

D. F. SUTTON.
Bit-Stock.

No. 163,896.

Patented June 1, 1875.

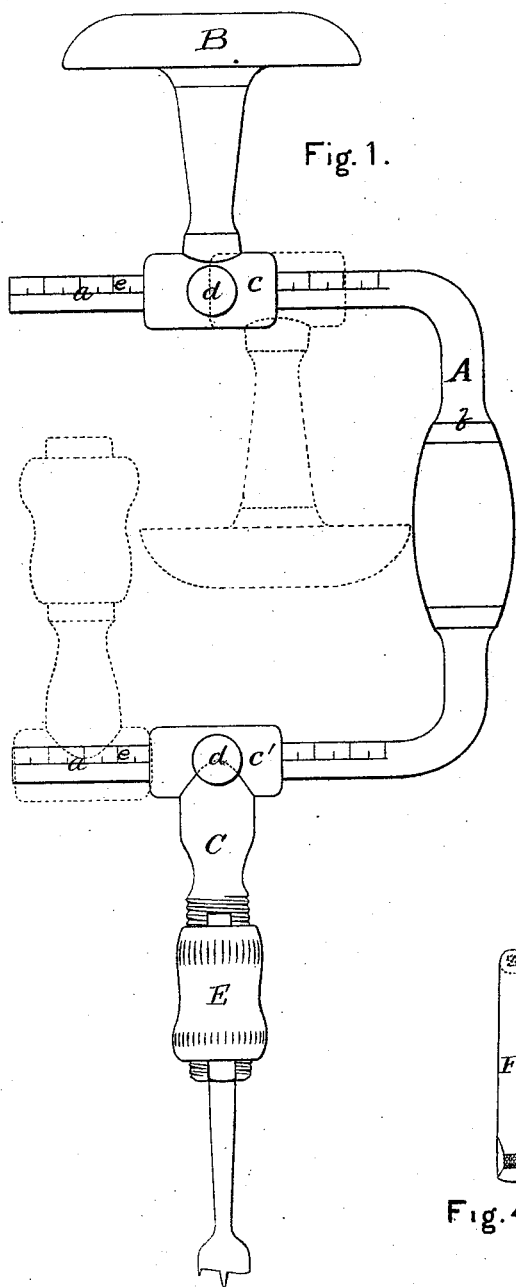


Fig. 1.

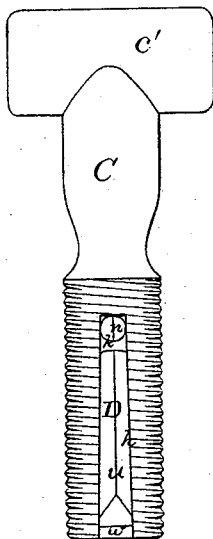


Fig. 2.

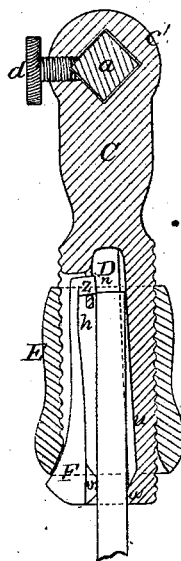


Fig. 3.

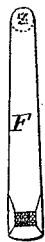


Fig. 4.

WITNESSES

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DELAY F. SUTTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BIT-STOCKS.

Specification forming part of Letters Patent No. **163,896**, dated June 1, 1875; application filed March 22, 1873.

To all whom it may concern:

Be it known that I, D. F. SUTTON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Bit-Stocks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of my bit-stock. Figs. 2, 3, and 4 are details of the same.

This invention has relation to bit-stocks; and consists in the construction and novel arrangement of the socket-piece, recessed from one side only, the back of the recess being of a tapering angular form, and the opening of the recess being provided with a single tapering dog, depending, by a stud on the upper end of its shank, from a catch perforation at the upper end of the socket-wall, in connection with a screw-sleeve having its lower end tapering or flaring outward.

The object of the present invention is to provide a bit-stock of which the clamping devices for holding tangs of different sizes are strong and secure, as will be hereinafter more fully set forth.

In the accompanying drawings, the letter A designates the brace or bow. This consists of two horizontal arms, *a a*, each graduated from its end to correspond with the other, as indicated in the drawings. These arms are connected, by the handle part *b*, forming the adjustable brace, which is a separate piece from the axis-handle and the socket-piece. B represents the axis-handle, which is of the usual form, except that it is provided at its lower end with a transverse sleeve, *c*, the opening through which is square or prismatic in form, to correspond with the form of the cross-section of the arm *a*, which is passed through the same. The square or prismatic arms *a* are so arranged that two of their angular opposite edges are connected, in each arm, by a plane which coincides with the vertical plane of pressure. This arrangement

prevents wobbling when pressure is applied in boring, and serves automatically to center the socket-piece and axis-handle on said arms. C indicates the socket-piece, also provided at its upper end with a sleeve, *c'*, transversely arranged, and similar to the sleeve *c* above described. This sleeve is designed to be slipped on the lower arm *a* of the brace. Set-screws *d d* are provided for securing these sleeves firmly in position after adjustment, according to the graduations marked on the arms at *e*. D indicates the socket, which is a recess made from one side into the middle portion of the lower end of the socket-piece C, the outer surface of this portion being cylindrical in form, and provided with a screw-thread for engagement with the internal thread of the clamping-sleeve E. The lower end of this sleeve is somewhat flaring or bell-shaped with respect to its opening, for engagement with the wedge-shaped dog hereinafter described. At the upper part of the recess D, between the lateral opening *h* through the screw-wall of the socket-piece and the axial portion of said socket, is formed a small partition, *k*, having an opening or seat, *n*, for the reception of a lug, *z*, arranged at the upper end of the dog F, and serving to hold the same in the socket. This dog F extends downward from said lug *z* in the form of a narrow shank, which becomes gradually wider at the base, thus assuming a wedge shape, as above mentioned. At the lower end of the dog, on its inner face, looking toward the interior of the socket, is formed a projection, *v*, which is provided with serrations or teeth on its faces, for the purpose of making its bite more secure when the sleeve E is screwed down, forcing the dog into the socket against the bit-shank.

The bit-stock is folded in portable form by drawing off the handle-piece and socket-piece from the arms *a a*, and replacing the same on said arms turned toward each other, and between the space occupied by said arms, as indicated in dotted lines in the drawings.

The socket D widens toward the base, and then becomes more constricted at the opening, as shown at *w*. The lateral wall *u* of this recess opposite the lateral opening *h* is angularly channeled, and extends obliquely upward

and inward. This construction of the recess aids in centering the various sizes of bits, and in securing firm hold of the different forms thereof.

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

The socket-piece C, having a groove, *u*, in combination with the single dog F, suspended from said piece C in an opening opposite to

the groove *u*, and with the sleeve E, all constructed, arranged, and operating as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DELAY F. SUTTON.

Witnesses:

D. D. KANE,

PHIL. C. MASI.