groove, B, around it about one-eighth of an inch in depth and about one and one-half inch from its outer or lower end. In the end of the piece A, at little b, is a socket to receive the shank of a bit. The socket is not shown in the drawings.

Figure 3 is a view of the ring D, having a spiral slot C; also, a slot, E, running lengthwise; also, said ring, D, is thimble-shaped, one end being partly closed, having the opening, little d, extending up on the side of the ring so as to admit the shank of a bit, and is sufficiently large at its side, little d, to admit the largest bit-shank, but is smaller across the end, so as not to allow the shoulders of the bit to slip through, thus forming a clamp across the shoulders of the bit.

Figure 4 is an end view of the ring or thimble D, showing the opening, little d.

Figure 5 is a ring, H, with a hole, little k, which has a screw-thread cut upon its sides to admit the screw, shown in Figure 6.

To put the parts together, I first slip the ring or thimble D on to the part A, until it presses against the shoulder, little a. I then drive the pin shown in Figure 7 through the slot E into the hole, little m, until the outer end of said pin is even with the outer surface of the ring or thimble D. I then slip the ring H outside of the thimble D until the hole, little k, is opposite the spiral slot C. I then enter the screw shown in fig. 6, and screw it in until its small end is pressed well down into the groove B, and my bit-brace is ready for use.

To attach a bit, I turn the ring H, which throws the ring or thimble D outward. I then enter the shank of the bit into the socket through the opening, little d. I then turn the ring H in the opposite direction until the end of the ring or thimble D is drawn down against the shoulders of the bit.

The object of my invention is to construct a bit-brace which can be manufactured cheap and operated quickly, and which shall hold a bit firmly with very little fitting.

Having thus described my invention,

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

The thimble-shaped ring or clamp D, when provided with the spiral slot C and the longitudinal slot E, in combination with the ring H, for giving to it a longitudinal motion, when constructed and arranged substantially as and for the purpose set forth.

FREDERICK A. WOOD.

Witnesses:

J. B. ROSS,

G. H. PRETTYMAN.