Aug. 10, 1926. 1,595,706

G. F. CARLSON

DYNAMITE TOOL

Filed August 19, 1925

Fig. 1.

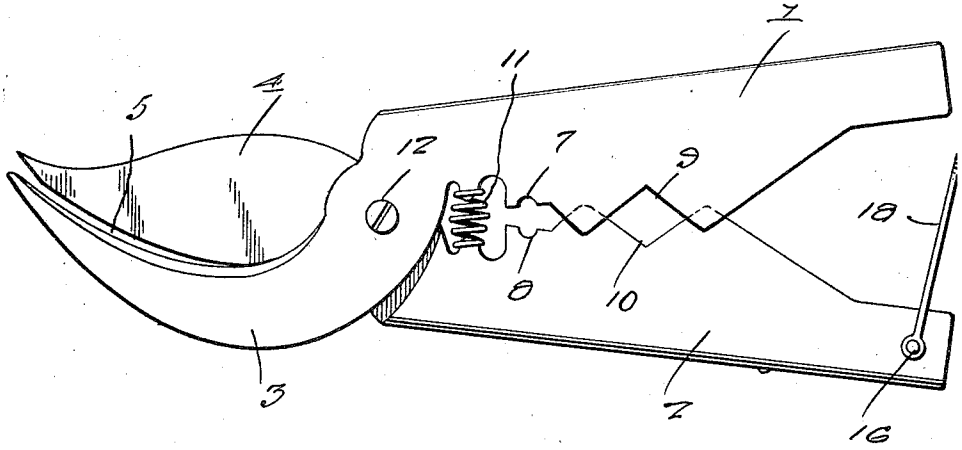


Fig. 2.

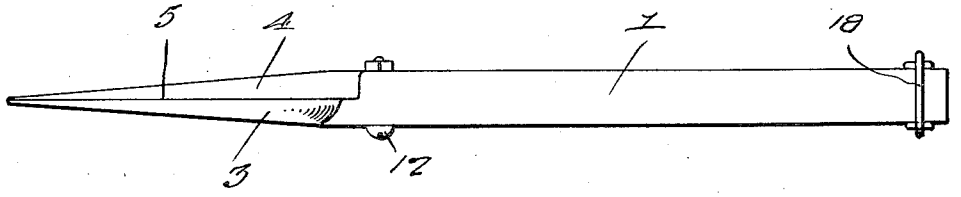
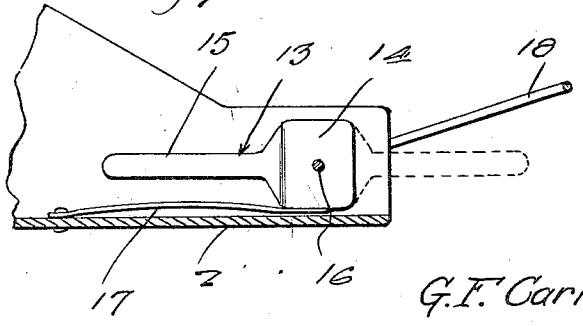


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DYNAMITE TOOL.

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This invention relates to improvements in combination tools and is more particularly adapted to an improved tool for use in preparing a cartridge for blasting purposes.

One of the important objects of the present invention is to provide a tool of the above mentioned character, which is of such construction as to obviate the necessity of a person having to employ separate tools for performing the various operations necessary in the preparation of a cartridge for use in blasting.

A further object is to provide a tool of the above mentioned character wherein the same is of such construction as to enable a person to save considerable time and labor in preparing cartridges, the tool being further simple in construction, inexpensive, strong and durable and further well adapted to the purpose for which it is designed.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification, and in which like numerals designate like parts throughout the same:

Figure 1 is a side elevation of the tool embodying my invention.

Figure 2 is a top plan view thereof, and

Figure 3 is an enlarged detail sectional view through one of the handles showing the plunger element associated therewith.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numerals 1 and 2 designates a pair of pivoted cross levers or handles, the forward ends thereof cooperating to provide a pair of coacting jaws 3 and 4 respectively, the rear ends of the levers forming handles. Each of the levers is formed of channeled material. The adjacent edges of the coacting jaws 3 and 4 are curved and sharpened as illustrated at 5 to provide a cutter, the use of which will hereinafter be more fully described.

The inner opposed edges of the levers 1 and 2 are provided with the cooperating notches 7 and 8 respectively which form a means for holding the dynamite cap, and crimping the same, while a string is tied around the paper and fuse so that the load will remain intact. Relatively larger cut out portions 9 and 10 are formed in the inner opposed edges of the levers 1 and 2 respectively at a point rearwardly of the coacting notches 7 and 8, and these cooperating cut out portions 9 and 10 provide a means for crimping the unfolded paper on end of the cartridge while cord is tied to hold cap and fuse to the stick for sinking loads. The levers 1 and 2 are normally held apart through the medium of the spring 11, the same being interposed between the levers 1 and 2 at a point adjacent the pivotal connection 12 provided for the levers.

A plunger designated generally by the numeral 13 is carried by one of the levers, the same comprising an enlarged head 14, and the elongated rod portion 15. The plunger is formed preferably of hard wood. A pivot pin 16 extends transversely through the sides of the channeled lever 2 at a point adjacent the free end thereof and this pin also extends centrally through the enlarged head 14 or the plunger so that the latter is adapted for pivotal swinging movement with respect to the lever 2.

A flat spring 17 is secured at its forward end in the bottom of the lever 2, and the free end thereof engages the bottom of the enlarged head 14 of the plunger for the purposes of normally holding the plunger in an inoperative position. The use of the plunger will hereinafter be more fully described.

For the purposes of holding the levers 1 and 2 in a closed position against the tension of the spring 11, I provide a substantially U-shaped wire clamping member 18, the free ends of the arm thereof being secured on the respective ends of the pivot pin 16 on the outer sides of the channeled lever 2. The crown portion of the clamping member 18 is adapted to fit over the upper edge of the adjacent portion of the lever 1. The clamping member is associated with the lever 2 in such a manner as to enable the same to be readily engaged or disengaged with respect to the lever 1.

The use of my improved combination tool in preparing a cartridge for blasting purposes may be briefly stated as follows: The wrapper is adapted to be slit or cut by using the cutting edge of the jaw 4. A stick of dynamite may be cut up into small pieces for convenience in loading when more than one stick is used for a pack load by the use of the coacting cutting edges 5 of the jaws 3 and 4. In order that a cap may be inserted, the stick of dynamite must be provided with a hole, and this hole is formed by the use of my improved plunger. The plunger 13 is

moved to an operative position by swinging the same outwardly from the open free end of the lever 2 on the pivot 16 so that the rod 15 projects beyond the end of the lever in the manner shown in the dotted lines in Figure 3 of the drawing. The free end of the rod 15 is adapted to be driven into the unfolded end of the stick of dynamite so that a hole will be formed therein of any desirable length. The cap which is adapted to be inserted in the opening formed in the stick of dynamite is crimped to the fuse by the use of the coacting notches 7 and 8. After the cap has been firmly attached to the end of the fuse, it is inserted into the hole formed in the stick of cartridge.

The cooperating cut out portions 9 and 10 grasp the cartridge and the latter is held in such a manner as to permit a cord or the like to be tied around the unfolded paper on the end of the cartridge and the fuse so that the load will remain intact. The opposite end of the fuse may be split by the use of the coacting cutting edges of the jaws, and when this is completed, the cartridge is prepared for blasting.

It will thus be seen from the foregoing description, that a combination tool has been provided wherein all of the necessary operation in preparing a cartridge may be performed with a single tool, thus saving considerable expense as well as time. Furthermore, a tool of the above mentioned character will at all times be positive and efficient in carrying out the purposes for which it is designed.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention and the scope of the appended claim.

Having thus described the invention, what I claim is:—

In a tool of the class described comprising a channeled lever, an implement for forming a hole in a stick of dynamite comprising a plunger rod, having an enlarged head formed on one end thereof, a pivot pin extending transversely through the sides of the channeled lever at a point adjacent the end thereof and through said head for pivotally supporting the implement in said channeled lever, the plunger rod being normally disposed within the channeled lever when in an inoperative position, said plunger rod adapted to swing outwardly so as to project beyond the end of the channeled lever when in use, and a flat spring secured at its forward end in the bottom of the channeled lever, the rear free end thereof being disposed in contacting relation with the bottom of the head for holding the same against swinging movement, said channeled lever forming a handle when the plunger rod is in an extended operative position, the plunger rod and the enlarged head formed thereon being entirely concealed within the channeled lever when in an inoperative position.

In testimony whereof I affix my signature.

GEORGE F. CARLSON.