No. 675,058. Patented May 28, 1901

J. J. ELLIOT.

MINER'S COMBINATION TOOL.

(No Model.) (Application filed Mar. 3, 1900. Renewed Oct. 2, 1900.)

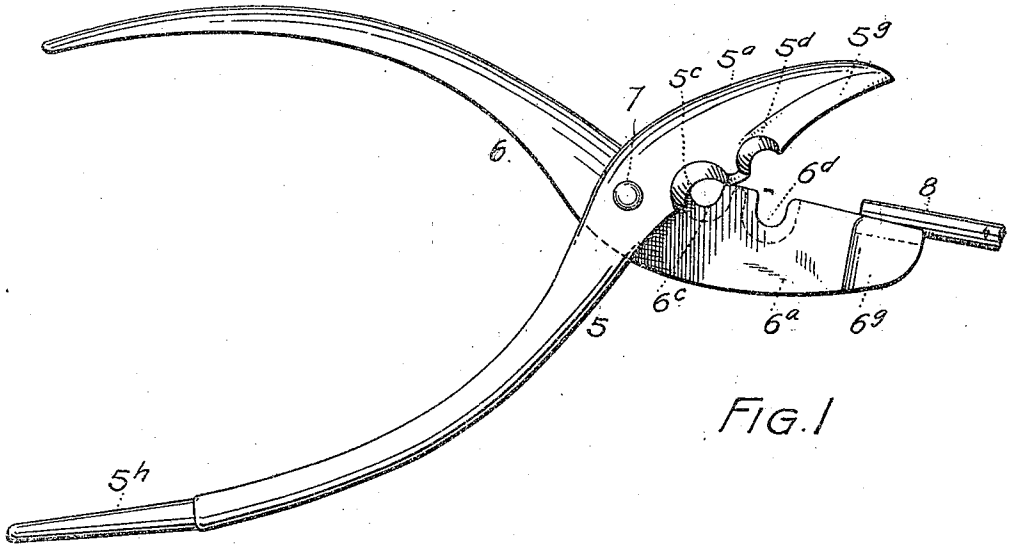


FIG. 1

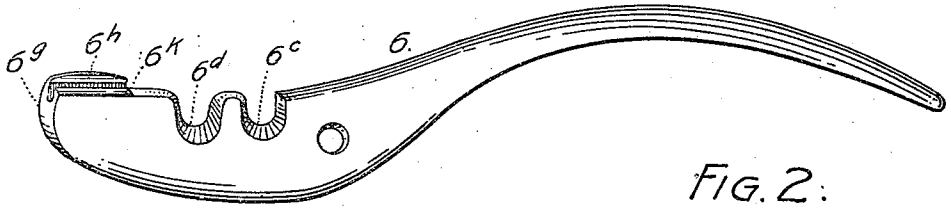


FIG. 2.

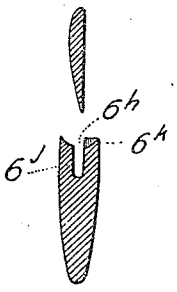


FIG. 3

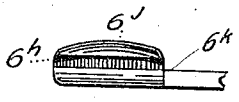


FIG. 4.

WITNESSES:

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MINER'S COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 675,058, dated May 28, 1901.

Application filed March 3, 1900. Renewed October 2, 1900. Serial No. 31,764. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH JAMES ELLIOT, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Miners' Combination-Tools; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in miners' combination-tools, my object being to embody in one instrument all the features necessary in the preparation of the powder, fuse, and cap comprising a dynamite charge, load, or shot for use in blasting rock.

My improved instrument is adapted to cut the fuse, crimp the cap thereon, split the fuse, cut the dynamite stick, and ream out the stick to receive the cap extremity of the fuse.

My improved device will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation of my improved device. Fig. 2 is a perspective view of one of the members. Fig. 3 is a section taken through the fuse-splitting extremity of the device with the jaws open. Fig. 4 is a fragmentary top view of the lower jaw of the instrument.

Similar reference characters indicating corresponding parts in the views, let the numerals 5 and 6 designate the two members of the device, which are pivotally connected by a rivet. The two members are provided with jaws 5^a and 6^a, respectively. The jaw 5^a will for convenience be termed the "upper" jaw of the device, and the jaw 6^a the "lower" jaw. These two jaws are provided with coöperating fuse-cutting recesses 5^c and 6^c, respectively, located as nearly as practicable to the rivet 7 to insure the complete severing of the fuse by the coöperating recesses, which are beveled and formed sufficiently sharp for the purpose. About midway of the jaws are located the coöperating cap-crimping recesses 5^d and 6^d, respectively. It is not necessary that the bottoms of these recesses should pass each other in the performance of their function; hence their location more remote from the pivot 7.

The outer extremity of the jaw 6^a is reinforced on one side, as shown at 6^g, and provided with a groove 6^h, adapted to receive the extremity of the fuse 8. (See Fig. 1.) Below the groove 6^h is a narrow slot 6^j, adapted to receive the edge of the coöperating outer portion 5^g of the jaw 5 after it has passed through or split the extremity of the fuse 8. This slot 6^j is open at the rear of the reinforced side 6^g of the jaw to allow the blade or sharpened part 5^g to enter in the performance of its function. On the opposite side of the jaw the groove 6^h is provided with a shoulder 6^k, which forms a stop, against which the end of the fuse strikes when placed in position to be split. This shoulder forms a sort of gage to prevent the fuse from passing rearwardly too far when it is placed in position for splitting. The knife part 5^g is also employed in cutting the sticks of giant-powder into proper lengths for tamping purposes and also to split the wrapper of the stick to facilitate tamping.

The extremity 5^h of the member 5 remote from the jaw is rounded and pointed to ream out or form a hole in the stick of powder for the insertion of the cap extremity of the fuse.

In the use of the device the fuse is first cut to the proper length by the use of the coöperating recesses 5^c and 6^c. One end of it is then inserted in the cap, which is crimped thereon by the use of the recesses 5^d and 6^d, the jaws being closed sufficiently for the purpose. A stick of powder is then bored or reamed out by the pointed part 5^h of the tool, after which the cap extremity of the fuse is inserted therein. The powder is then cut to the proper length and the wrapper split by the use of the knife part 5^g. After the powder is tamped into the hole the protruding extremity of the fuse is split by placing it in the groove 6^h and closing the jaws. The spitting or priming powder is then placed in the split extremity and the fuse is ready for lighting.

Having thus described my invention, what I claim is—

1. A tool comprising two crossed members

pivotally connected and provided with coöperating jaws located forward of the pivot, one of the jaws being reinforced at its forward extremity and grooved in the plane of the coöperating jaw to receive the fuse extremity, the opposite jaw being sharpened at its forward end to perform the fuse-splitting function.

2. A tool comprising two crossed members, pivotally connected and provided with coöperating jaws, one of the jaws being reinforced or thickened at its forward extremity and grooved to receive the fuse extremity, a stop-shoulder being formed at the rear extremity of the groove to gage the length of the split end of the fuse, the groove being formed in the plane of the opposite jaw and terminating in a slot at the bottom, the opposite jaw being sharpened at its forward extremity to split the fuse placed in the groove of the coöperating jaw.

3. A miner's combination-tool comprising two crossed members pivotally connected and provided with coöperating jaws, the said jaws being provided with fuse-cutting and cap-crimping recesses, one of the jaws being thickened at its forward extremity and grooved in the plane of the opposite jaw whose coöperating forward extremity is sharpened to split the fuse placed in the groove.

4. A miner's combination-tool comprising two crossed members pivotally connected and provided with coöperating jaws, the said jaws being formed with fuse-cutting recesses, located forward of the pivot, cap-crimping recesses located about the middle of the jaws, the forward extremity of one of the jaws being provided with a fuse-groove formed in the path of the opposite jaw which is sharpened from the crimping-recess to its forward extremity.

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

JOSEPH JAMES ELLIOT.

Witnesses:
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