C. L. GRISWOLD.
Bit-Stock

No. 208,168. Patented Sept. 17, 1878.

Fig. 1

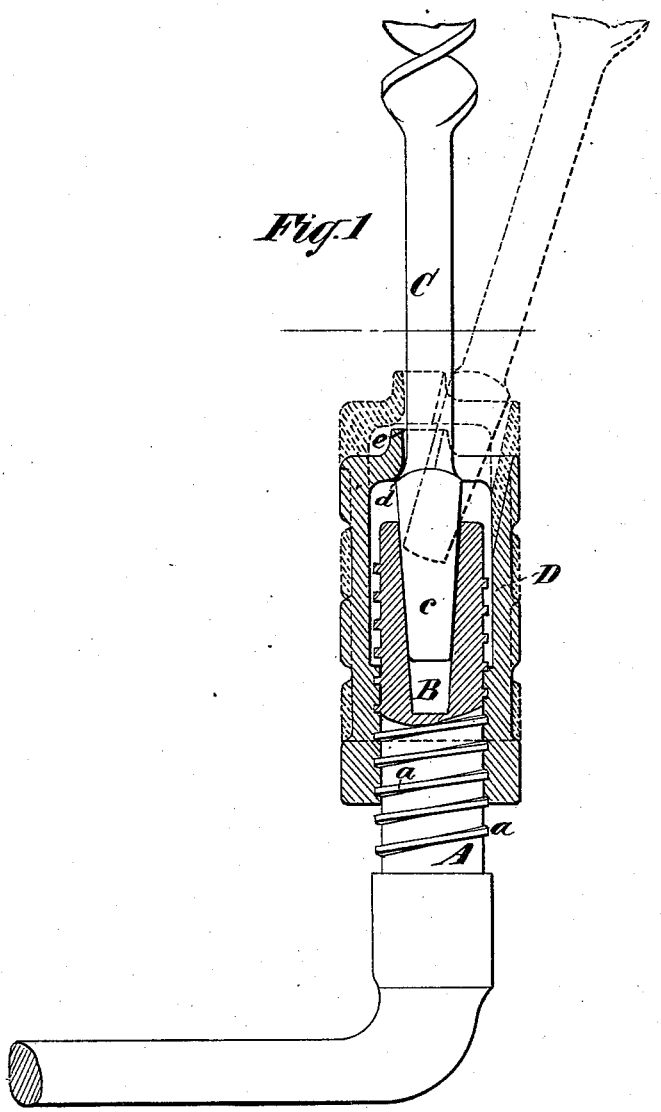
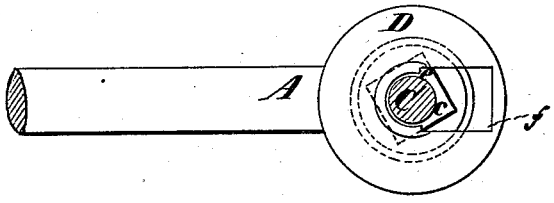


Fig. 2.



Witnesses
John Becker
Fred. Haynes

Inventor:
Charles L. Griswold
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

CHARLES L. GRISWOLD, OF CHESTER, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO HENRY McTIGHE, OF NEW YORK, N. Y.

IMPROVEMENT IN BIT-STOCKS.

Specification forming part of Letters Patent No. **208,168**, dated September 17, 1878; application filed February 18, 1878.

To all whom it may concern:

Be it known that I, CHARLES L. GRISWOLD, of Chester, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Bit-Stocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

My invention consists in a novel construction and combination, with the socket portion of a bit-stock or tool-holder, of a thimble, ferrule, or cap for holding a bit or a tool firmly and securely in place in the socket of the stock or holder, as hereinafter particularly described.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a bit-stock embodying my improvement. Fig. 2 is an end view with the bit in cross-section.

A represents a portion of the brace or stock, provided with a socket, B, for the reception of the square portion *c* of the shank of a bit, C. On the portion of the stock surrounding the socket is a screw-thread, *a*. D represents a thimble or ferrule, fitting over the socket portion of the stock A, and provided with a female thread corresponding with the thread *a*, so that it may be screwed on and off. The outer end of the ferrule D is provided with an opening divided into two parts, *e f*. The part *e* is large enough to allow the ferrule to turn freely around the shank of the bit, but is smaller than the enlarged square portion *c;* and the part *f* forms a notch large enough to permit the square portion *c* to pass freely through it. Below the opening *e* is a shoulder, *d*, for engagement with the shoulder of the shank *c*.

In order to attach the bit to the stock the ferrule D is unscrewed a portion of the way, sufficiently to allow the square portion *c* to pass through the notch *f* and enter the socket B in an inclined direction, as shown in dotted lines in Fig. 1.

As soon as the end of the shank has entered the socket and its largest portion has cleared the notch *f* the bit C is moved to an upright position, or to a direction extending rectilinearly from the socket portion of the stock, so as to cause the square portion *c* to enter farther into and fit snugly in the socket B, and the round portion of the bit to occupy the opening *e* of the ferrule. The ferrule D is then screwed down until its shoulder *d* presses closely against the shoulder of the shank, as shown in full lines, and thus holds the bit firmly and securely in place.

To remove the bit it is only necessary to unscrew the ferrule until the bit C can be inclined sufficiently to allow it to be withdrawn from the socket and drawn through the notch *f*.

A bit-stock constructed according to this invention is applicable to the holding of bits of any of the usual descriptions. The pressure of the ferrule upon the shank is in a direction longitudinally of the bit, instead of laterally, as heretofore, and it is impossible for the bit to be withdrawn from the socket except by partially unscrewing the ferrule.

The invention is also applicable to tool-holders of various descriptions.

Bit-stocks and tool-holders having their socket portions formed with external screw-threads to fit clamping-sleeves, caps, or thimbles having openings entirely through their walls, to permit lateral movement of a bit or tool, have heretofore been constructed; but the openings entirely through the walls of said sleeves, caps, or thimbles have rendered them liable to spring and inconvenient for handling. While my device possesses all the convenience afforded by the old form for the lateral displacement of the bit, my continuous wall of the thimble renders it rigid, so as to hold the bit firmly in an unvarying position, and presents a convenient surface for the hand in operating said thimble for clamping or releasing the bit.

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

The combination, with the socket portion of a bit stock or tool-holder having formed thereon the male thread *a*, of a thimble, ferrule, or cap having a continuous outer curved surface, an interior screw-thread, *b*, fitted to said male thread, and having also the internal shoulder *d* for grasping, and the recess *e f* for permitting the lateral movement of, the tool, substantially as described.

CHARLES L. GRISWOLD.

Witnesses:
J. W. BATES,
C. J. BATES.