(No Model.)

C. S. WESTBROOK.

DRILL CHUCK.

No. 299,886. Patented June 3, 1884.

Fig. 1.

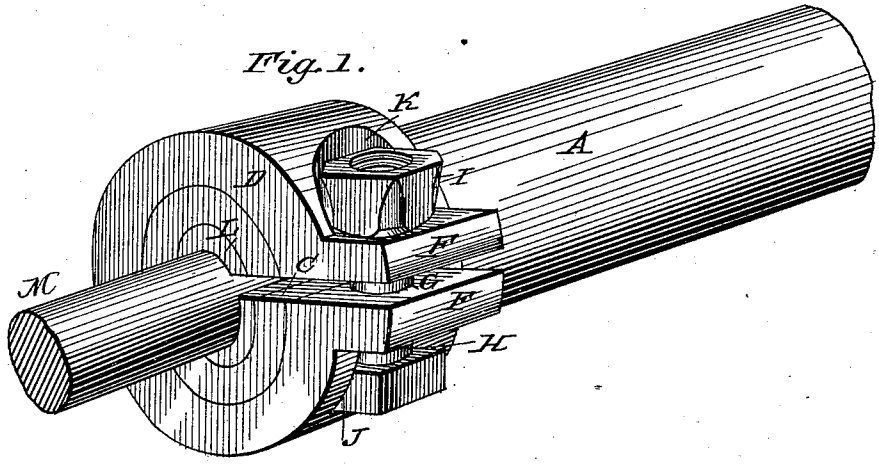


Fig. 2.

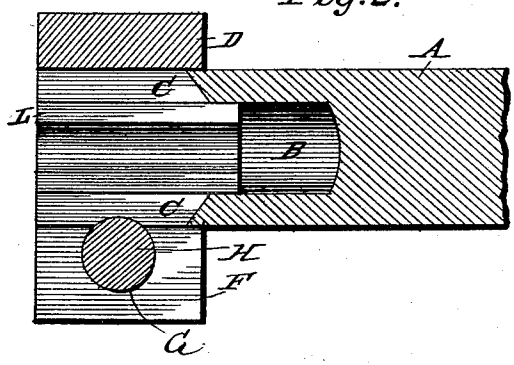


Fig. 3.

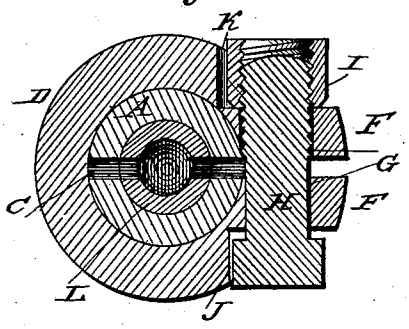
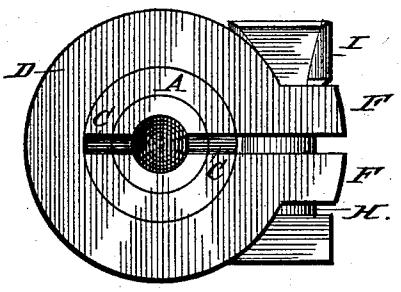


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES S. WESTBROOK, OF SPRAGUEVILLE, NEW YORK.

DRILL-CHUCK.

SPECIFICATION forming part of Letters Patent No. 299,886, dated June 3, 1884.

Application filed December 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. WESTBROOK, a citizen of the United States, and a resident of Sprague ville, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Drill-Chucks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of the outer end of the drill-spindle of a drilling-machine provided with my improved drill-chuck. Fig. 2 is a longitudinal section of the same. Fig. 3 is a cross-section, and Fig. 4 is an end view of the chuck.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to chucks for holding the bit or drill in steam or air drilling-machines; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the drill-spindle of a drilling-machine, the outer end of which rod is tubular, as shown at B, and slotted longitudinally at C upon two sides diametrically opposite to each other.

D is the chuck, which clamps around the outer tubular end of the drill-spindle, and the ends of which form outwardly-projecting lips F, the space between which forms a continuance of one of the longitudinal slots, and which lips have perforations G, through which passes a screw-bolt, H, provided with a nut, I. The outer sides of the chuck near the lips form two recesses, J and K, one of which, J, is polygonous, and serves to receive and hold the head of the bolt, while the other, K, is round, and serves to receive the nut, allowing it to be turned. Inside the tubular end of the drill-spindle is a bushing, L, of a softer metal, which is slotted in the same manner as the end of the drill-spindle, and the drill or bit M is inserted into this bushing, and may be clamped firmly by tightening the nut upon the screw-bolt, when the chuck will compress the free sides of the tubular drill-spindle and the bushing, clamping the bit. By slotting the tubular end of the drill-spindle at two sides diametrically opposite to each other, the inner sides of the said tubular spindle will be brought to bear evenly all around upon the bushing, and consequently upon the bit, while in the tubular drill-spindle heretofore used in drilling-machines, in which only one side is slotted, the pressure of the inner sides is uneven, the portions near the slot only bearing against the bushing and drill-bit, which will cause the several parts of the chuck and the bit to wear unevenly, and the bit will very easily work itself loose while drilling.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of a drill-spindle having its outer end tubular, and provided with two diametrically-opposite longitudinal slots, a chuck or clamp clamping the outer end of the drill-spindle, and having perforated lips for the reception of a screw-bolt, and having recesses in its outer sides near the lips for the reception of the head of the bolt and of the nut, a soft-metal bushing having two diametrically-opposite longitudinal slots, and a drill-bit, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

CHARLES S. WESTBROOK.

Witnesses:
F. A. DAVIS,
WILLIAM A. EGERT.