No. 883,648. PATENTED MAR. 31, 1908.

G. H. LANDERS.

MINER'S KNIFE.

APPLICATION FILED JUNE 4, 1907.

Fig. 1.

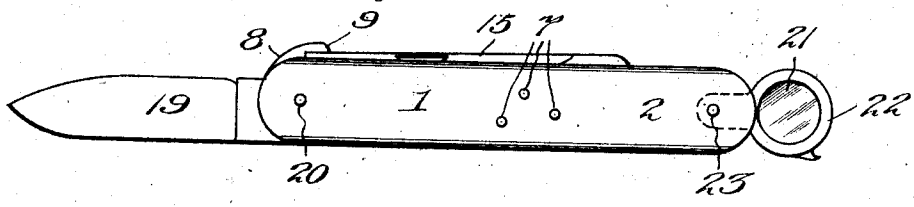


Fig. 2.

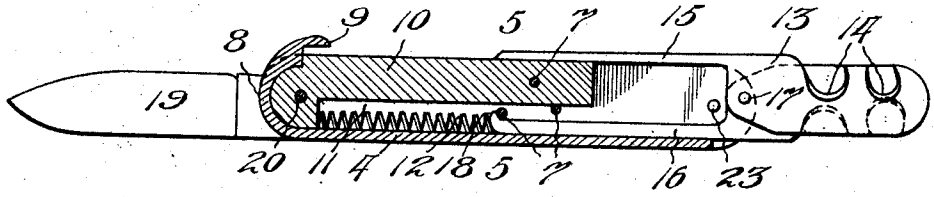


Fig. 3.

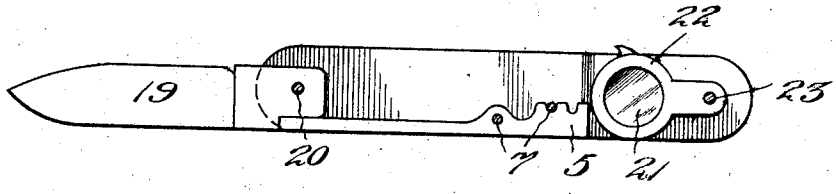


Fig. 4.

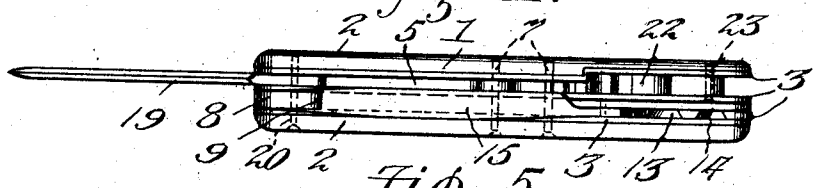
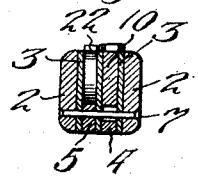


Fig. 5.



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MINER'S KNIFE.

No. 883,648. Specification of Letters Patent. Patented March 31, 1908.

Application filed June 4, 1907. Serial No. 377,250.

To all whom it may concern:

Be it known that I, GEORGE H. LANDERS, a citizen of the United States, residing at Boise, in the county of Ada and State of Idaho, have invented new and useful Improvements in Miners' Knives, of which the following is a specification.

This invention is an improved combination tool providing a knife and other implements especially adapted for use by miners, and the same consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of my invention is to provide a combination tool having a knife blade, a magnifying lens and a pair of pliers and the handle of which tool is common to all of such implements and furnishes a housing in which the same may be compactly folded or placed when not in use.

In the accompanying drawings, Figure 1 is a side elevation of a combination tool embodying my invention, showing the knife blade and the lens extended from opposite ends of the handle. Fig. 2 is a longitudinal sectional view of the same on a plane disclosing the pliers, showing the knife blade extended and the pliers partly extended. Fig. 3 is a similar view on a plane disclosing the knife blade and the lens, the blade being shown extended and the lens being folded in the handle. Fig. 4 is a side elevation at right angles to Fig. 1. Fig. 5 is a transverse sectional view of the same.

The handle 1 comprises side pieces 2, longitudinally disposed metallic strips 3, a back piece 4 which is disposed between two of such strips, and a back spring 5 which is disposed in the channel formed between two of such strips, and rivets 7 which extend transversely through said side pieces, strips, back piece and back spring and secure them together, as shown. The back piece terminates short of one end of the handle and its opposite end is curved, extending around the opposite end of the handle, as at 8, and terminates in a hook or lip 9. A block 10 is also placed in the same channel with the back piece, extends from the curved end of said back piece to within a suitable distance of the opposite end of the handle and is formed with a longitudinal recess 11 in its back edge providing a chamber for the reception of a coil extensile spring 12.

A pair of pliers 13 is provided, having wire cutting blades 14 and arms 15—16 of unequal length. Said arms are pivotally connected together, as at 17. The shorter arm 16 is adapted to enter the channel in the handle in which the block 10 is placed and to bear at its extreme extent against the outer end of the spring 12, is slidable in the said channel, and has a hook or loop 18 to engage one of the rivets 7, as shown in Fig. 2. The longer arm 15 of the pliers is adapted to bear on the outer side of the block 10 and is slidable on such block to cause the blade end of the pliers to be inclosed by or extended from the open end of the channel in which the block 10 is placed. When the pliers are placed in the handle and entirely incased thereby, the outer end of the arm 15 is engaged with and forced under the lip or hook 9 of the back piece 4 and by friction therewith locked thereby in such closed position, as shown in Figs. 1 and 4. The spring 12 is compressed when the pliers are forced into the handle and when the arm 15 is disengaged from the hook or lip 9 such spring serves to push the said pliers outwardly to project the blade end of the pliers from the handle, as shown in Fig. 2. The pliers must then be partly opened, and turned angularly with reference to the handle to disengage the hook 18 from the rivet 7, when the pliers may be entirely removed from the handle for use. The blade 19, which may be of the form here shown or of any other suitable form, is placed in the channel of the knife handle which contains the back spring 5, said back spring at its free end engaging the inner end of such blade, which is pivoted on a rivet 20 which serves to hold such blade either in an opened or in a closed position. In the opposite end of the handle from the blade and in the same channel therewith is the magnifying lens 21, the frame 22 of which is pivoted to the handle by a rivet 23. Said lens, with its frame, may be either folded within the handle or disposed out of the way or extended from the end thereof opposite the blade, as shown.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. A combination tool of the class described, comprising a handle having a channel, a back piece closing the rear side of said channel and having an extended portion closing one end of said channel and forming a hook or lip on the front side of said channel, a block in such channel partially closing

the front side thereof, the opposite end of such channel being open, and pliers or like implements having arms for insertion respectively in such channel and to bear on the front side of such block and engage such hook or lip, for the purpose set forth.

2. A combination tool of the class described, comprising a handle having a channel, a back piece in such channel closing one end thereof and having a hook or lip on the front side thereof at such closed end, a block in such channel closing one end thereof and having a recess in the side opposite said back piece, a spring in such recess, a block element extending transversely through such recess, and a pair of pliers or the like implement having arms one of which is adapted to enter such recess and the other of the arms adapted to slide on the front side of the said block and engage such lip or hook for the purpose set forth.

In testimony whereof, I affix my signature in presence of two witnesses.

GEORGE H. LANDERS.

Witnesses:
CHARLES L. SAUM,
S. P. HOLLOWAY.