

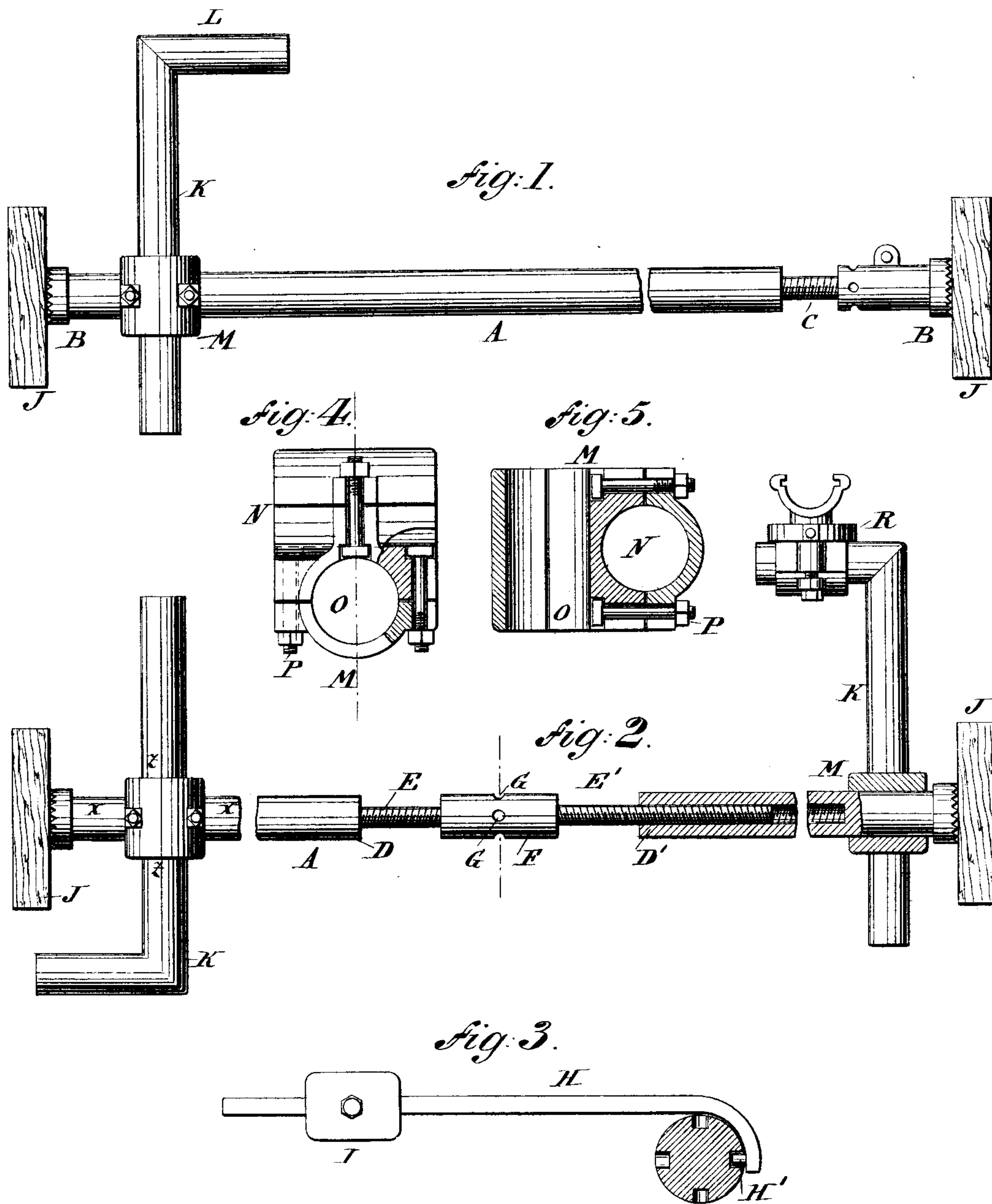
(No Model.)

P. KELLY.

SUPPORT FOR ROCK DRILLS.

No. 388,203.

Patented Aug. 21, 1888.



WITNESSES:

Trajano G. Torres.
James F. Fogarty

INVENTOR.

Patrick Kelly.
BY
Geo. W. Benjamin
ATTORNEY,

UNITED STATES PATENT OFFICE.

PATRICK KELLY, OF POUGHKEEPSIE, ASSIGNOR TO ADDISON C. RAND, OF
NEW YORK, N. Y.

SUPPORT FOR ROCK-DRILLS.

SPECIFICATION forming part of Letters Patent No. 388,203, dated August 21, 1888.

Application filed May 13, 1887. Serial No. 238,138. (No model.)

To all whom it may concern:

Be it known that I, PATRICK KELLY, a resident of Poughkeepsie, county of Dutchess, State of New York, have invented certain new
5 and useful Improvements in Supports for Rock-Drills, of which the following is a specification.

My invention relates to various details of construction, which will be hereinafter fully
10 described.

In the accompanying drawings, which illustrate my improved apparatus, similar letters of reference indicate like parts.

Figure 1 is a longitudinal elevation of a tunnel-bar such as I desire to use, and upon which
15 is mounted a bent radial arm made in accordance with my invention. Fig. 2 is a longitudinal elevation, partially in section, of a modification of the tunnel-bar, showing two
20 of the radial arms mounted thereon and in different positions, and likewise showing a drill-carriage on the end of one arm. Fig. 3 is an elevation of the lever and weight employed for adjusting and maintaining the position of the tunnel-bar. Fig. 4 is a top view
25 and partial section on the line X X of Fig. 2 of the hub or bearing upon the tunnel-bar, and which serves to support and adjust a radial arm. Fig. 5 is a vertical section of the
30 hub on the line Z Z of Fig. 2.

In the drawings, A is a tunnel-bar such as I desire to use, and is provided on the ends with the serrated feet B. At one end of the
35 bar is a jack-screw, C, by means of which the bar can be extended.

A' indicates a modification of the tunnel-bar, which is shown as divided in the center. It may be divided at any other convenient
40 portion of its length. The central and inner ends of the bar are provided with the tapped holes D D', to receive the screws E E' of the double jack-screw F. The threads on the screws E E' are cut in opposite directions; and hence when the body of the jack-screw is rotated in one direction the effect is to lengthen
45 the tunnel-bar, and vice versa. In order to rotate the jack-screw, the holes G G are provided in the body portion of the screw, in which the end of the lever H can be inserted. I is
50 a weight adjustable on the lever H. To adjust

the bar the jack-screw is rotated and the bar extended as far as the width of the tunnel will allow. The lever is then placed in one of the
holes of the body of the jack-screw on the side toward which the body is rotated, and which
55 is in the horizontal plane of the bar. The weight is then placed on the end of the lever, and falling by its gravity will rotate the body of the screw and thereby extend the bar to
60 compensate for any compressibility or shifting of the wooden blocks J, this often being necessary by reason of the vibration of the drill in working.

K is one of the radial arms, of which there may be several, and is mounted on the tunnel-
65 bar by means of the split hub or bearings M. One end of the radial arm L is shown bent at a right angle to the axis of the bar. I may vary the angle to meet various conditions.

M is a three-part split hub bored horizontally at N, Fig. 5, and thereby adjustable longitudinally on or rotatively around the tunnel-bar, and also bored vertically to receive
70 the radial arm, whereby the arm is adjustable vertically and circumferentially relative to the
75 tunnel-bar. Such hubs are made in several parts and are provided with adjusting-bolts P.

On the horizontal end of the arm K, I locate a clamping-seat, R, made in all respects
80 similar to that described in United States Letters Patent No. 264,524, dated September 19, 1882, and granted to Joseph C. Githeus; or I may use any other clamping-seat for the drill-carriage.

By locating the drill-seat upon the horizontal
85 bend of the arm a firm seat is secured. The drill may be moved circumferentially on its seat, and when the clamping-nuts of the seat and hub are loosened the arm and its bearing
90 can be swung around and downward into the position occupied by the arm at the left of Fig. 2, and without removing the drill from its carriage. These motions and adjustment are in practice found to be of great practical
95 advantage.

I have hereinbefore stated that the tunnel-bar may be arranged horizontally across the
tunnel.

I do not wish to limit myself to the horizontal arrangement of the bar, as it may frequently
100

become necessary, in order to obtain proper bearing for the ends of the bar, or for other reasons, to place the bar at an angle across the tunnel. Neither do I wish to limit myself to the employment of a bent radial arm for supporting a drill, although I prefer to use such an arm as being better and more convenient.

I claim as my invention—

10 1. An extensible tunnel-bar divided into two parts, in combination with a double right and left hand jack-screw and a lever and adjustable weight thereon for adjusting said bar and preserving said adjustment, substantially
15 as described.

2. The combination, with an extensible tunnel-bar, of a drill-supporting arm bent at its

upper end to an angle with the axis of said arm, substantially as described.

3. The combination, with an extensible tunnel-bar, of a drill-supporting arm bent at its upper end to an angle with the axis of said arm, and a three-part hub bored horizontally and vertically and adapted to support said arm upon the tunnel-bar, substantially as described. 25

4. The combination, with a rock-drill, of an extensible tunnel-bar, a bent drill-supporting arm, and a hub or supporting-bearing for said arm, substantially as described.

PATRICK KELLY.

Witnesses;

GEO. H. BENJAMIN,
V. M. BRASCH.