(No Model.)

G. R. CULLINGWORTH.

ROCK DRILL CLAMP.

No. 371,672. Patented Oct. 18, 1887.

Fig. 1.

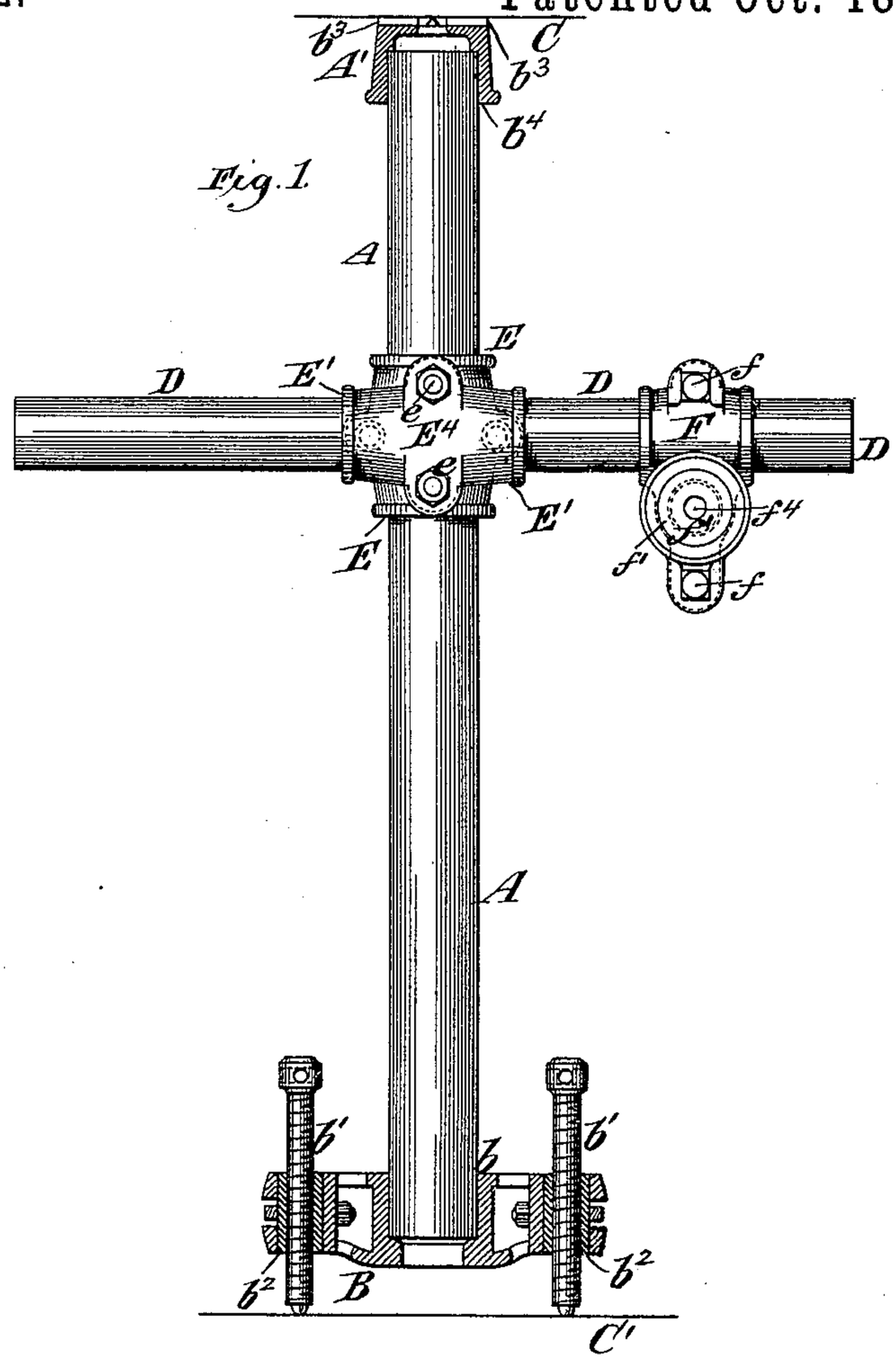

Fig. 2.

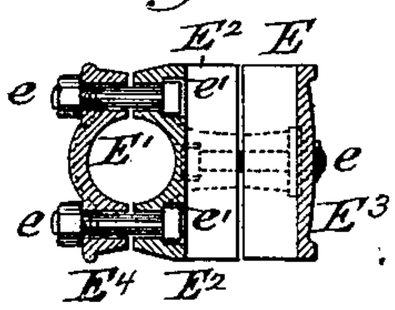

Fig. 3.

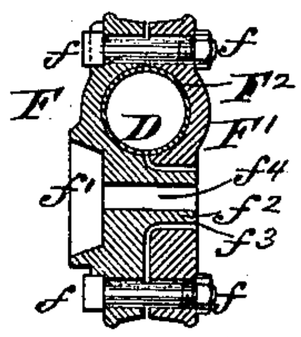

Fig. 4.

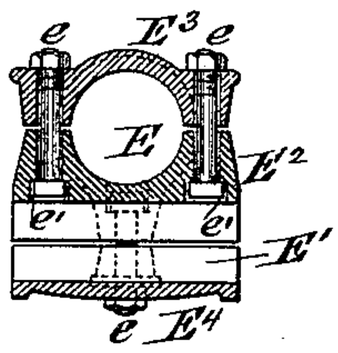

Fig. 5.

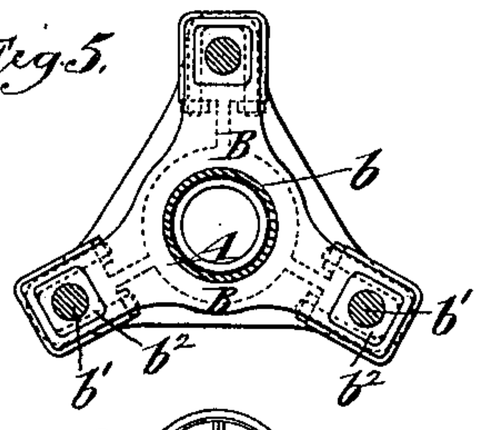

Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE R. CULLINGWORTH, OF NEW YORK, N. Y.

ROCK-DRILL CLAMP.

SPECIFICATION forming part of Letters Patent No. 371,672, dated October 18, 1887.

Application filed February 3, 1887. Serial No. 226,373. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. CULLINGWORTH, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Rock-Drill Clamps and Supports, of which the following is a specification.

The invention consists in a drill-clamp adapted to slide and turn upon an arm or column, and which is composed of two parts, being divided through its sleeve or socket which fits the arm, and has its parts secured together by bolts. One part has a circular recess or seat to receive a projection on a drill back, and has concentric with said recess or seat a projection which is received loosely through an opening in the other part and, is bored or perforated to receive the bolt which secures the drill in place. It will therefore be seen that the drill may be solely secured to one part of the clamp, and after being set and secured in proper position the parts of the clamp may be loosened to permit it and the drill to be moved along the arm or turned on the arm without changing the angle of the drill.

The invention is shown in the accompanying drawings, in which—

Figure 1 is a partly-sectional elevation of a column and supports embodying my invention. Fig. 2 is a vertical section of a coupling, which connects the column and its lateral arm. Fig. 3 is a vertical section of a drill-clamp supported upon the lateral arm and embodying my invention. Fig. 4 is a horizontal section of the coupling for connecting the arm and column. Fig. 5 is a transverse section through the column and its adjusting-screws and a plan of the base or foot of the column; and Fig. 6 is a plan of the cap which is at the upper end of the column.

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

A designates a vertical column, which may be of heavy pipe; and B is a base or foot piece having a socket, b, in which the lower end of the column is inserted. This base-piece is provided with screws b', which engage nuts b^2, and which may be adjusted to brace the column strongly between the top or roof C of the heading and the floor C'. The head of the column A is formed by a cap, A', which has spurs or projections b^3 on its top surface, and which is bored out at b^4 to receive the upper end of the column within it. This cap or head, therefore, prevents the splitting of the column.

D is an arm which projects laterally from the column, and, as here shown, is clamped in a coupling, whereby it is connected with the column. This coupling is best shown in Figs. 2 and 4, but also in exterior view in Fig. 1. The coupling comprises a vertical sleeve, E, and a horizontal sleeve, E', both of which are divided in about the plane of their axes. The vertical sleeve E embraces the column A, and the horizontal sleeve E' embraces the arm D. As here represented, the coupling is composed of a center portion, E^2, which has formed in its opposite sides, and at right angles to each other, semicircular seats or portions of the sleeve and two side pieces or caps, E^3 E^4, which complete these sleeves. Each of the caps E^3 E^4 is secured in place by bolts e, the heads of which are received in recesses e' in the center portion, E^2, of the coupling. By slackening the bolts e, which secure the cap E^3 in place, the coupling and the arm D, which it carries, may be adjusted vertically on the column, and by slackening the corresponding bolts, which secure the cap E^4, the arm D may be turned or slid lengthwise in the coupling and secured in place after such adjustment.

I prefer to have the arm D clamped at about the middle of its length in the coupling, so that it will extend substantially equally on opposite sides of the column, and may then serve to support two rock-drills, one upon each side of the column.

Preferably the rock-drill is also supported upon the arm D by a clamp, which is adjustable both by turning upon the arm and by sliding upon the arm. The clamp shown in Figs. 1 and 3 comprises two parts, F F', secured together by bolts f, and forming between them a divided sleeve, F^2, for clamping upon the arm D. The part F in this drill-supporting clamp has a conical seat or recess, f', which is adapted to receive the usual projection on the back or frame of a rock-drill wherein the cylinder slides, and this part F also has a projection, f^2, extending rearward through a suitable opening, f^3, in the part F', and bored at f^4 throughout its length to receive the drill-clamping bolt. The nut of this bolt will be accessible on the side of the part F' opposite

to that on which the part F is located, and, being supported upon a projection, f^2, in substantially the plane of or coincident with the face of the part F', ready access to the nut may be obtained by a wrench.

According to my invention lateral adjustment of the rock-drill is provided for either by sliding the arm D lengthwise in its coupling or by sliding the drill-supporting clamp F F' lengthwise on the arm, and rotary adjustment of the drill is provided for by turning the drill-clamp F F' upon the arm, or by turning said arm in the coupling which connects it with the column A.

I do not claim as of my invention the combination, with the column and horizontal arm, of a drill-clamp on the arm and a coupling adjustable vertically on the column, and comprising a horizontal sleeve wherein said arm is held and in which the arm may be adjustable lengthwise; neither do I claim the combination, with the column and the arm, of the coupling having the divided sleeves, with their axes at substantially right angles to each other, and composed of the center piece having in its opposite sides semicircular portions of the sleeves, and having recesses for the bolt-heads and cap-pieces, and bolts securing said cap-pieces, and having their heads received in said recesses.

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

A drill-clamp having a socket or sleeve to slide and turn upon an arm and composed of two parts bolted together, it being divided through the socket or sleeve, one part having a recess or seat to receive a projection on the drill-back, and also having a projection which is concentric with said recess or seat and received in an opening in the other part, and which is bored to receive the bolt securing the drill, whereby the clamp may be loosened to turn or slide on the arm without loosening the drill on the clamp, substantially as herein described.

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