(No Model.)

J. & J. G. THROCKMORTON.

CHUCK FOR ROCK DRILLS.

No. 347,397. Patented Aug. 17, 1886.

Fig. 1.

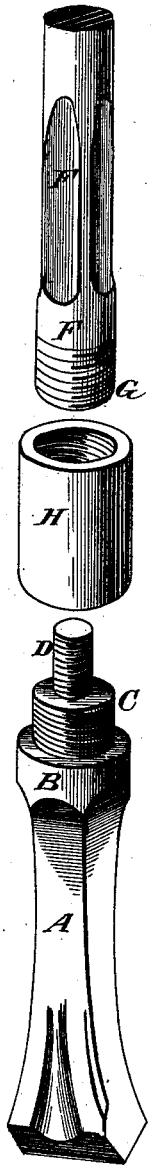
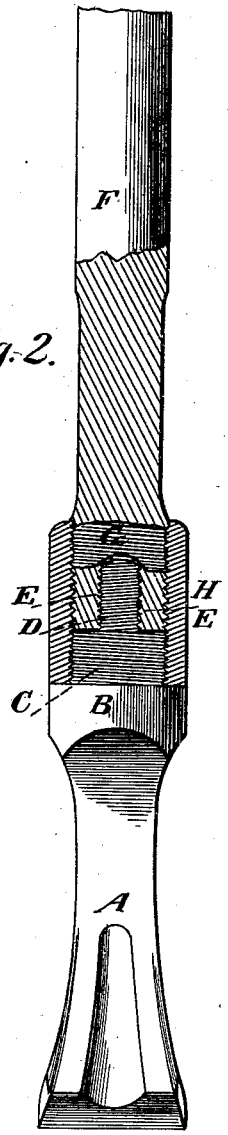


Fig. 2.



Witnesses.
A. Ruppert.
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UNITED STATES PATENT OFFICE.

JAMES THROCKMORTON AND JOSEPH G. THROCKMORTON, OF HARVEY'S, PA.

CHUCK FOR ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 347,397, dated August 17, 1886.

Application filed April 19, 1886. Serial No. 199,332. (No model.)

To all whom it may concern:

Be it known that we, JAMES THROCKMORTON and JOSEPH G. THROCKMORTON, citizens of the United States, residing at Harvey's, in the county of Greene and State of Pennsylvania, have invented certain new and useful Improvements in Tool-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

Like letters refer to similar parts throughout the several views.

Reference being had to the drawings, Figure 1 is a perspective view of a tool-coupling device constructed in accordance with our invention, the several parts being shown as detached. Fig. 2 is a side elevation, partly in section, of the same, the parts being shown as secured in place.

Our invention relates to improvements in couplings for bits and other tools, but it has more particular reference to couplings intended for use in securing the bit to the stem or handle in that class of tools which are used in Artesian-well boring; and to this end it consists in the peculiar combinations and the novel construction and arrangement of parts, all as more fully hereinafter described, shown in the drawings, and particularly pointed out in the claim.

The object of our invention is to provide a coupling both simple and inexpensive in construction, and which will securely attach together the parts of the boring-tool, and prevent the same from becoming accidentally detached when in use.

Heretofore in boring Artesian wells much trouble and delay have at times been occasioned by the accidental detachment of the bit during the process of boring.

Referring by letter to the drawings, A represents a bit, the lower portion of which is similar in all respects to the boring-tool commonly used in boring oil and gas wells. Near the upper end of the bit a shoulder, B, is formed. The extension C is provided with an external left-hand screw-thread, the use of which will be more fully hereinafter described. The neck or pin D is of less diameter than the extension C, and is provided with a right-hand screw-thread adapted to engage with the interiorly-threaded opening E in the stem F. The diameter of the end G of the stem F corresponds with that of the extension C upon the bit, and is also provided with a left-hand screw-thread, as shown.

H is a metallic band or collar provided upon its inner surface with a left-hand screw-thread, adapting it to fit over and engage with the screw-threaded ends of the adjoining ends of the bit A and stem F.

Aside from the additional security afforded by the use of the metallic band or collar described, it also serves to materially strengthen the tool and protect the joint from injury while in use.

Although we have described our coupling device in connection with well-boring-tools, we do not desire to confine ourselves to such use, as it is at once evident that such a coupling is equally well adapted for use in securing the adjacent parts in tools of various kinds.

We deem it important that the collar H be internally threaded throughout its entire length, and engage the extension C of the bit and the threaded end G of the stem, for by this arrangement we provide a much more secure union of the parts, as will be readily understood. The longitudinal movement of the collar in one direction is limited by the shoulder B on the bit, as is clearly shown in Fig. 2.

We are aware of Patent No. 47,907, and make no claim to the construction shown therein as forming a part of this invention.

Having thus described our invention and set forth its merits, what we claim to be new, and desire to secure by Letters Patent, is—

The combination, with the bit A, provided with the shoulder B and the extension C, formed with the left-hand thread and neck D, of less diameter than said extension, and formed with right-hand thread, of the stem F, having externally-threaded end G and interiorly-threaded opening E, to engage said stem D,

and the collar H, provided with an interior left-hand screw-thread throughout its entire length, and adapted to engage the thread of the end G of the stem and that of the extension C of the bit, and its lower end abutting against said shoulder, substantially as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES THROCKMORTON.
JOSEPH G. THROCKMORTON.

Witnesses:
JAS. M. HOGE,
J. A. I. RANDOLPH.