

C. H. Stockbridge,

Bit Stock.

No 62,232.

Patented Feb. 19, 1867.

Fig. 1

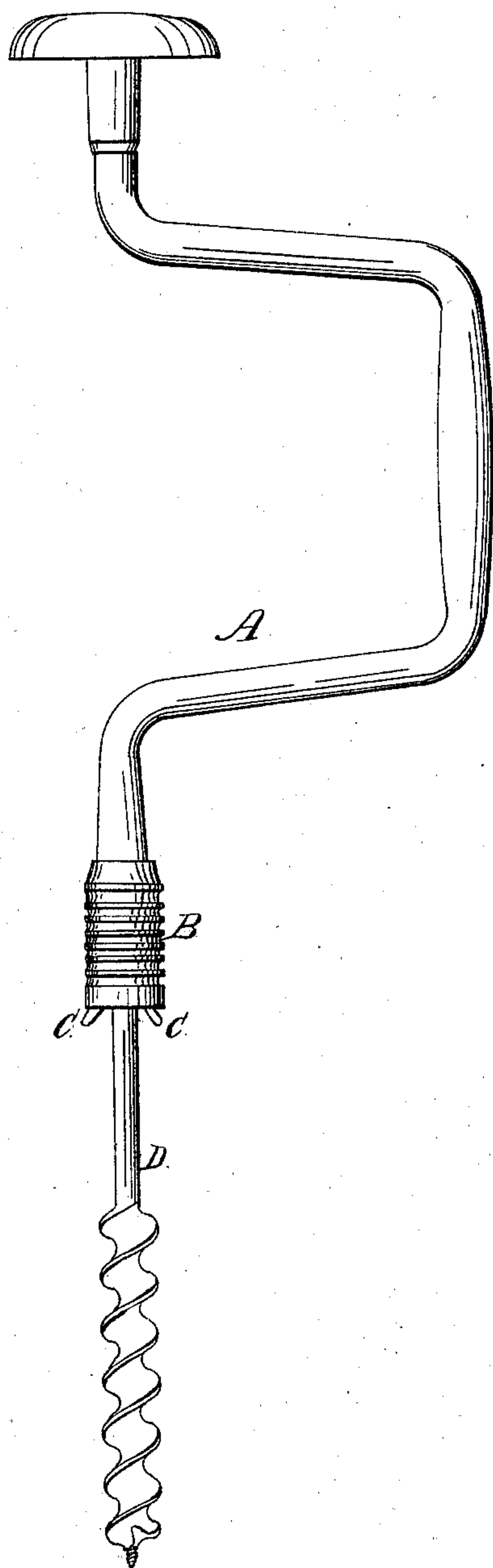


Fig. 2.

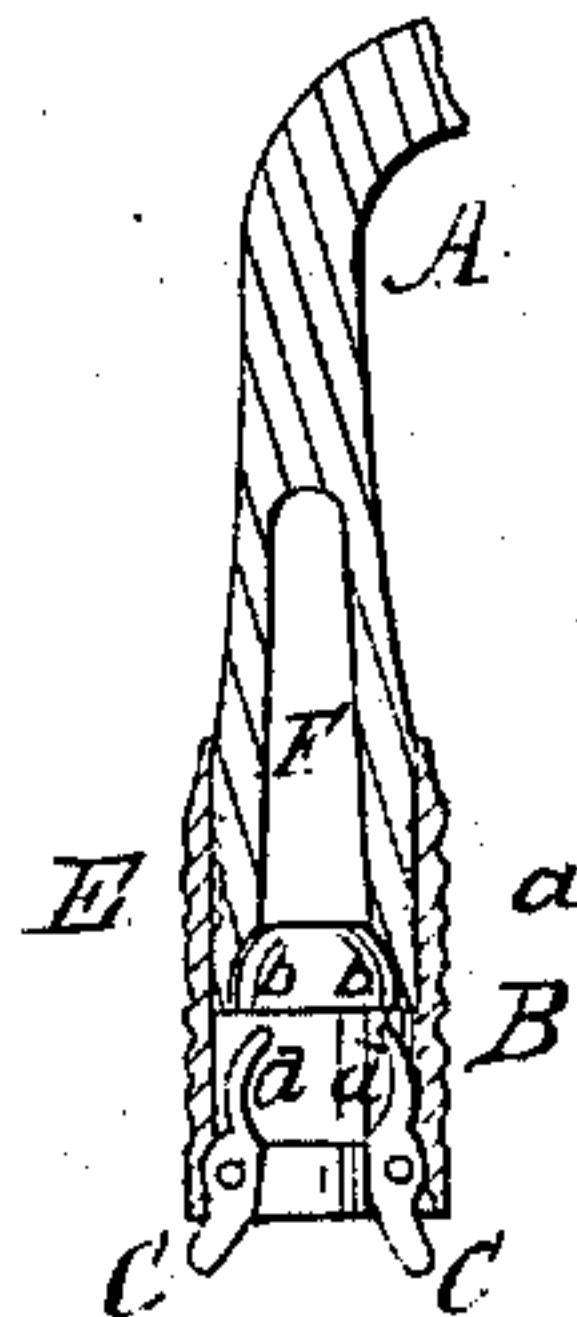


Fig. 3.

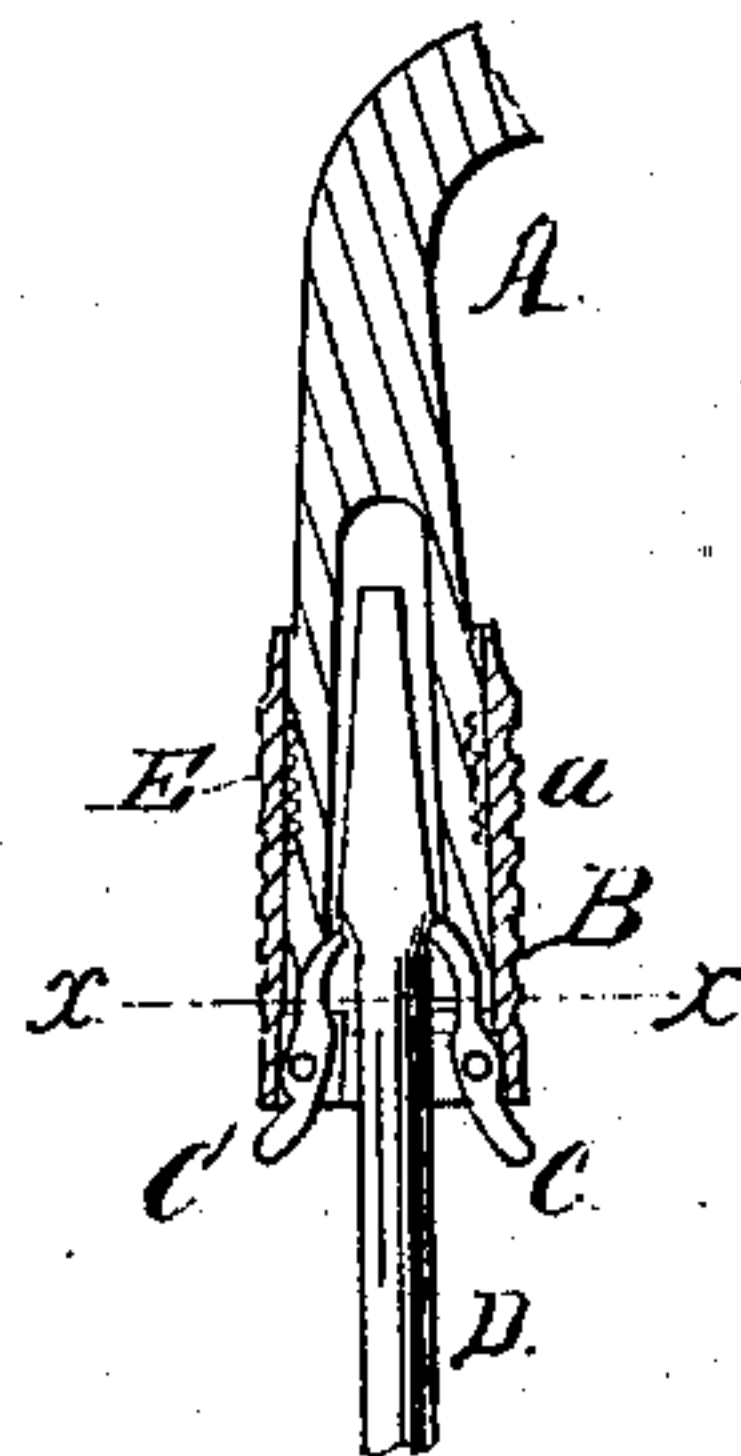


Fig. 4.



Witnesses:

Henry Stevens
Edward Smith

Inventor:

Chas. H. Stockbridge

United States Patent Office.

CHARLES H. STOCKBRIDGE, OF WHATELEY, MASSACHUSETTS.

Letters Patent No. 62,232, dated February 19, 1867.

IMPROVEMENT IN BRACES FOR BITS.

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, CHARLES H. STOCKBRIDGE, of Whateley, in the county of Franklin, and State of Massachusetts, have invented a new and useful Improvement in Braces or Bit-Stocks; and I do hereby declare that the following is a full and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my improved brace or bit-stock with a bit placed therein ready for use.

Figure 2 is an axial section of the socket part of the brace and of the nut which surrounds it.

Figure 3 is a like axial section showing the shank of a bit in the socket of the brace.

Figure 4 is a cross-section on the line *xx*, fig. 3, looking upwards into the socket.

This invention relates to means for fastening bits or other tools in the sockets of braces or bit-stocks, and it consists in a novel mode of securing the bit or other tool therein, involving a peculiar and novel construction of the lower part of the brace or stock.

The letter A designates a brace or bit-stock, the lower end of which is formed with a socket, F, to receive the shank of a bit or other tool. The letter B designates a nut, which is placed upon the socket of the brace working on a screw-thread which is cut around or upon the exterior of said socket. It will be observed that the screw-thread on the exterior of the socket does not extend to the base or bottom thereof, but ends at a considerable distance above, as is clearly seen in figs. 2 and 3. The base of the nut B extends below the base of the socket, and carries two dogs C C, which are pivoted within said nut near its base, on opposite sides, where suitable recesses are made to receive them. The lower ends of said dogs extend below the said nut, and their upper ends extend upwards within the nut, said upper ends being curved or bent inwards toward each other so that they may come against the body of the bit when its shank has been inserted in the socket of the brace. The nut B is completed by the formation of a screw-thread on its interior after it has been placed on said socket. In making and completing said nut, I take a ferrule or cylinder of the proper size to fit around the socket of the brace, and form a circular groove in the interior of said ferrule above the middle of its length, and for the purpose of establishing communication from without with the interior of said groove, I cut a hole through the side of the ferrule opposite the groove, as seen at *a*, figs. 2 and 3. Through this hole *a*, after the ferrule or nut is put around or upon the socket so that the circular groove is directly opposite the screw-thread formed on the socket, I pour molten Babbitt metal or other suitable composition, which will endure without wasting rapidly from friction until the said groove is filled, thereby forming on the interior of the ferrule or nut a female-screw thread, because the ring of Babbitt or other metal, which is thus formed, will, before its cools, receive the impression of the male-screw thread on the socket. Such ring is designated by the letter E in the drawing, and when it has become fully formed it enables the ferrule to be turned like a nut on the exterior of the socket. The downward movement of the nut on the socket is however limited by the extent or length of the screw-thread formed on the latter, and when it has run down to the bottom of such thread, as is shown in fig. 2, the further movement of the nut is arrested, and consequently it cannot run off the socket and become disconnected from the brace. Its movement upwards is arrested, before it reaches the top of said screw-thread, by the upper end or jaws *dd*, of the dogs C C, the curved backs of which jaws come against the curved lower and inner edges of the socket at the parts marked *bb*, in fig. 2, when the nut has been moved upwards sufficiently high. These curved edges *bb* serve the purpose of cams in forcing the jaws *dd* of the dogs inwards against the body of the bit, which is then locked and fastened in the socket of the brace, because the ends of the jaws come under the shoulders of the shank of the bit and prevent its withdrawal. When it is desired to release the bit, the nut is moved downwards so as to remove the jaws *dd* of the dogs out of contact with the arms *bb*, when they are free to be moved away from each other and to let the shank of the bit or other tool pass out between them. The direction of the screw-thread on the ring E of the nut is contrary to the direction in which the bit or other tool is to be turned in working with it, in order that the nut shall be kept up on the socket while one is operating the brace.

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

I claim the combination of the nut B, secured on the exterior of the socket of a brace or bit-stock, with the dogs C C, C C, and cams *bb*, all constructed, arranged, and operating substantially as and for the purpose herein set forth.

CHAS. H. STOCKBRIDGE.

Witnesses:

HENRY STEVENS,
EDWARD SMITH.