

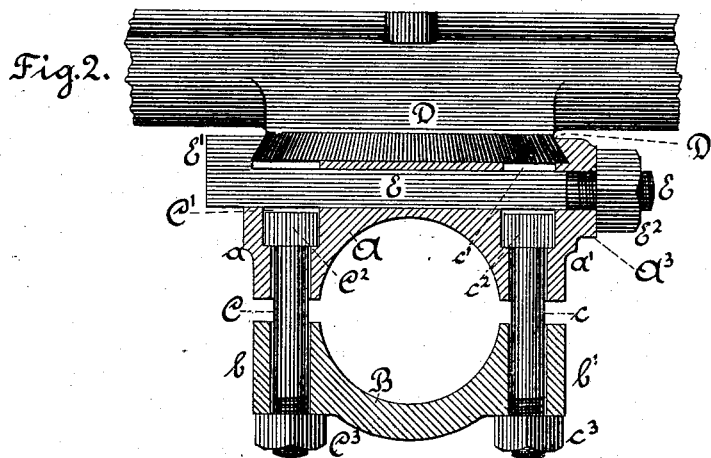
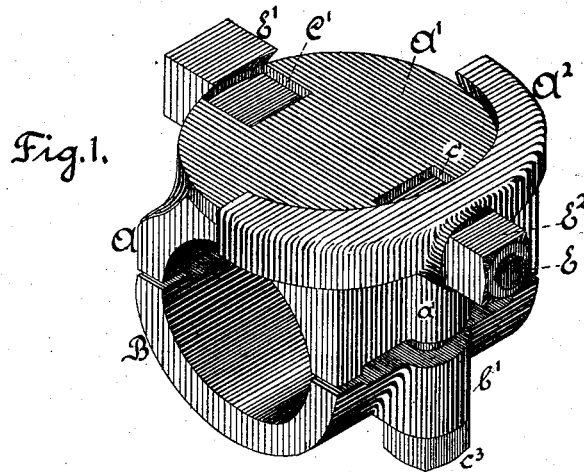
(No Model.)

J. C. GITHENS.

CLAMPING MECHANISM FOR STEAM ROCK DRILLS.

No. 264,524.

Patented Sept. 19, 1882.



WITNESSES:

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JOSEPH C. GITHENS, OF NEW YORK, N. Y., ASSIGNOR TO THE RAND DRILL COMPANY, OF NEW JERSEY.

CLAMPING MECHANISM FOR STEAM ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 264,524, dated September 19, 1882.

Application filed July 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. GITHENS, of the city and State of New York, have invented an Improvement in Clamping Mechanisms for Steam Rock-Drills, of which the following is a specification.

It is the object of my invention to simplify the construction of the clamping mechanism by which the carriages of rock-drills are adjustably secured to the tripod or other object which supports them. The requirements of mechanism of this character are that the drill-cylinder carriage, when the clamps are loosened, shall have the capacity of oscillation upon two axes which are perpendicular with relation to each other.

The accompanying drawings, illustrating a clamping device embodying my invention, are as follows: Figure 1 is an isometrical perspective. Fig. 2 is a side elevation of the central portion of a drill-cylinder carriage and a transverse section of the clamping-jaws, showing the bolts by which the clamping-jaws are tightened upon the horizontal shaft of the tripod, and the transverse clamping-bolt by which the flaring trunnion of the drill-cylinder carriage is tightened upon the seat afforded for it by the disk formed upon the top of the upper clamping-jaw.

The drawings represent a two-part clamp, composed of the upper jaw, A, and the lower jaw, B, which are adapted to embrace the bar or shaft upon which the structure is mounted. The tightening of the jaws A and B is provided for by means preferably of the bolts C c, which are inserted respectively through holes bored through the lugs a a' b b', formed upon the sides of the jaws A and B, respectively. The upper portions, C' c', of the holes through the upper jaw, A, are enlarged to admit the heads C² c² of the bolts, respectively. The grip of the jaws A and B upon the object which they embrace is adjusted in the usual manner by means of the nuts C³ c³, applied to the ends of the bolts C c, respectively.

It will of course be understood that tap-bolts may, if desired, be substituted for the nut-bolts C and c, in which case the holes in the jaw A for the reception of the tap-bolts will not require to be carried entirely through

the jaw A, as is necessary when nut-bolts are employed, as shown.

The upper part of the jaw A is formed into the disk A', which affords the bearing for the flaring end of the drill-cylinder-carriage trunnion D, the edge D' of which is inwardly beveled, as shown. Nearly one-half the circumference of the disk A' is provided with the upwardly-projecting flange A², the concave face of which is undercut to conform to the shape of the beveled edge D' of the trunnion.

The flange A² constitutes the fixed jaw, against which the trunnion is adjustably clamped by means of the clamping-bolt E, inserted transversely through the upper jaw, A, a short distance below the surface of the disk A'.

The head E' of the clamping-bolt projects upward above the top of the disk A', and its inner edge is curved concentrically with the jaw A², and undercut to fit the beveled edge of the trunnion.

The end of the bolt E projects through the boss A³, formed upon the side of the jaw A, and the face of this boss forms the bearing for the clamping-nut E², applied to the projecting end of the bolt E.

It will be seen that my clamping mechanism, which is composed merely of the two principal pieces A and B and of the three bolts, C, c, and E, with their corresponding nuts, is simple and substantial in construction, and is capable of easy adjustment upon the rod or column which supports the drill-carriage.

In applying my invention to a tripod, the flaring trunnion of the carriage is provided with a seat formed upon the tripod-head and having the undercut flange A² upon one side, the head being perforated suitably for the reception of the clamping-bolt E, provided with the undercut upwardly-projecting head E'.

I claim as my invention—

1. The herein-described adjustable clamping mechanism for the support of a drill-cylinder carriage, provided with a flaring trunnion, which consists, first, of the upper clamping-jaw, A, upon the top of which is formed the disk A', provided with the upwardly-projecting flange A², and which is transversely perforated to admit the clamping-bolt E, pro-

vided with the upwardly-projecting head E',
and with the clamping-nut E²; and, secondly,
of the lower jaw, B, and the bolts for tightening
the jaws A and B upon a bar or shaft em-
5 braced by them.

2. In combination with a circular flaring
truunion upon the carriage of a drill-cylinder,
a bearing or seat provided with the undercut

flange A² and the clamping-bolt E, having at
one end the undercut upwardly-projecting ro
head E' and at the other end the nut E², as
and for the purpose set forth.

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Witnesses:

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