(No Model.)

C. D. HALE.

COMBINED FUSE CUTTER, CAP SETTER, AND INSERTER.

No. 365,179. Patented June 21, 1887.

Fig: 1.

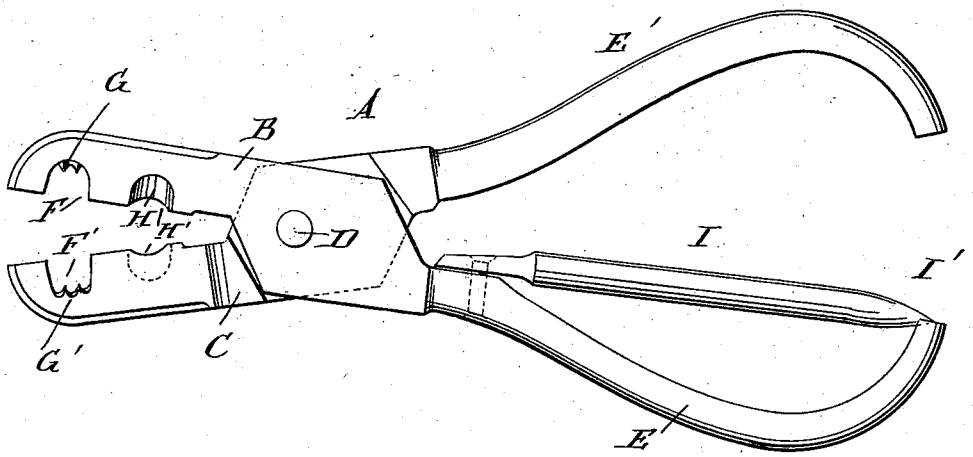


Fig: 2.

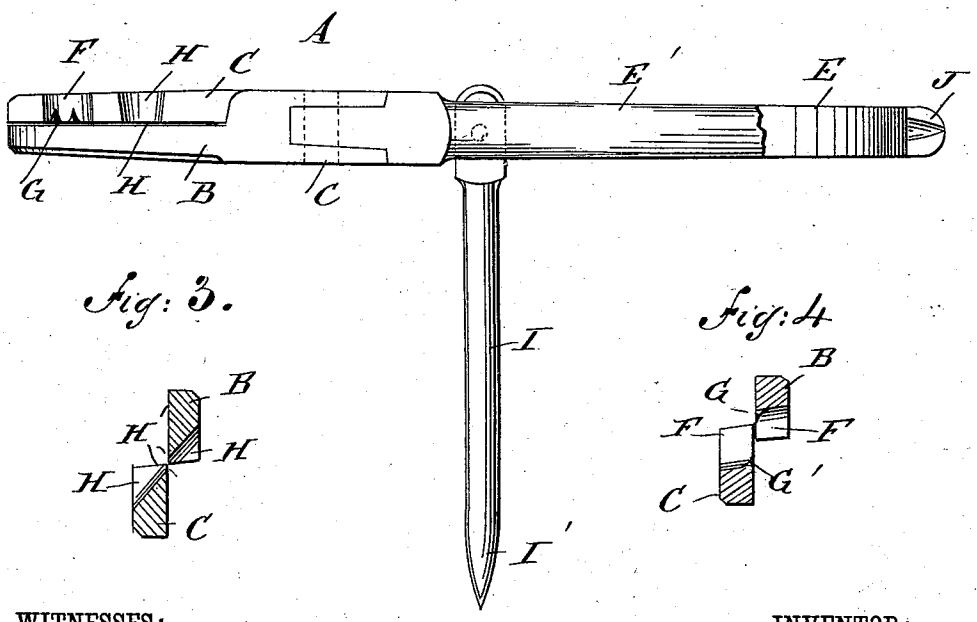


Fig: 3.

Fig: 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

CALEB D. HALE, OF LEADVILLE, COLORADO.

COMBINED FUSE-CUTTER, CAP-SETTER, AND INSERTER.

SPECIFICATION forming part of Letters Patent No. 365,179, dated June 21, 1887.

Application filed March 4, 1887. Serial No. 229,695. (No model.)

To all whom it may concern:

Be it known that I, CALEB D. HALE, of Leadville, in the county of Lake and State of Colorado, have invented a new and Improved Combined Fuse-Cutter, Cap-Setter, and Inserter, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved combination-tool for miners' use to cut the fuse, fasten the cap securely to the fuse, and to make a cavity in powder before firing.

The invention consists in the construction and arrangement of the various parts, and details and combinations of the same, as will be hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improvement. Fig. 2 is a plan view of the same, with the setting-tool in position to be used, part being broken out. Fig. 3 is a sectional end elevation of the tool through the fuse-cutting jaws. Fig. 4 is a similar view of the same through the cap-fastening jaws.

The tool A is made in the shape of a pair of pliers or shears, and is provided with the blades B and C, pivoted together at D, and formed at their rear ends into handles E and E', respectively, of any desired shape, preferably, however, as shown in the drawings, so that when the tool is closed the ends of the handles E and E' abut against each other, thus limiting the closing motion of the blades B and C. The latter are each provided near their front ends with a half-round slot or opening, F or F', having at their innermost ends inwardly-projecting tusks or prongs G G'. Between the slots F and F' and the pivot D are formed on the blades B and C the corresponding half-round openings or slots, H, and each having a curved cutting-edge, H'. Near the inner end of the handle E is pivoted one end of the inserting-tool I, which consists of a pin having a pointed end, I', which, when the tool is not in use, rests in a groove, J, formed on the outer end of the handle E.

The instrument is used as follows: In order to cut the fuse off squarely, the operator takes hold of the handles E and E' with one hand and opens the same, and then places with his other hand the fuse to be cut off between the slots H. The blades B and C are now closed by pressing the handles E and E' toward each other, so that the cutting-edges H' cut the fuse squarely into two parts. The firing-cap is then slipped over the cut-off end of the fuse, and the blades B and C are again opened, and the cap is introduced with its inner fuse end into the opening or slot F, after which the blades B and C are again closed, so that the teeth or prongs G and G' embed themselves in the cap, and thus clinch the cap onto the fuse, whereby the cap cannot be removed from the fuse. When the inserting-tool I is to be used, then the operator opens the handles E and E' and lifts the pointed end I' of the tool I out of the groove J, and then swings the tool I at right angles to the blades B and C, as shown in Fig. 2. The pointed end I' can then be used for making a cavity in thick powder, or any powder where caps can be used, for the purpose of inserting the fuse and cap preparatory to its being fired.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improved article of manufacture, the combined fuse-cutter, cap-setter, and inserter, comprising the two blades B C, pivoted at D, and having the handles E E', the blades being provided, respectively, with the cutting-edges H', and the slots F F', having the inward-projecting prongs G G', and the inserter I, pivoted at its inner end to the inner face of one of the handles, to be folded between the handles when not in use and outward at right angles thereto when in use, substantially as set forth.

2. In a combined fuse-cutter, cap-setter, and inserter, the combination, with pivotally-connected handles E and E', of the fuse-inserter I, pivoted on the handle E, and adapted to rest with its pointed end in a groove, J, formed on the outer end of the said handle E, when folded between the two handles into its inoperative position, substantially as shown and described.

CALEB D. HALE.

Witnesses:
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