

1,001,074.

Fig. 1.

Fig. 1.

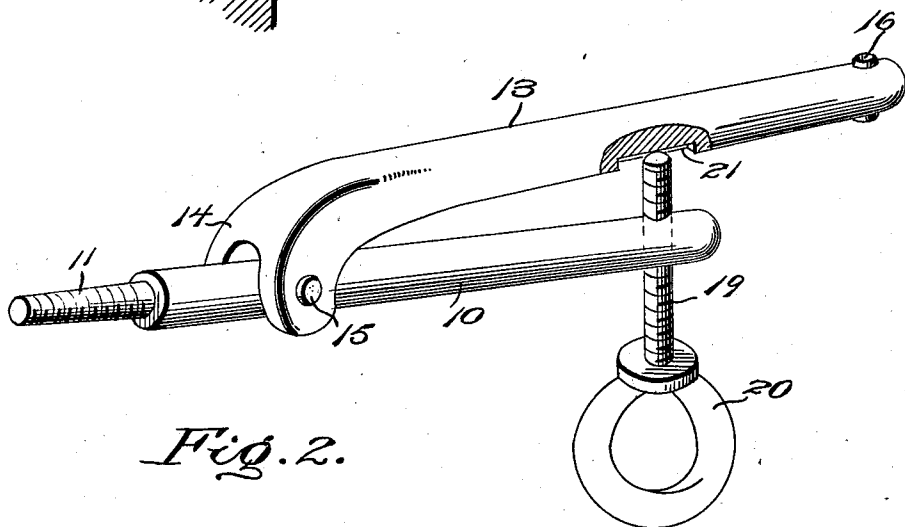


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

JERRY E. POWELL, OF HAYWOOD, WEST VIRGINIA.

MINE-DRILL JACK.

1,001,074.

Specification of Letters Patent.

Patented Aug. 22, 1911.

Application filed April 19, 1911. Serial No. 622,087.

To all whom it may concern:

Be it known that I, JERRY E. POWELL, citizen of the United States, residing at Haywood, in the county of Harrison and State of West Virginia, have invented certain new and useful Improvements in Mine-Drill Jacks, of which the following is a specification.

This invention relates to an improved support for mine drills for use in boring coal, rock, and similar substances, and has for an object to provide a support capable of such adjustment that the auger may be directed at the desired angle and height against the front face of the substance without the necessity of removing and replacing the support or jack several times in obtaining the correct adjustment, as is now necessary with the jacks in common use.

Another object of this invention is to provide a jack of peculiar construction wherein the desired adjustment may be made quickly and easily by hand to raise and lower the drill, and without removing the base or supporting bar from the body of the substance.

The invention further designs a jack of this nature which is of very simple construction, the same essentially comprising a base or supporting bar engaging in the substance to be drilled, an adjustable bar hinged to the base bar and upon which the drill is attached, and a set screw which is passed up through the outer end of the base bar for striking against the adjustable bar and swinging the same up.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of the improved drill jack in position; and, Fig. 2 is a detail perspective view of the jack.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, 10 designates the base or supporting bar which is of suitable thickness and provided at its inner end with a slightly tapering and externally threaded shank 11 engaging in an opening drilled in the side or face of the body 12 of rock, coal, or other similar substance. An

adjustable bar 13 is arranged above the base bar 10 and is provided at its inner end with a downwardly curved fork 14, the arms of which engage against the opposite sides of the base bar 10 and are hinged in such relation upon the pin 15 engaging transversely through the base bar 10. The adjustable bar 13 extends considerably beyond the outer end of the base bar 10 and is provided with a vertical opening 16 there-through for the reception of the depending shank 17 of a drill fork 18. A set screw 19 extends up in threaded relation through the outer end of the base bar 10, the same being inclined inwardly to engage at substantially right angles against the lower side of the adjustable bar 13. The set screw 19 is provided with a circular head 20 having a central opening therethrough, the head 20 being adapted for engagement by the hand to rotate the set screw to raise and lower the outer end of the adjustable bar 13. The adjustable bar 13 is provided in its under side with a relatively short and longitudinally disposed depression 21 for the reception of the upper end of the set screw 19 for the purpose of centering the same against the bar 13, and holding the bar from lateral movement. The drill fork 18 carries a threaded sleeve 22 hinged at its opposite sides to the arms of the drill fork 18, and through which passes a threaded bar 23 carrying upon its outer end a double crank arm 24 for rotating the bar 23. An auger or bit 25 is attached to the inner end of the threaded bar 23 and is directed against the face of the substance 12.

In the application and use of the improved support or jack, a small opening is drilled in the face of the substance 12 at a point below that to which the auger is to be applied. The tapering and threaded shank 11 is now placed in the opening to support the base bar 10 at substantially right angles to the face of the substance 12. When in this position the adjustable bar 13 extends up and out to support the drill. When it is desired to raise or lower the drill, the set screw 19 is rotated through the base bar 10 to swing the adjustable bar 13 up or down as required about the pin 15. It is thus readily observed that the drill may be adjusted vertically by simply rotating the set screw 19 to swing the adjustable bar 13 up or down.

It has heretofore been the custom to drill

a small hole in the substance 12 approximately at the desired point so as to support the auger or bit 25 where it is desired. It is also frequently necessary to drill several of these openings before the desired location is reached, and it is with a design to overcome this loss of time and work that the adjustable jack above described is provided.

10 Having thus described the invention, what is claimed is:

1. A drill jack comprising a base bar for threaded engagement in a substance to be drilled, an adjustable bar hinged toward 15 the inner end upon the base bar for supporting a drill, and a set screw engaging through the base bar and against the adjustable bar to swing the latter to raise and lower the drill.

20 2. A drill jack comprising an elongated base bar adapted to be fixed at its inner end in horizontal relation to a substance to be

drilled and extending out therefrom, an adjustable bar hinged at its inner end upon the base bar midway between its ends and adapted to pivotally carry a drill upon its outer end, and a hand operating set screw arranged vertically through the outer end of the base bar and engaging beneath the adjustable bar to raise and lower the same. 25 30

3. A drill jack comprising a longitudinal base bar adapted to be fixed in horizontal relation against a substance to be drilled, a vertically movable set screw carried through the base bar at its outer end, and an adjustable bar hinged at its inner end upon the base bar midway of its ends and resting upon the upper extremity of the set screw. 35

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

JERRY E. POWELL. [L. s.]

Witnesses:

JOHN E. SYPULT,

P. G. STACKPOLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."