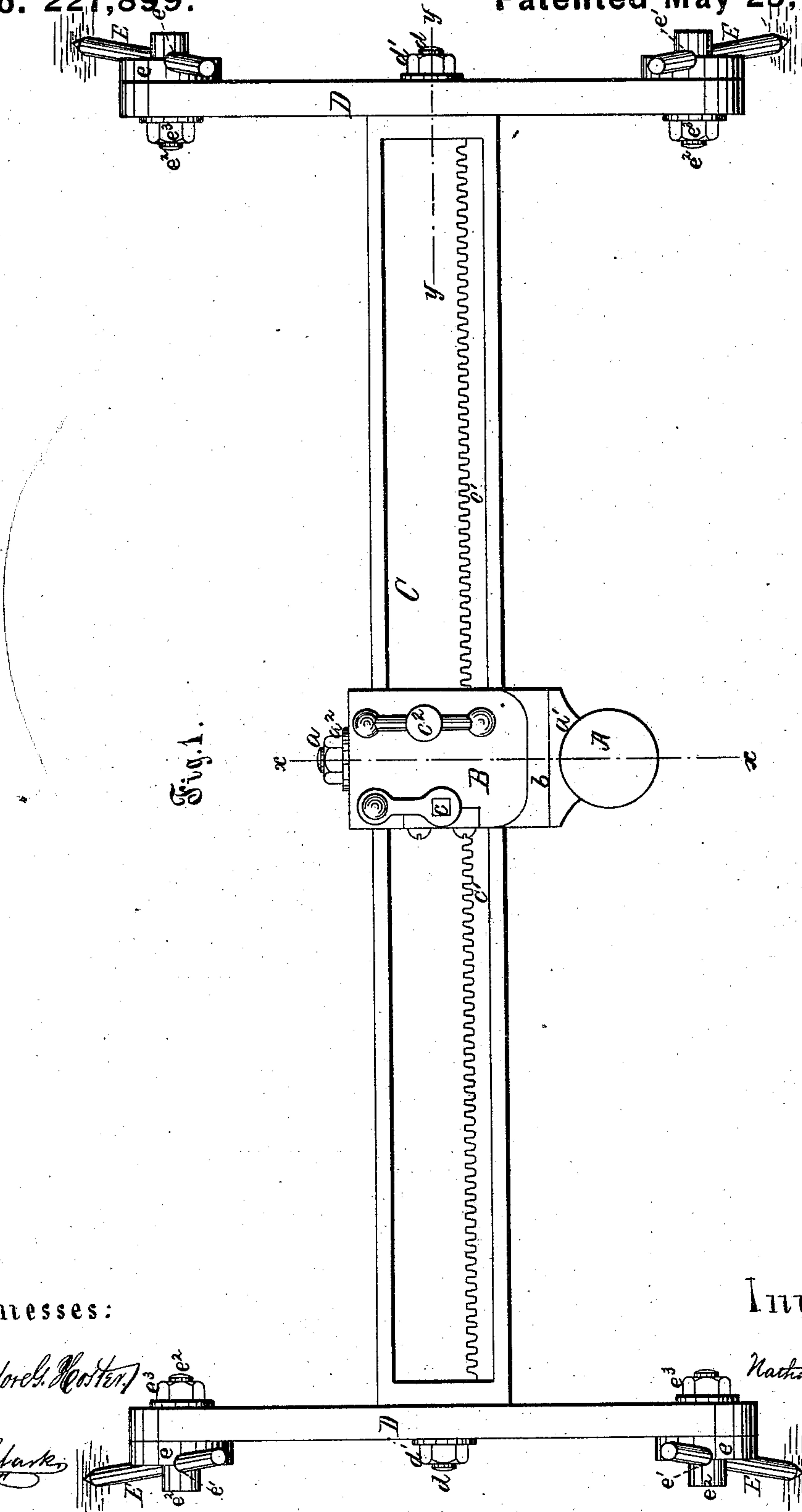


N. W. HORTON.
Carriage for Rock-Drills.

No. 227,899.

Patented May 25, 1880.



Witnesses:

Theodore G. Foster,

B. S. Clark,

Inventor:

Nathan W. Horton

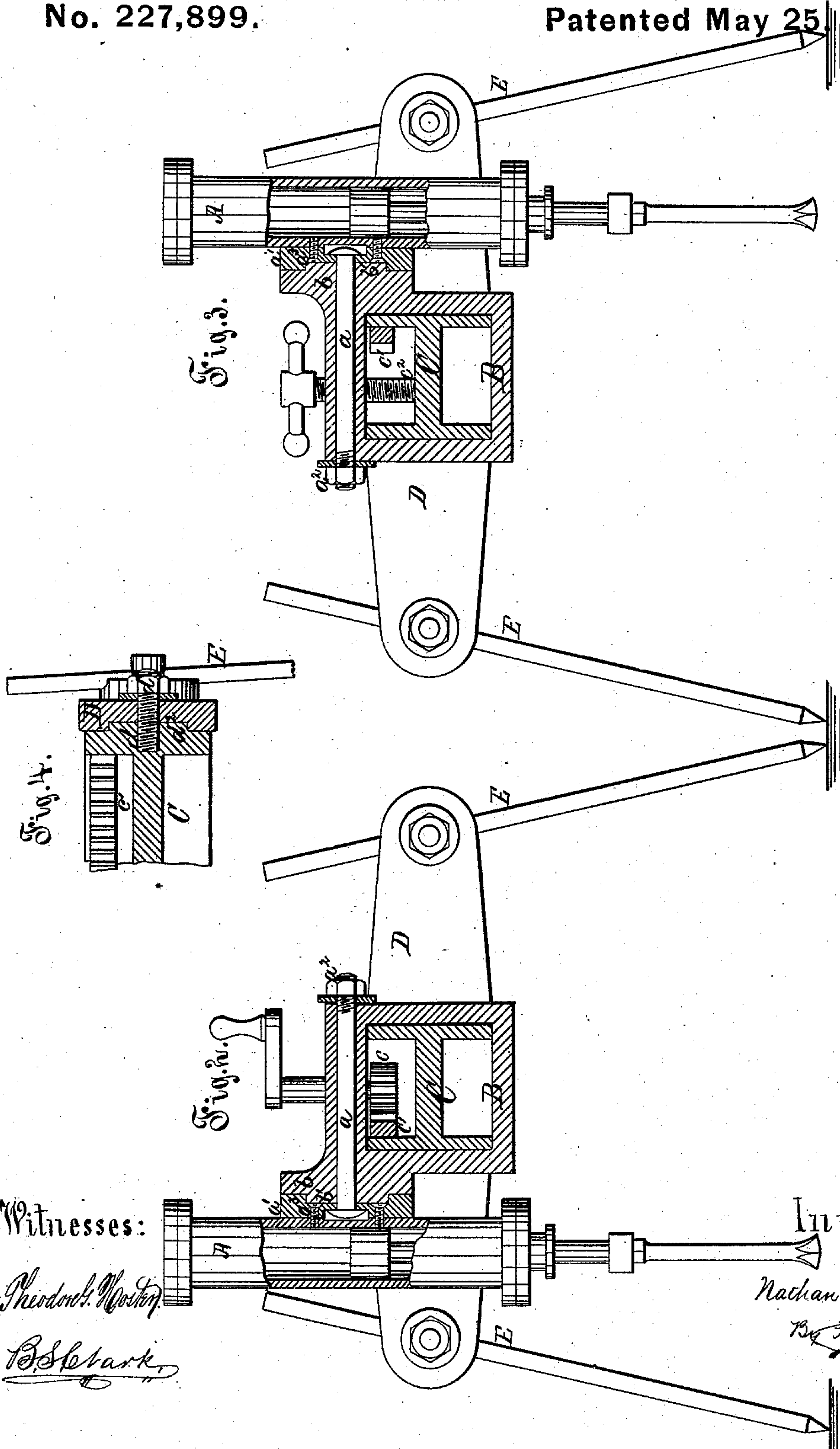
By Fitch Fitch

His Attyys.

N. W. HORTON.
Carriage for Rock-Drills.

No. 227,899.

Patented May 25, 1880.



Witnesses:

Theodore W. Norton

B. S. Clark

Inventor

Nathan W. Horton

By Fitch & Fitch

Attys.

UNITED STATES PATENT OFFICE.

NATHAN W. HORTON, OF WILKESBARRE, PENNSYLVANIA.

CARRIAGE FOR ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 227,899, dated May 25, 1880.

Application filed June 14, 1878.

To all whom it may concern:

Be it known that I, NATHAN W. HORTON, of Wilkesbarre, Luzerne county, State of Pennsylvania, am the inventor of an Improved Carriage for Rock-Drills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention consists in a carriage for rock-drills, as hereinafter particularly set forth and described, and more at length recited in the claims.

Figure 1 is a plan of a carriage for rock-drills embodying my improvements. Figs. 2 and 3 are vertical sectional views of the same on the line *xx*, Fig. 1, looking in opposite directions from the line of section; and Fig. 4 is a sectional view on the line *yy*, Fig. 1, showing the arrangement of the pivot of the bar to the cross-pieces.

A represents the rock-drill. B is a frame, which is preferably rectangular in general form, as shown. To this frame, upon one side thereof, is pivoted the drill A. This is accomplished by means of the long stout bolt *a*, which passes from a plate, *a'*, fixed on the drill, through the frame B to the opposite side thereof, where it is provided with a jam-nut, *a²*, as shown. To give the drill a firm seat on the frame the table or plate *b* is fixed or formed on the frame, as shown, and on this plate, around the bolt-hole, is formed the circular boss *b'*, which fits into a corresponding recess, *a³*, in the plate *a'*. By means of this arrangement the drill can be turned or swung upon its pivot on the frame in any direction, and there held in position.

The frame B is mounted on and arranged to be moved longitudinally on the bar or beam C. This bar is preferably given the form of a double-T beam, as shown, and may be of any desired length. The moving of the frame along the bar may be conveniently done by means of a pinion, *c*, in the frame engaging a rack, *c'*, on the bar, extending the length thereof. To hold the frame rigidly in place on the bar the screw-clamp, *c²* set in the frame and arranged to bear upon the bar, as shown, may be employed.

The bar C is pivoted at its ends to the cross-pieces D, so that the bar may be revolved on its axis and held securely in any desired position.

To accomplish this I employ the screw-bolts *d*, Fig. 4, which extend from either end of the bar through the cross-pieces, and are provided with jam-nuts *d'* on the outside of said cross-pieces. Around the bolts on the ends of the bar are formed the circular bosses *d²*, which fit into corresponding recesses on the inner face of the cross-pieces, thus affording a firm bearing for the bar.

The cross-pieces D are mounted on legs E, the legs being pivoted to the cross-pieces and also arranged to be vertically adjusted on the said cross-pieces. Upon one side of the cross-pieces are arranged disks or plates *e*, channeled or grooved on their outer faces to receive the legs, which also pass through slotted openings *e'* in the ends of bolts *e²*, which pass through the cross-pieces and said plates *e*. Upon the opposite side of the cross-pieces the bolts are furnished with jam-nuts *e³*, as shown. By loosening the nuts the frame or bars may be moved up or down on the legs, and the legs may be turned or swung, with the plates *e*, to one side or the other, and the carriage may be thus set firmly in the desired position upon an uneven surface of rock or soil, and by swinging the bar C on its axis so that the frame B is underneath the bar, and the drill A is thus on the underside thereof, the drill may then, by lowering the entire frame on the legs, be brought down to the rock floor on which the machine stands, and thus be in position to drill into the rock-wall at the base line thereof.

I am aware that drilling-tools have heretofore been arranged or mounted upon a bar or horizontal frame and constructed to traverse the same longitudinally.

I am also aware that a carriage for drills has been heretofore used in which a frame for supporting the drill has been mounted on a bar or beam pivoted to blocks sliding in ways in a frame hung upon wheels for carrying and sustaining the apparatus, said wheels having at their rims adjusting-legs to prevent their revolution or movement when the carriage is in position for drilling. I do not, therefore, claim these devices broadly, but intend to confine my claims hereunder to the specific improvements and novel devices I have described herein; and therefore

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

1. In a carriage for rock-drills, having the frame B, mounted on and to traverse longitudinally the bar C, the table or plate *b* on said frame, and the plate *a'* on the drill A, together with the bolt *a* and its nut *a'*, constructed and arranged to operate as and for the purpose specified.

10 2. In a carriage for rock-drills, having the frame B, to which is pivoted the drill A, mounted

on and to traverse the bar C, which is hung to swing on its longitudinal axis in the cross-pieces D, the legs E, seated in and provided with the channeled plates *e*, the bolts *e'*, having slots *e'*, 15 and the nuts *e'*, constructed and arranged to operate as and for the purposes specified.

NATHAN W. HORTON.

Witnesses:

B. S. CLARK,
THEODORE G. HOSTER.