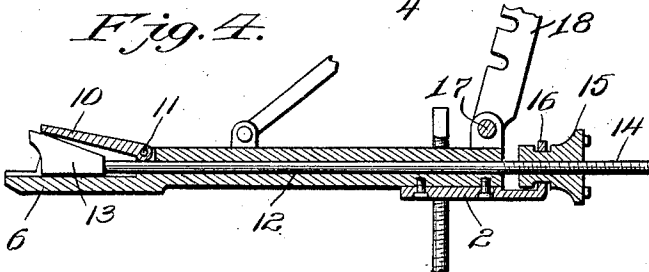
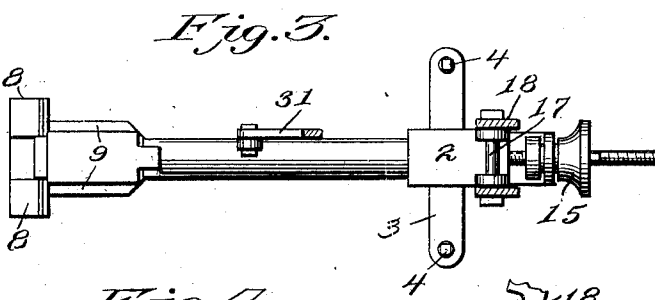
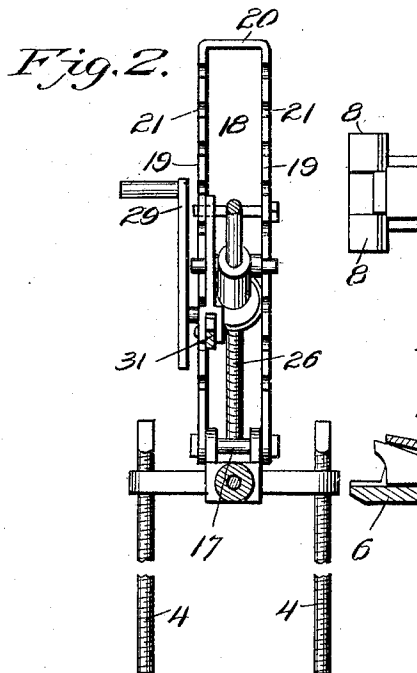
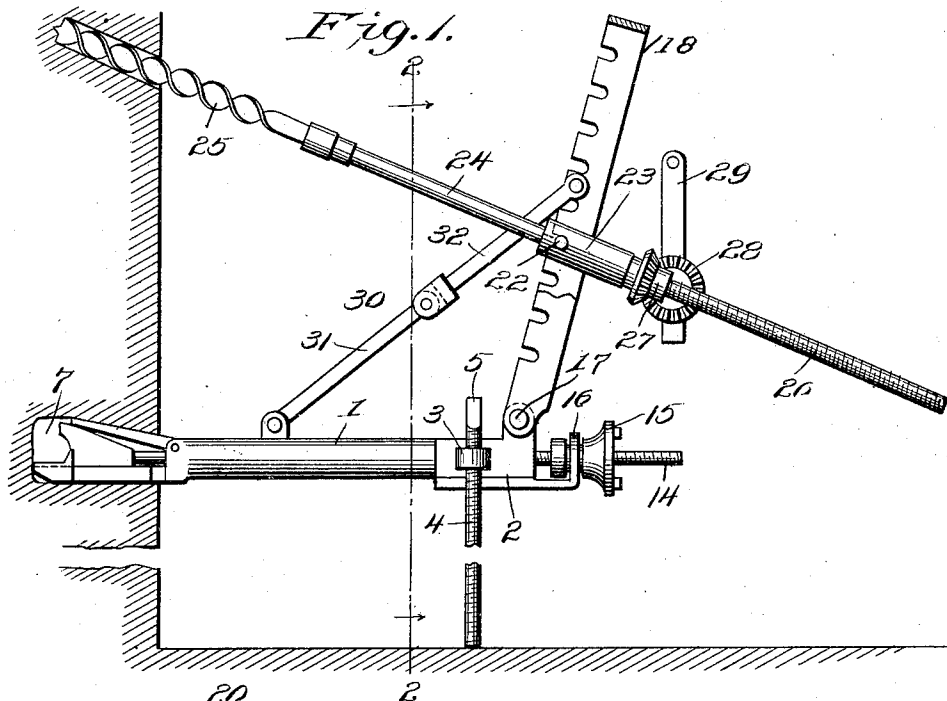


R. SECRIST.
COAL DRILL SUPPORT.
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965,024.

Patented July 19, 1910.



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RICHARD SECRIST, OF HEMLOCK, OHIO.

COAL-DRILL SUPPORT.

965,024.

Specification of Letters Patent.

Patented July 19, 1910.

Application filed June 29, 1909. Serial No. 505,025.

To all whom it may concern:

Be it known that I, RICHARD SECRIST, a citizen of the United States, residing at Hemlock, in the county of Perry and State of Ohio, have invented new and useful Improvements in Coal-Drill Supports, of which the following is a specification.

This invention relates to coal drill supports, the object of the invention being to provide a simple and effective construction of support having means for adjustably holding it in position and fixing it in bed or wall of coal and also having means for adjustably supporting the drill shaft, by which the drill may be arranged at any desired working angle.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a side elevation showing the application of the invention. Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1. Fig. 3 is a horizontal sectional view. Fig. 4 is a vertical longitudinal section through the supporting tube.

Referring to the drawing, 1 designates a tubular main supporting member, secured at its outer or rear end to a bracket 2 provided with laterally extending side ears 3 having threaded openings to receive a pair of threaded rods 4, by which the outer end of said tube may be adjustably supported from the ground or floor of the mine gallery. The rods 4 have angular upper ends 5 by which they may be conveniently adjusted through the action of a wrench.

The forward end of the supporting tube 1 is provided with an anchoring point 6 adapted to be inserted within a flaring opening 7 formed in the wall or bed of coal to be drilled. This point consists of a flat base plate having laterally extending teeth 8 at its forward end and vertical side flanges 9 in rear of said teeth. These side flanges form a chamber which is closed at the top by a jaw 10 pivotally mounted at its rear end upon the supporting tube, as at 11.

A rod 12 is mounted to slide in the bore of the supporting tube and carries at its forward end a wedge 13 movable in said chamber in the anchoring point and having an inclined upper surface to engage the jaw 10. The rear end of the rod is threaded, as at 14, and passes through an adjusting

nut 15 journaled upon an upright extension 16 on the bracket 2, said nut being adapted for engagement by a spanner or wrench by which it may be turned in one direction or the other to move the rod forwardly or rearwardly. In the operation of anchoring the member 1 in the opening 7, the wedge 13 is projected forwardly to allow the hinged jaw 10 to drop down to reduce the size of the anchoring point so that it may be forced into said opening 7, after which the rod 12 is drawn rearwardly, causing the wedge 13 to elevate the jaw 10 and thus expand such anchoring point within the opening to prevent its withdrawal and thus firmly fasten the member 1 in position.

The bracket 2 carries a transverse bolt or pin 17 on which is pivotally mounted at its lower end a drill carrier or drill supporting frame 18. This frame is in the form of a yoke, comprising parallel side bars 19 connected at their upper free ends by a cross bar 20. In the forward edges of the bars 19 are formed aligned series of notches or recesses 21 which are adapted to receive oppositely disposed lugs or supporting pins 22 on a holding sleeve 23, by which the latter is adapted to be readily applied to and removed from said drill carrier and adjusted vertically thereon to support said sleeve at different elevations. The sleeve forms a support for the drill shaft 24 to the forward end of which is secured a drill 25, the rear end of said shaft carrying a beveled pinion 27, which pinion 27 meshes with a beveled driving gear 28 suitably supported upon the sleeve 23 and which is adapted to be driven by an operating crank 29.

It will be understood from the foregoing description that the drill shaft may be arranged and supported at different elevations by engaging the lugs 22 with different sets of openings or notches in the carrier frame, thus enabling the drill to be arranged at any desired elevation and working angle.

For the purpose of holding the carrier frame 18 in a rearwardly inclined position to insure the retention of the lugs 22 within the notches 21, said carrier frame is connected with and supported from the supporting tube by a brace 30 composed of a pair of jointed rods or links 31 and 32 pivotally united in any suitable manner at their meeting ends and pivotally connected with the tube 1 and with one of the side

bars of the frame 18. When the device is not in use and it is desired to transport the same from place to place, these links adapt the drill carrier frame to be swung downward in substantially parallel relation to the main supporting tube 1. It will be understood that the drill carrying shaft may be readily mounted on the carrier frame for use and as readily detached therefrom when it is desired to drill at any point or to temporarily stop the operation of the machine.

I claim:—

1. In a drill support, a main supporting member having anchoring means at its forward end, a bracket secured to the rear end of said anchoring member and provided with outwardly extending arms and upturned ears, supporting standards adjustably mounted upon said arms, a drill carrier pivotally mounted upon the ears and embodying connected side bars each provided with a series of notches, a jointed brace connecting said drill carrier with the main supporting member, a holding sleeve having lugs to engage the notches in said bars, to adjustably support the same upon the carrier, a drill shaft supported by said sleeve, and gearing for actuating the said shaft.

2. In a drill support, a main supporting member having a bore and provided at its forward end with an anchoring point including a movable element, a bracket secured to the rear end of said anchoring member and provided with outwardly extending arms, upturned ears and a transversely extending upturned rear portion, supporting standards adjustably mounted upon said arm, a drill carrier pivotally mounted upon the ears, a holding sleeve vertically adjustable on said carrier, a drill shaft supported by said sleeve, gearing for actuating said shaft, a rod extending through the anchoring member and upturned transverse portion of the bracket, said rod having its rear end threaded and its forward end provided with a device for projecting the movable element of the anchoring point, and a nut journaled in the upturned rear transverse portion of the bracket and operating on the screw-threaded end of the rod.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD SECRIST.

Witnesses:

ELWOOD NEWBERRY,
SAML. EICHENBAUM.