J. Esler,

Rock-Drill Chuck.

No. 48,667 Patented July 11, 1865

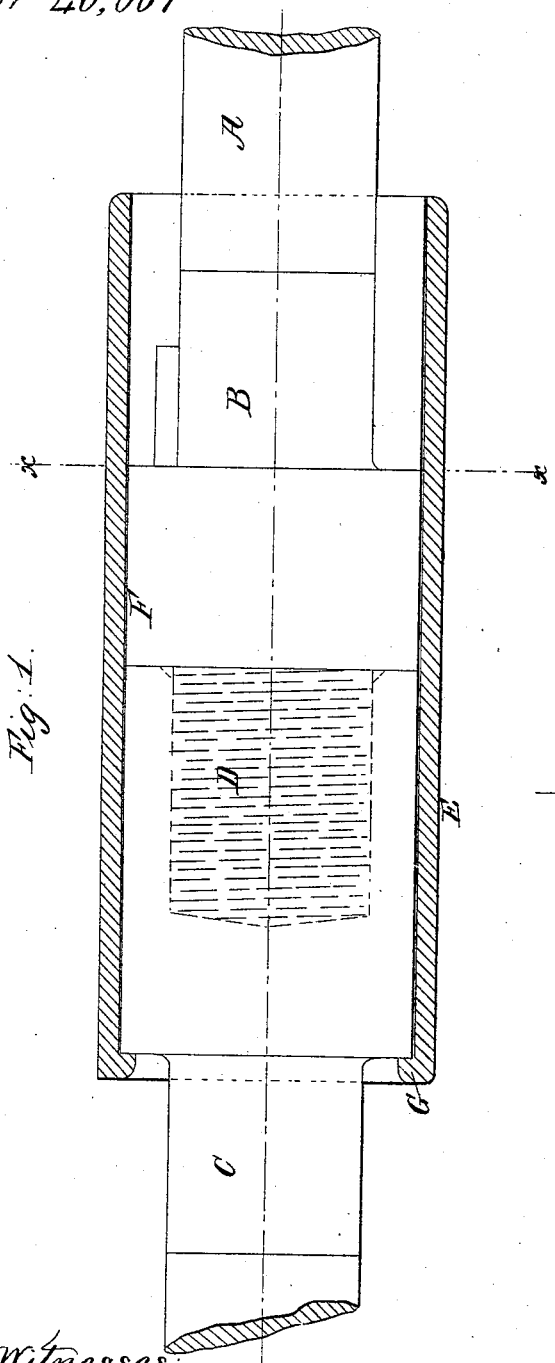
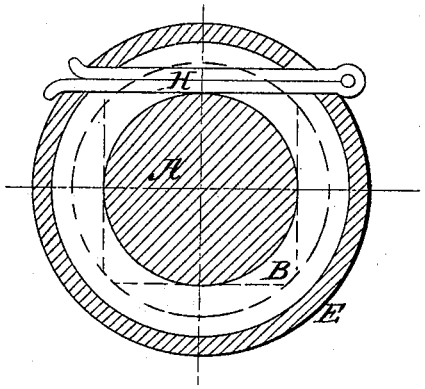


Fig: 1.

Fig: 2



Witnesses;
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UNITED STATES PATENT OFFICE.

JAMES ESLER, OF BROOKLYN, NEW YORK.

COUPLING FOR SHAFTS OF BORING-TOOLS.

Specification forming part of Letters Patent No. **48,667**, dated July 11, 1865.

To all whom it may concern:

Be it known that I, JAMES ESLER, of the city of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful arrangement for retaining the ends of boring-tools used for boring for oil or water in connection with each other; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a vertical section, and Fig. 2 a transverse section taken through the line *x x*, Fig. 1.

In the ordinary construction of boring-rods for boring apertures in the earth for oil or water the different lengths of rods connected to and operating the boring and other necessary tools are secured together by male and female screws at their ends, as the bore is deepened, a new rod being attached by being screwed into or on the end of the last one. In the operation of boring, the boring-tool at the bottom of the series of boring-rods, and therefore the whole of the said series, requires to be partially rotated at every lift of the rods, in order that the borer may strike at a different point at each time of its depression. It is found in practice that this change of position tends to and does unscrew partially the different jointed rods, or some one or more of them, so that after a short time of use the lower or some portion of the lower section is unscrewed, leaving the portion thus unscrewed in the bore and requiring great expense, time, and trouble to remove it from its position and raise it to the surface.

My invention is designed to overcome and remedy this difficulty; and it consists in so attaching and securing the ends of the rods together (after being screwed together in the ordinary manner) by a sleeve, as shown in the drawings, which slips over a circular enlargement on the ends of the rods, and which is retained in place on its lower end by a key passing through the sleeve, and which has at its upper end a collar to retain the upper rod from being withdrawn from contact with the lower one.

A is the lower boring-tool, having a square forged upon it, B. C is the upper boring-tool, having upon it a similar square to the other, the said squares being intended, primarily, to be used to fasten the two tools together by means of a wrench or other proper tool, the said boring-tools having in one end a male and in the opposite end a female screw, the said screw-threads being shown at D in Fig. 1.

E is a sleeve which fits over and upon the circular enlargement F, and which has upon its upper end the collar G. In the lower portion of this sleeve is cut a passage-way for the key H, as shown in Fig. 2, the said key keeping the lower section of the boring-tool from turning by passing across and against one of the square sides of the boring-tool A.

The collar G bears upon the upper part of the circular enlargement on the upper tool, C, so that when the sleeve is put in place over and upon the boring-rods (after the rods are screwed together) and the key H is put in place the two rods cannot be disconnected without first taking out the key H. If required in practice, the ends of the key H can be turned over, so that they will require to be cut off at the outer end, to be withdrawn, and then a new key be put in place of the one thus destroyed.

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

Preventing the lower section of the boring-rod A from turning away or being disconnected from the rod C by means of the sleeve E and the key H, the said key passing through an aperture in said sleeve by and past one of the squares formed on said section A, as and for the purpose set forth.

JAMES ESLER.

Witnesses:

FRANCIS S. LOW,

WM. A. LIGHTHALL.