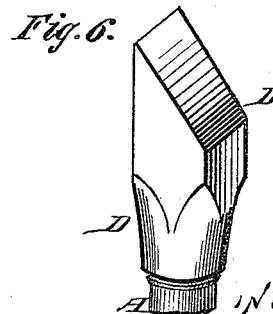
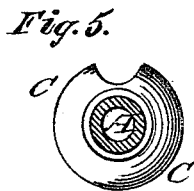
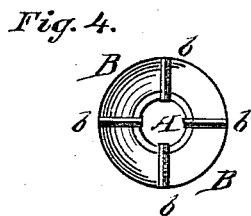
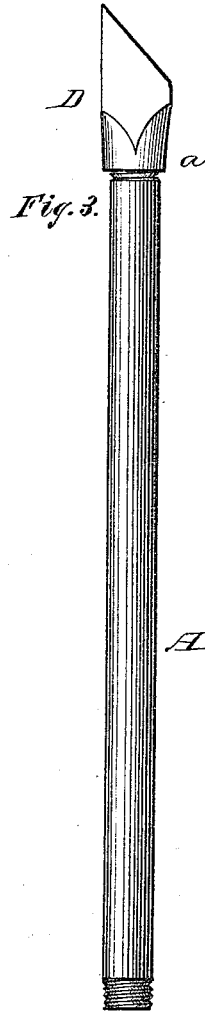
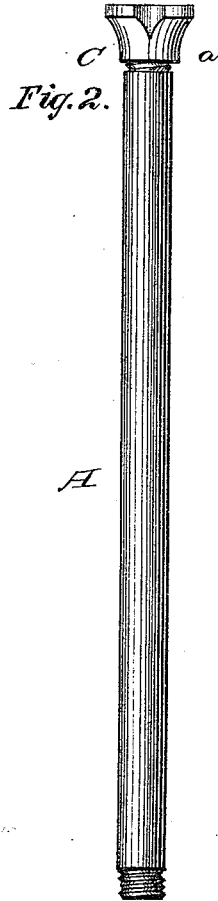
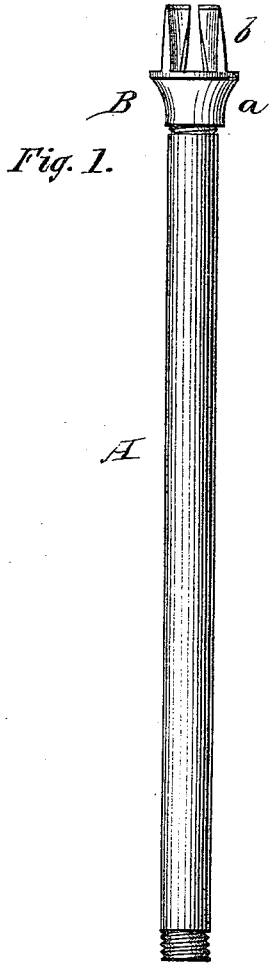


J. HOLMES & P. P. QUIRIN.
Miners' Tool.

No. 165,580.

Patented July 13, 1875.



WITNESSES:

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INVENTORS:
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Peter P. Quirin

per:
C. H. Watson & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN HOLMES AND PETER P. QUIRIN, OF ST. CLAIR, PENNSYLVANIA.

IMPROVEMENT IN MINERS' TOOLS.

Specification forming part of Letters Patent No. **165,580**, dated July 13, 1875; application filed June 23, 1875.

To all whom it may concern:

Be it known that we, JOHN HOLMES and PETER P. QUIRIN, of St. Clair, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Miners' Tools; and we hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon which form a part of this specification.

The nature of our invention consists in a cutter having a beveled head, beveled points, and open center provided with a screw-thread, and combined with a hollow handle, as will be hereinafter more fully set forth, and pointed out by the claim.

In the accompanying drawing, Figure 1 is a side view, showing the cutter attached to the hollow bar. Fig. 2 shows the tamper, and Fig. 3 the crow-bar attached thereto. Figs. 4, 5, and 6 are views, respectively, of the cutter, tamper, and crow-bar.

A represents a hollow bar or tube of any suitable dimensions provided at both ends with exterior screw-threads for the purpose of attaching the cutter B, tamper C, or chisel D. The cutter B is constructed of a head, *a*, with four beveled points or chisels, *b b*, extending from the rim of the same, their cutting edges standing radially from the axial line of the head. At the point where the points *b* are united to the head, the head is made beveled or countersunk so as to form a receiver.

The cutter, thus constructed, is screwed on one end of the tube A, and is used for making a hole to place powder in for a blast, when the tamper C will be put in place of the

cutter, or may be secured to the other end of the bar or tube, to tamp and secure the powder.

After the blast the cutter A may be removed and the fulcrum-chisel D adjusted to serve as a crow-bar in pulling the loose coal or rock down.

With our improved cutter the miner will be able to fire his blast in considerable less time than it now takes, for the reason that more stuff is cut each stroke, and the hollow bar or tube carries away refuse without the delay of withdrawing and scraping, as by the old process. The miner will also be saved the labor of carrying out of the mines every evening one or more heavy bars for the sake of sharpening the chisel at the end. He may have as many improved cutters on hand as he pleases at very little cost.

Instead of uniting the cutter, tamper, and fulcrum-chisel with the hollow bar or tube by means of screw-threads other fastenings may be used, if desired.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The cutter B, having the beveled head or receiver *a*, and the four beveled points *b*, and open center provided with screw-thread, in combination with the hollow handle, all as and for the purpose specified.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JOHN HOLMES.
PETER P. QUIRIN.

Witnesses:

ADAM DIDYOUNG,
HEINRICH OMLON.