

No. 610,305.

Patented Sept. 6, 1898.

J. MINO & W. DAY.
BLASTING IMPLEMENT.

(Application filed July 19, 1897.)

(No Model.)

Fig. I.

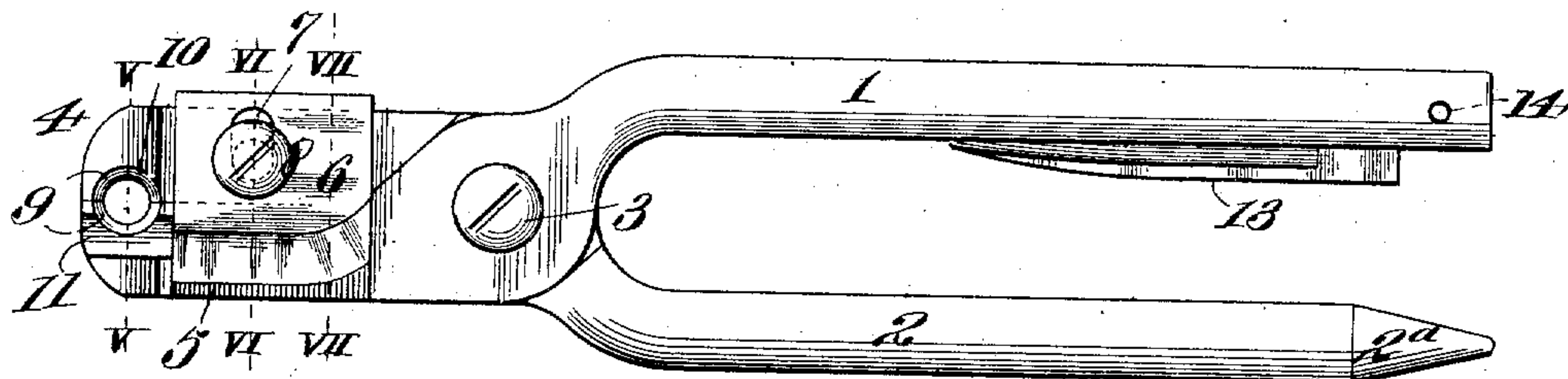


Fig. II.

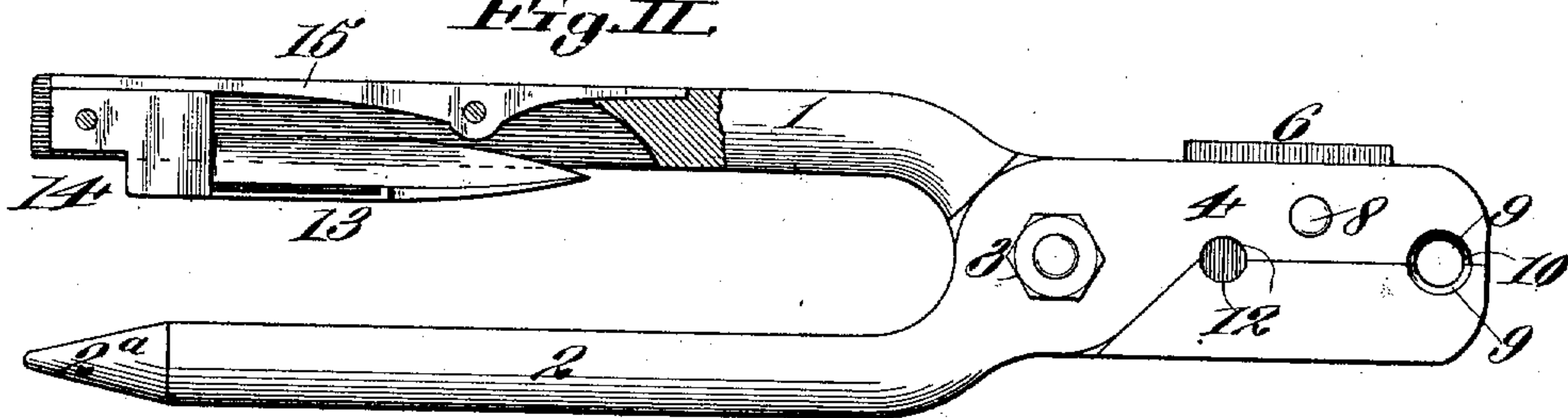


Fig. III.

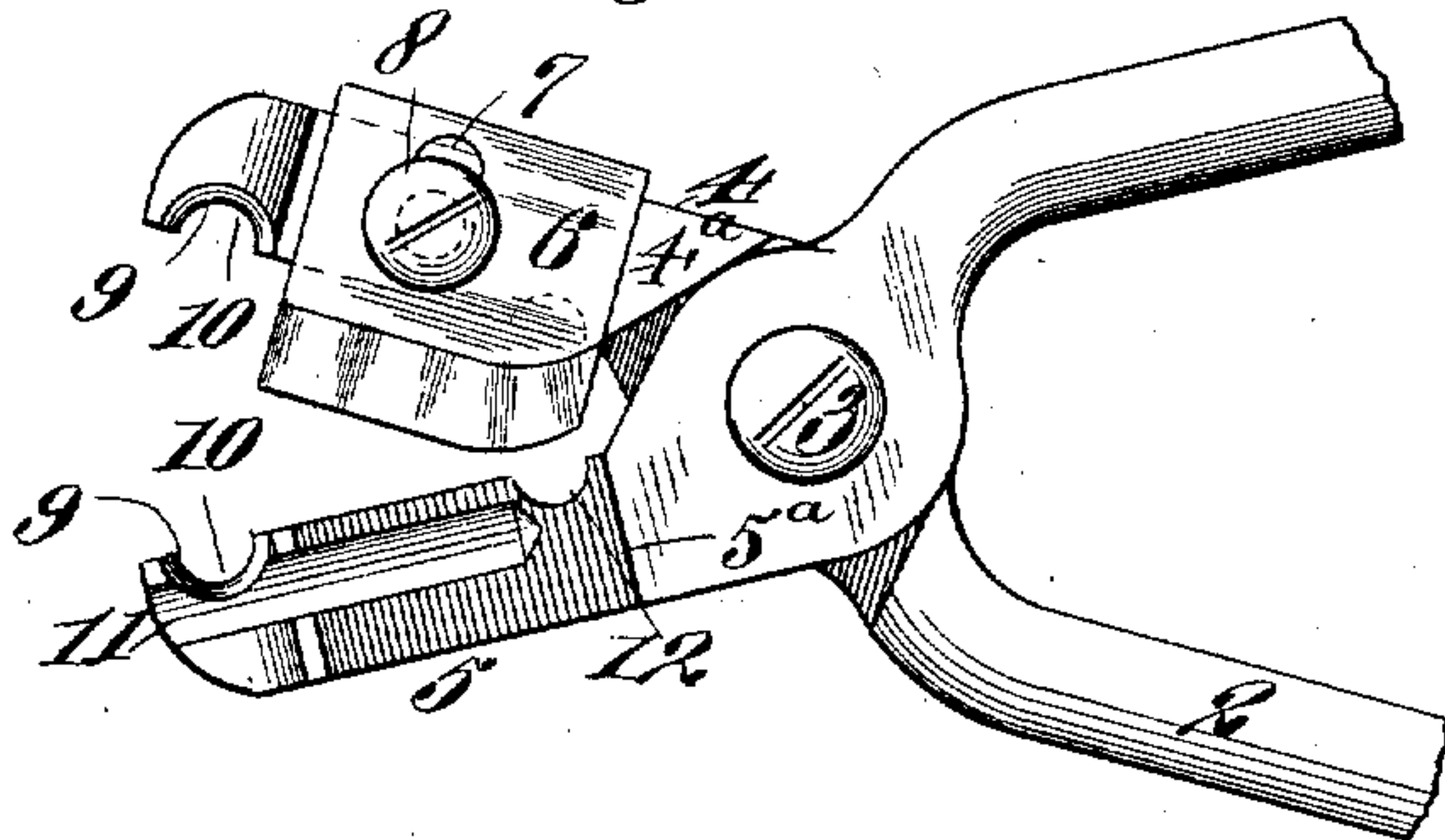


Fig. IV.



Fig. V.

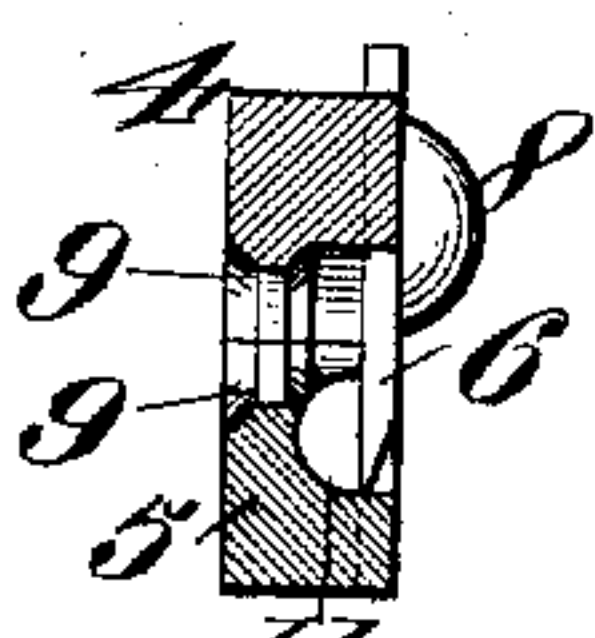


Fig. VI.

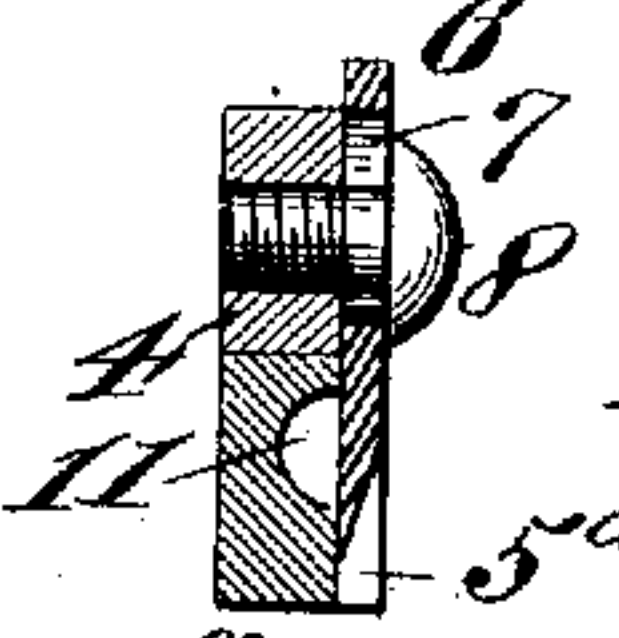
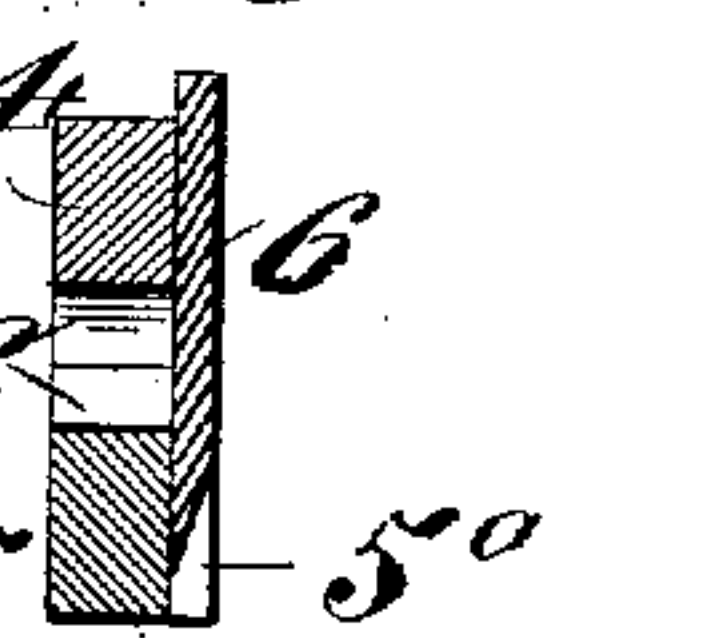


Fig. VII.



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JOSEPH MINO AND WILLIAM DAY, OF DENVER, COLORADO.

BLASTING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 610,305, dated September 6, 1898.

Application filed July 19, 1897. Serial No. 645,186. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH MINO and WILLIAM DAY, citizens of the United States, and residents of the city of Denver, Arapahoe county, in the State of Colorado, have invented a certain new and useful Improvement in Combination-Tools for Preparing Cartridge-Fuses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to a combination-tool for employment in crimping caps upon blasting-cartridge fuses and slitting and cutting the fuses, and also embraces a folding knife in one of the handles of the tool and a tapering point formed upon the other handle, through means of which point a hole may be made in the cartridge for the insertion of the fuse-carried cap.

The fuses which our improved tool is designed to prepare are such as are used to convey fire to an explosive cap carried by them, and through means of which cap a blasting-cartridge, such as dynamite, is caused to explode on the concussion resulting from the explosion of the fuse-carried cap. In preparing for a blast by means of cartridges such as herein referred to a piece of fuse sufficient in length to meet the requirements of the special case is employed. To this fuse a cap containing a powerful explosive, such as fulminate of mercury, is attached by crimping the open end of the cap to the fuse. The end of the fuse bearing the cap is then inserted into the cartridge and the cartridge is inserted into the hole made for its reception in the substance to be blasted.

Our invention consists of features of novelty hereinafter fully described and claimed.

Referring to the drawings, Figure I is a side view of our improved tool. Fig. II is a view showing the reverse side of the tool from that shown in Fig. I, a portion of one of the handles of the tool being shown in longitudinal section. Fig. III is a side view of the tool, showing the jaws open. Fig. IV is an edge view looking at the outer surface of the knife-carrying jaw. Fig. V illustrates a section taken on line V V, Fig. I. Fig. VI illustrates a section taken on line VI VI, Fig. I. Fig. VII

illustrates a section taken on line VII VII, Fig. I.

In the drawings, 1 and 2 designate the handles of the tool, hinged together by a screw or bolt 3.

4 designates an upper short jaw carried by the handle 2, and 5 a lower short jaw carried by the handle 1.

6 designates a single longitudinal knife-blade provided with an elongated transverse opening 7 and secured adjustably to the jaw 4 in a recess 4^a by a screw 8, inserted through said opening. The elongated opening 7 allows for the adjustment of the knife inwardly or outwardly in the transverse recess 4^a, and such construction is of material advantage where the knife has become dulled from use and is ground down, thereby shortening it. The knife-blade 6 overlaps the lower jaw 5 and plays in the recess 5^a thereof.

Each of the jaws 4 and 5 is provided at its extreme end with a semicircular recess 9, that when the jaws are brought together forms a circular opening, as shown in Figs. I and II. In each recess 9 is a semicircular rib 10, formed by concaving or beveling the material of the jaws surrounding the recesses.

11 designates a longitudinal groove in the jaw 5, said groove being semicircular in cross-section and extending inwardly from the end of the jaw. This groove is designed to receive the uncapped end of the fuse for the purpose of slitting it through means of the knife.

The jaws 4 and 5 are provided with semicircular cavities 12 at their inner ends, that are adapted to receive the fuse while cutting it transversely, the fuse being cut by means of the knife-blade 6, which is common to both the longitudinal groove 11 and the recess 12 in the lower jaw. The handle 2 is provided with a tapering end 2^a, designed to be employed in effecting a hole in the blasting-cartridge for the insertion of the fuse-carried cap.

In the handle 1 is a folding or jack knife 13, said knife being pivoted in the handle at 14 and being controlled by a spring 15.

In preparing a fuse with our improved tool the cap is first placed upon the end of the fuse and is crimped in position thereon by

opening the jaws of the tool and inserting the inner end of the cap in the recesses 9, and then by pressing the jaws together the cap is crimped to the fuse by the ribs 10.
5 The fuse is then cut to the proper length by inserting it between the cavities 12 of the jaws 4 and 5 and pressing the jaws together. The uncapped end of the fuse is then laid in the groove 11 while the jaws are open, and
10 the jaws being pressed together the knife 6 passes through the fuse, slitting it longitudinally. After the fuse has been prepared as stated a hole is made in one end of the blasting-cartridge by means of the tapering point
15 2^a of the handle 2 and the cap secured to the fuse is inserted in the cartridge.

We claim as our invention—

A combination-tool for preparing cartridge-fuses constructed with a handle 1 provided
20 with a short lower jaw 5 formed with a longitudinal recess 5^a, with a longitudinal slitting-

groove 11 semicircular in cross-section, with a transverse semicircular cutting-cavity 12 at the inner portion of the lower jaw and with a semicircular ribbed crimping-recess 9, 10, 25 at the outer end of the lower jaw, the handle 2 provided with a short upper jaw 4 formed with a longitudinal knife-recess 4^a, with a transverse semicircular cutting-cavity 12 at the inner portion of the upper jaw, and with 30 a semicircular ribbed crimping-recess 9, 10, at the outer end of the upper jaw, a single short knife-blade having a slot and located in the knife-recess and registering with both the semicircular cutting-cavities and with the 35 longitudinal recess of the lower jaw; substantially as described.

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In presence of—

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