

E. L. POWELL & E. SEDDON.  
MINERS' DRILLS.

No. 195,645.

Patented Sept. 25, 1877

Fig. 1.

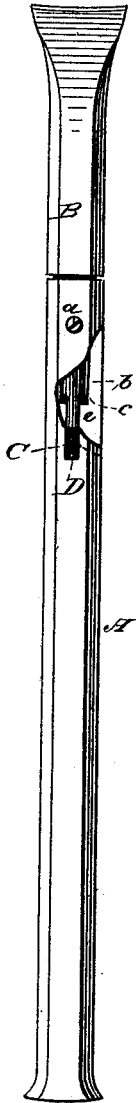


Fig. 2.

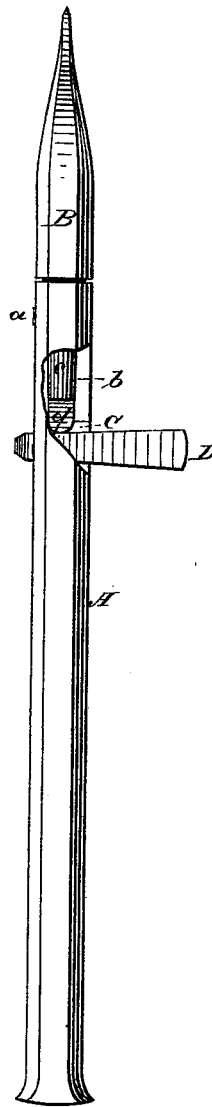
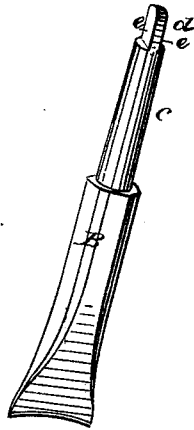


Fig. 3.



Attest:  
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# UNITED STATES PATENT OFFICE.

EDWARD L. POWELL AND EDWARD SEDDON, OF DRIFTON, PENNSYLVANIA.

## IMPROVEMENT IN MINERS' DRILLS.

Specification forming part of Letters Patent No. 195,645, dated September 25, 1877; application filed May 21, 1877.

*To all whom it may concern:*

Be it known that we, EDWARD L. POWELL and EDWARD SEDDON, both of Drifton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Miners' Drills; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figures 1 and 2 are side elevations, partly in section; and Fig. 3 is a perspective view of the drill detached.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates more especially to that class of drills which are used for mining anthracite coal; and it consists in providing the drill-bit with a detachable handle or stock, in the manner and for the purpose which we shall now proceed more fully to describe.

In the drawing, A is the stock or handle. This consists of a metallic rod of suitable dimensions, having at its upper end a recess, *b*, to accommodate the base *c* of the drill B. The recess *b* corresponds in shape to that of the base *c*, which is slightly conical or tapering. The lower end *d* of base *c* is tenoned, as shown in the drawings at *e e*, for the purposes hereinafter described.

At the bottom of recess *b* the stock A has a transverse slot, C, into which a wedge, D, may be inserted.

In operation the drill-bit B is placed in the recess provided for its reception, and is secured in position by ramming it down; if desirable, also, by a set-screw, *a*. When the drill-bit is rammed home the lower end or point *d* of its base *c* should reach below the upper side of slot C.

To remove the drill-bit it is only necessary to insert wedge D in slot C, and strike a few smart blows with a hammer on the head thereof. The bit is thus loosened in its socket, and may be easily removed for sharpening or other purposes. The gradual flattening or spreading of the metal of which base *c* is composed, caused by the wedge being rammed against it, will, on account of the tenons *e e*, not interfere with the withdrawal or reinsertion of the bit.

Miners' drills, as ordinarily used, are very large, unwieldy, and heavy, weighing from fifteen to twenty-two pounds. They often require to be sharpened, and must then be carried from the interior of the mines to some place where this can be conveniently done—sometimes a distance of two or more miles.

By our improvement the bit may be readily and quickly detached from the stock or handle, thus making it far more convenient, while quite as effective and useful.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

The improved miners' drill herein described, consisting of the handle A, having recess or socket *b* and slot C, and bit B having tenoned base *c*, fitting in socket *b*, in combination with the wedge D, substantially as and for the purpose herein shown and specified.

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

EDWARD LEWIS POWELL.  
EDWARD SEDDON.

Witnesses:

ELI WELLIVER,  
WM. WELLIVER.