(No Model.)

G. M. GITHENS.

CLAMP FOR STEAM ROCK DRILLS.

No. 307,641. Patented Nov. 4, 1884.

Fig. 1.

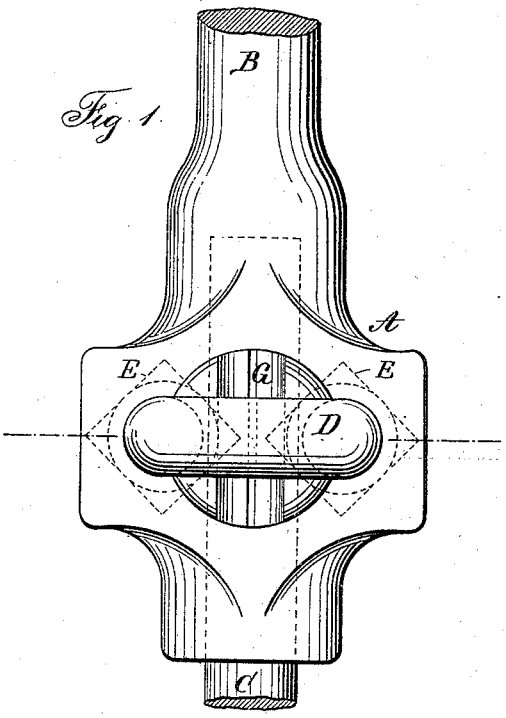
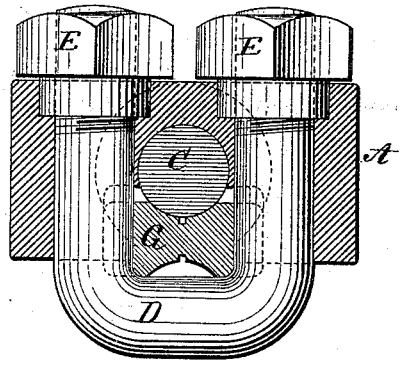


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE M. GITHENS, OF BROOKLYN, NEW YORK.

CLAMP FOR STEAM ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 307,641, dated November 4, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. GITHENS, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Clamps for Drills in Steam Rock-Drills, &c., of which the following is a specification.

The drill or tool in steam rock drills requires to be held very firmly. The rapid vibration and hammering action is liable to loosen the same. In the chucks or clamp heretofore employed the long key that has been pressed to the tool by a screw-staple is liable to become bent and inefficient.

The object of my improvement is to lessen the expense of construction and to render more reliable in action the clamp or chuck.

In the drawings, Figure 1 is an elevation. Fig. 2 is a sectional plan.

The head or chuck A at the end of the piston-rod B, or other stock or carrier, is to be of a suitable size and shape. An anvil-hole is bored into the end of this head, which hole is of a size to receive the shank of the drill or other tool, *c*. There are two holes bored transversely at the sides of the tool for the reception of the staple-formed clamping-bolt D, the nuts E of which press against one side of the head A, which has a flat surface at this part. The clamping-block G, instead of being long or polygonal, is round; hence its exterior surface can be turned off cylindrical, and I bore in the side of the head A a cylindrical hole, into which the block G fits. By this means I am able to prevent any looseness or motion of the block G in the head, and the parts cannot become battered or loose by use. I also channel the two surfaces of the block G with narrow grooves, so as to form lips or edges to press against and into the surface of the tool when the staple-bolt is tightly drawn up. The edges of the block G are notched where the screw-staples pass the same. By this construction I am able to make a hardened-steel clamping-block with two similar faces, either one of which can be used, and the said block is within a recess, so that it cannot become detached or lost, as the screw-staple only requires to be loosened, and the entire work of construction can be done by machinery; hence the cost is greatly lessened.

I am aware that a key has been held by a screw-staple, and also that a round bolt has been used to clamp the tool. These are liable to become bent or to work loose.

I claim as my invention—

1. The combination, with the head A and staple and nuts, of a round clamping-block grooved upon its surfaces, and fitting into a circular recess at the side of the head, substantially as set forth.

2. The combination, with the head A, screw-staple, and nuts, of a round clamping-block notched at the edges for the staple, and received into a circular recess in the side of the head, substantially as set forth.

Signed by me this 11th day of February, A. D. 1884.

GEO. M. GITHENS.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.