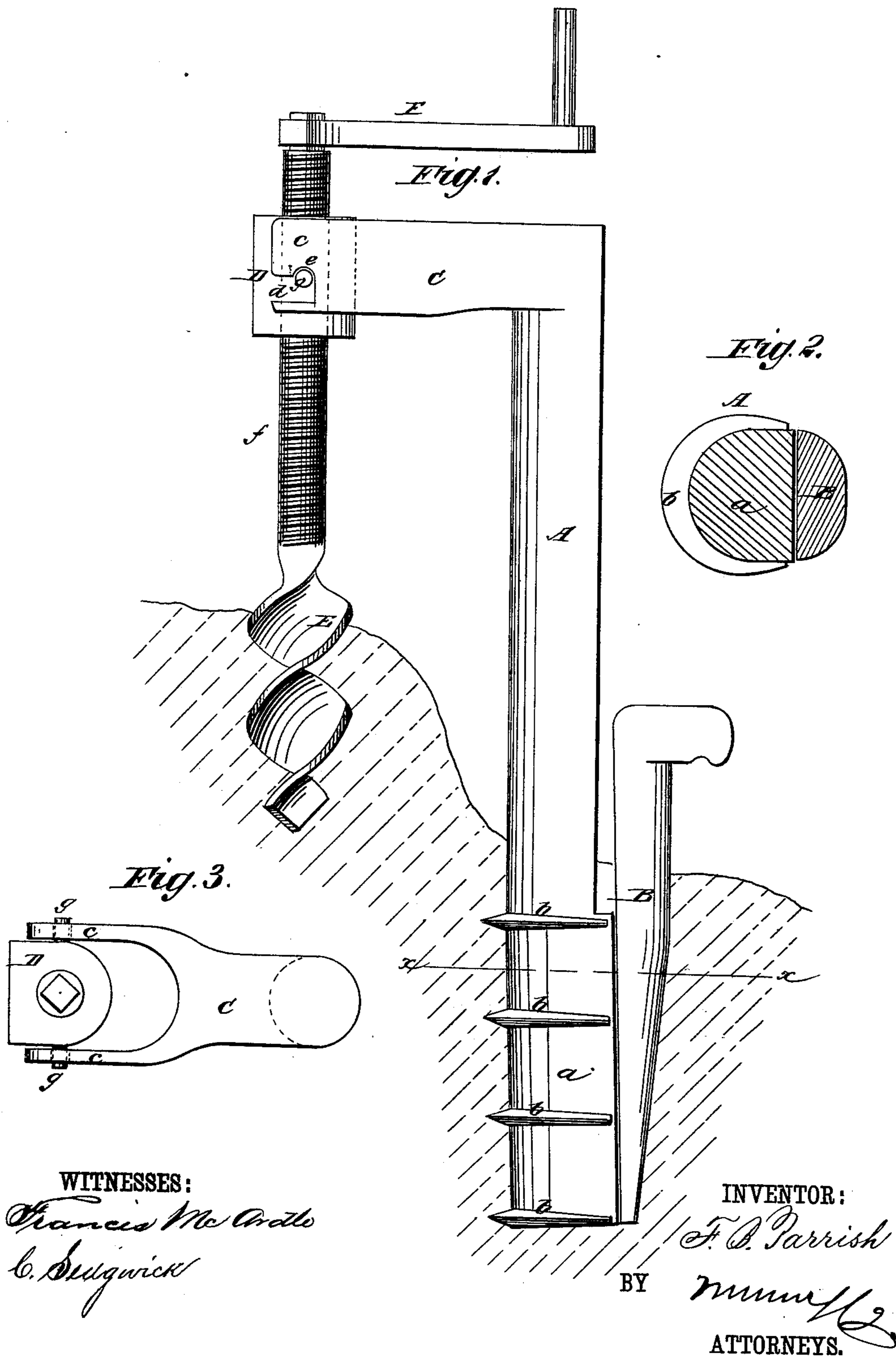


F. B. PARRISH.  
Mining-Drill.

No. 220,863.

Patented Oct. 21, 1879.



WITNESSES:  
Francis Mc Ardle  
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# UNITED STATES PATENT OFFICE.

FRED. B. PARRISH, OF WILKESBARRE, PENNSYLVANIA.

## IMPROVEMENT IN MINING-DRILLS.

Specification forming part of Letters Patent No. **220,863**, dated October 21, 1879; application filed April 8, 1879.

*To all whom it may concern:*

Be it known that I, FRED. B. PARRISH, of Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Drill, of which the following is a specification.

The invention consists in combining, with a drill-shaft arm having slotted recessed jaws, and a crank-screw on the auger, a pivoted nut having pins on opposite sides and made solid, as hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of my improvement. Fig. 2 is a section of the inserted end of the stock and wedge on line *x x*; and Fig. 3 is a top view.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the shaft of the drill-stock, the inserted end *a* whereof has on its rounded side V-shaped ribs *b*, while the edge or side of the shaft-back of these is flat.

B is a wedge, flat on one side where it is applied to the back of the shaft, and tapering on the other.

The upper end of the shaft has a right-angular arm, C, terminating in jaws *c c*, with open slots *d*, extending inward from the ends, and having semicircular recesses *e* on the upper side at the end.

D is the threaded socket or nut, through which is passed the screw-shank *f* of the drill E, which is provided with a winch, F, for turning it.

On opposite sides of socket D are pins *g g*, projecting out at right angles, forming pivots, which are passed in the slots *d* to the recesses *e*, in which they are held and find a bearing, as clearly shown in Fig. 1.

The device is used as follows: A hole is first made with a pick large enough to receive the end *a*, which is then inserted. The wedge B

is then driven in between the flat side of end *a*, and the side of the hole to force the V-shaped ribs in the side of the hole, and to tighten, by this means, and by the pressure it exerts, the shaft in place.

The drill is then connected with the stock by inserting the nut or socket D between the jaws with the pivots in the slots *d*, and resting in the recesses *e*, the drill is then turned by means of the crank F, until the bit is forced into the coal the entire length of the screw-shank *f*. It is now reversed for two or three turns, until the pivots are moved out of the recesses *e*, and loosened, when the nut is lifted out of the slot and the bit withdrawn from the hole; another longer bit is now placed in the stock and the work proceeds as before.

The arrangement of the stock or holder, with the open jaws for receiving the nut or screw-socket, enables me to use a worm-shaped drill less than ten inches long, while the pivotal connection of the nut D with the jaws enables me to set the drill at any angle that I may wish to drill the hole.

I am aware that it is not new to use a spirally-twisted drill, or a sliding box on a sliding-rod having pins to enter curved slots in box, or a disk whose position can be changed, so that the drill may be worked in different directions.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the arm C, of drill-stock shaft, having jaws *c c*, with slots *d*, and recesses *e*, and the crank-screw *f* on the auger, of the pivoted nut D, having pins *g g* on opposite sides and made solid, as shown and described.

FRED. BROWN PARRISH.

Witnesses:

JOHN W. GILCHRIST,  
W. H. COLEMAN.