No. 642,677. Patented Feb. 6, 1900.

W. CHILDS.

MINER'S DRILL AND PICK.

(Application filed Apr. 15, 1899.)

(No Model.)

Fig. 1

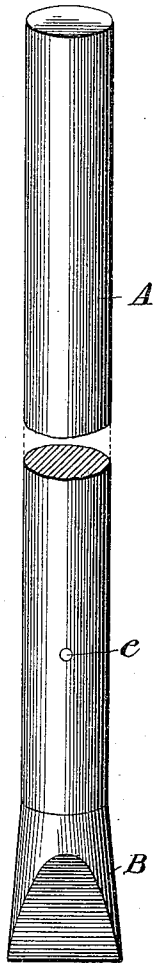


Fig. 2.

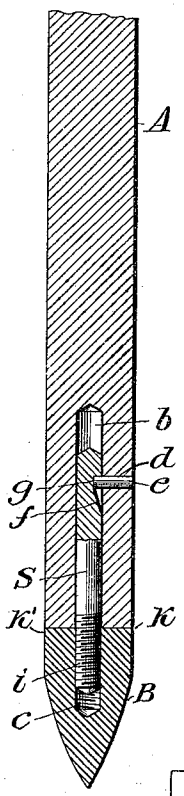


Fig. 3.

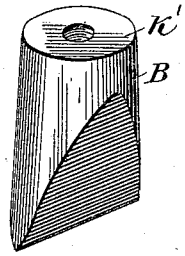


Fig. 4.

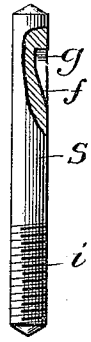


Fig. 5.



Fig. 6.

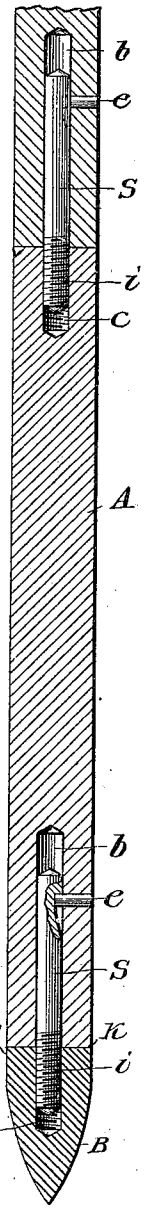
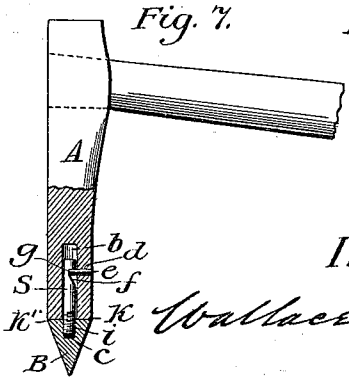


Fig. 7.



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MINER'S DRILL AND PICK.

SPECIFICATION forming part of Letters Patent No. 642,677, dated February 6, 1900.

Application filed April 15, 1899. Serial No. 713,222. (No model.)

To all whom it may concern:

Be it known that I, WALLACE CHILDS, of the city of Neosho, county of Newton, State of Missouri, have invented certain new and useful Improvements in Miners' Drills and Picks, of which the following is a specification.

The object of my invention is to construct a miner's drill and pick with a renewable bit or pick-point, so that a miner without the aid of blacksmithing can easily and quickly renew the bit or pick-point thereof when dulled or broken and that the handle or brace can be made in any desired length and in sections connected together, as clearly shown in Figure 6, and a detailed and fuller description of this part of my invention would be similar to that for attaching the bits or points to the drill-handle or brace. This object is attained by substituting a new duplicate piece for the battered and worn-out part. This invention can be used and readily adapted to other tools by a skilled mechanic.

The mechanism illustrated in the accompanying drawings, together with this specification, will show how to make and use my invention.

Fig. 1 is a perspective view of a miner's drill and pick, showing my invention. Fig. 2 is a longitudinal cross-section of a part of Fig. 1. Fig. 3 is a perspective view of bit or pick-point with a section broken out to show its socket. Fig. 4 is the adjustable shank or connecting-stem between the parts. Fig. 5 is the lock-pin which secures the adjustable shank in place. Fig. 6 is a perspective view of miner's drill or brace in two sections with bit screwed on and all joined together, showing my invention.

The general plan and manner of constructing my invention are as follows:

Referring to Fig. 2, which represents a section of a cross-section of Fig. 1, *b* represents a socket made lengthwise in A. Said socket *b* is preferably drilled therein. Into this socket the stem S is inserted, it being smooth and designed to be drawn out or inserted without hard forcing. Then the stem S is turned until the shouldered depression *g*, which is made in said stem, comes in line with the lock-hole *d*, which is made transversely into the handle or holder piece A, as shown in the drawings, when the pin *e* is inserted through said hole *d* and part way into depression *g*, thus locking the stem in the part A and preventing said stem from turning around therein or being withdrawn therefrom until the pin is removed. To remove the pin *e*, drive the stem into the socket, when the incline of the depression *g* at *f* will strike the pin and force it out, so that the stem may be removed and a new stem substituted in case the stem shall be broken or injured in use. On the other end of stem S are threads cut as shown at *i*, which are designed to enter the threaded socket *c* of the bit or point B, and the bit or point B may be screwed to or unscrewed from the stem at will.

The stem S when the parts are fitted together ready for use does not, and by reference to the drawings it may be seen, extend to the full length of the socket *b*. This has a twofold design—the first to permit the stem to be unlocked readily (when the bit or point B is first removed) and the other so that no concussion will be received on this end of the stem when the drill or pick is in use. The bit or point B when screwed onto stem and up to place at shoulders *k k* will also have space at bottom of its socket *c*, thus providing for take-up and the stem from all liability to batter or pound in its sockets.

It should be noted that the parts hereinabove described are made of metal.

Having now described my invention as to its construction, I will state that when it is properly put together it may be used in the the same manner that a miner's drill or pick of ordinary construction is used and with renewable bits or points is very handy.

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

1. A duplicatable bit having a threaded socket in a surfaced shoulder as shown, adapted to screw onto a stem projecting from and detachably secured to a holder and against a like-surfaced shoulder of said holder in a miner's drill, and pick and in combination therewith substantially as and for the purpose specified.

2. In a miner's drill, and pick, the combination of a holder, a stem or shank, and a shankless bit, the three detachably secured together, substantially as shown and for the purpose specified.

3. In a miner's drill, and pick the combination of a bit having a surfaced shoulder and a socket therein, and a stem or shank secured detachably to one end thereof, with a holder having a like-surfaced shoulder and the other end of said stem locked detachably in a longitudinal socket in said holder substantially as and for the purpose specified.

4. A handle having a longitudinal socket therein and a transverse pin-hole socket, an adjustable stem with shoulder-locking depression therein, and a lock-pin adapted to be disengaged from the stem-piece by driving the stem-piece into said longitudinal socket and the incline or wedge of said depression on said stem, against said pin all in combination substantially as specified.

5. In a miner's drill, and pick the combination of a holder having a smooth-bore longitudinal socket and a stem therein detachably secured therein, with a bit having a surfaced shoulder and an internally-threaded socket in said surfaced shoulder adapted to detachably screw onto the threaded projecting part of said stem and against the surfaced shoulder of said holder substantially as and for the purpose specified.

6. The combination of a holder, having a longitudinal socket in one end, a stem entering said socket; a detachable bit formed with a threaded socket for engaging a projecting threaded end of said stem; and a locking-pin, said bit, when in position, operating to prevent the disengagement of the locking-pin.

7. The combination of a holder having at one end a surfaced shoulder, and a longitudinal socket therein; a stem having a threaded portion, and a shouldered portion entering said socket; a locking-pin engaging said shoulder; and a detachable bit formed with a surfaced shoulder and a threaded socket therein; and adapted to screw onto the threaded projecting portion of the stem, and, by the impingement of said shoulder against the shouldered end of the holder, to pull the stem outwardly and engage its shoulder with the locking-pin.

8. The combination of a holder having at one end a surfaced shoulder and a longitudinal socket therein; a stem detachably secured in said socket and having one end projecting therefrom; and a bit having a surfaced shoulder and a socket therein, whereby it may be detachably secured on said stem by bringing the surfaced shoulders firmly together.

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