

P. O. DONOHUE.
COAL-SHELLING DRILL.

No. 170,350.

Patented Nov. 23, 1875.

Fig. 1.

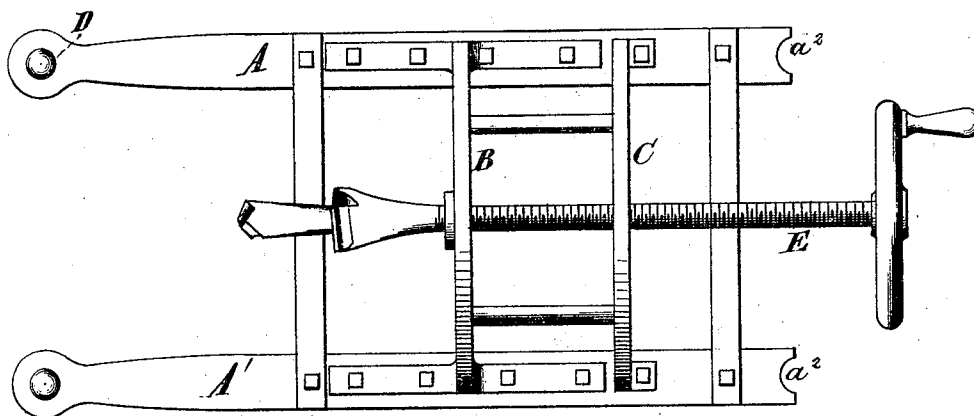
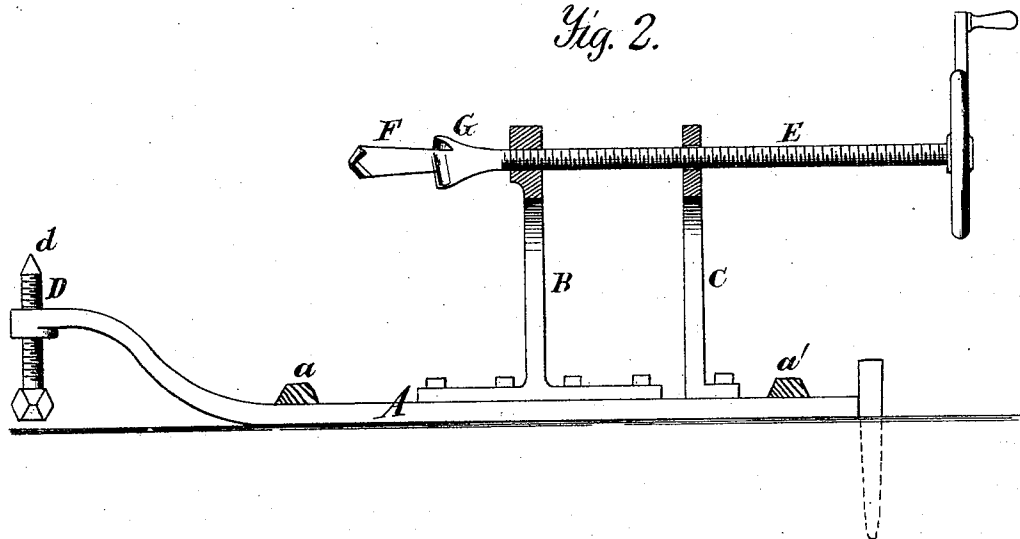


Fig. 2.



Witnesses.
A. Rupkert.
W. E. Chaffee

P. O. Donohue
Inventor.
D. P. Holloway & Co
Attys

UNITED STATES PATENT OFFICE.

PATRICK O. DONOHUE, OF PERU, ILLINOIS.

IMPROVEMENT IN COAL-SHELLING DRILLS.

Specification forming part of Letters Patent No. **170,350**, dated November 23, 1875; application filed October 25, 1875.

To all whom it may concern:

Be it known that I, PATRICK O. DONOHUE, of Peru, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Coal-Shelling Drills, of which the following is a specification:

This invention relates more particularly to drills for boring coal-rock, though it is adapted equally well for operating in other kinds of rock; and it consists, first, of certain hereinafter-described means for securing the frame of the drill to the ground; and, secondly, of the manner of mounting the drill-stock.

In the annexed drawings, Figure 1 is a plan view of my improved rock-drill. Fig. 2 is a longitudinal section thereof.

The same letters of reference are used in the designation of identical parts.

The frame of the drill consists of the side sills A and A', connected by cross-bars *a* and *a'*, and of the arches B and C, which support the drill-stock, and are located toward the rear ends of the sills. The forward end of each sill is turned up, as clearly shown in Fig. 2, and has a screw-threaded hole near its extremity for the reception of a screw, D. The rear ends of the sills are concave, as at *a*². The drill-stock consists of a screw-threaded spindle, E, and drills F and G on the ends of said spindle, the drills being of different sizes, as clearly shown in the drawings, the drill F cutting a small hole in advance of the longer drill G. The screw-threaded spindle of the drill-stock works in a screw-threaded hole in the top of the arch B, and passes loosely through a hole in the top of arch C. It is operated by a hand wheel or crank at its outer end.

The drills, instead of forming part of the screw-threaded spindle, may be detachably connected therewith.

The arches rise a proper distance above the upturned ends of the sills of the frame.

To place the drill in position for work a cavity is dug under the ledge or rock to be drilled, sufficiently high to admit the upturned ends of the sills and their screws, the latter being turned down to a level with the sole of the sills. The machine is then pushed forward, with its upturned ends entering the cavity dug, when the screws D are turned up to enter with their points *d* the roof of the cavity. Stakes may then also be driven behind the concave ends of the sills, as shown in Fig. 2. Thus secured, the drilling may be proceeded with.

This machine may be operated to drill either horizontally or vertically; and it may be driven either by hand or by power.

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

1. In a rock-drill, the combination, substantially such as hereinbefore described, of screws with the upturned ends of the sills.

2. The combination, substantially as hereinbefore described, of the drill-stock, the supporting-arches, and the sills.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PATRICK O. DONOHUE.

Witnesses:

C. W. MUNGER,
JULIUS HEINRICH.