S. H. LUNSFORD.

MINER'S COMBINED FUSE CLIPPER AND SPLITTER.

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975,968. Patented Nov. 15, 1910.

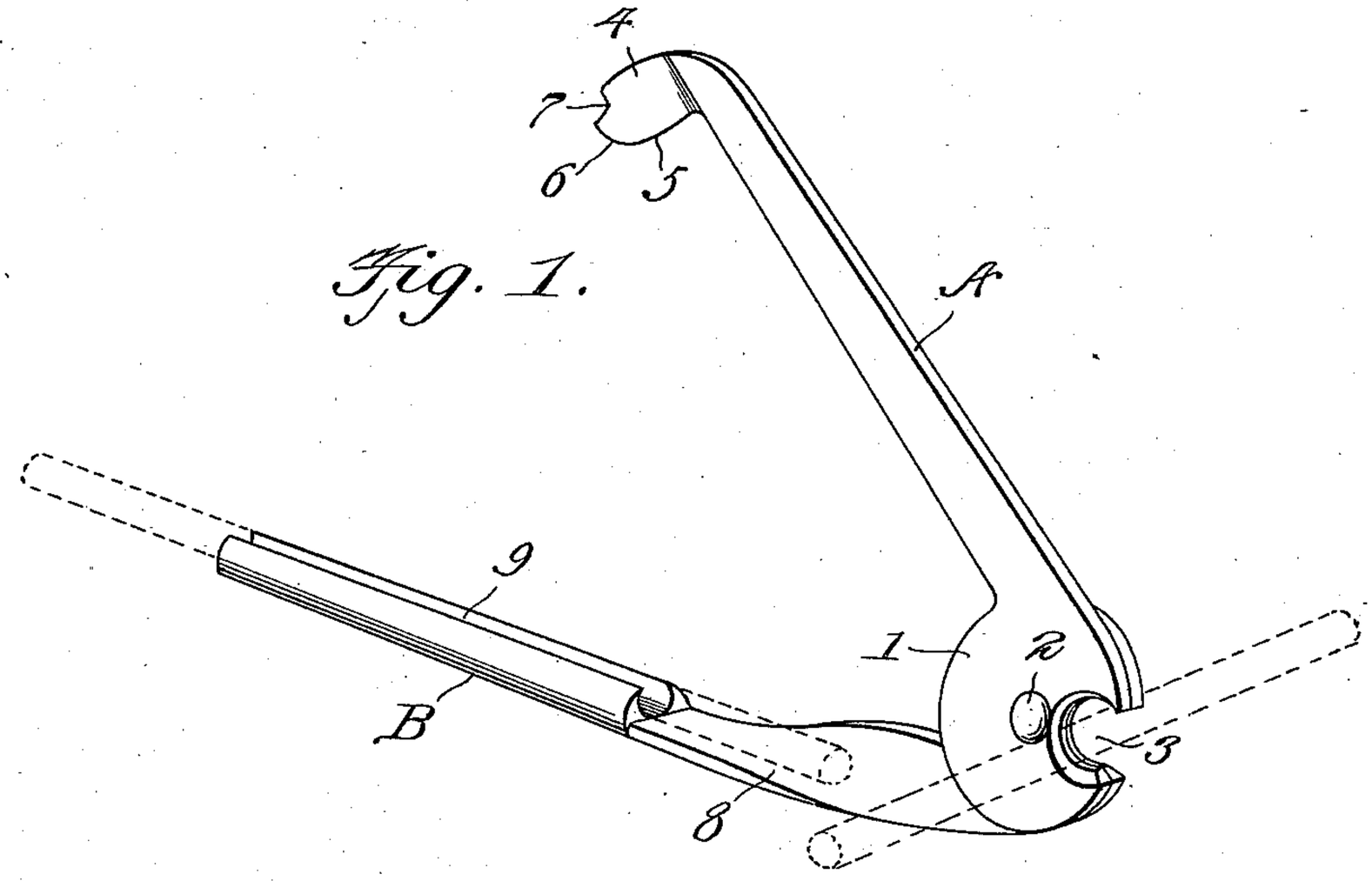

Fig. 1.

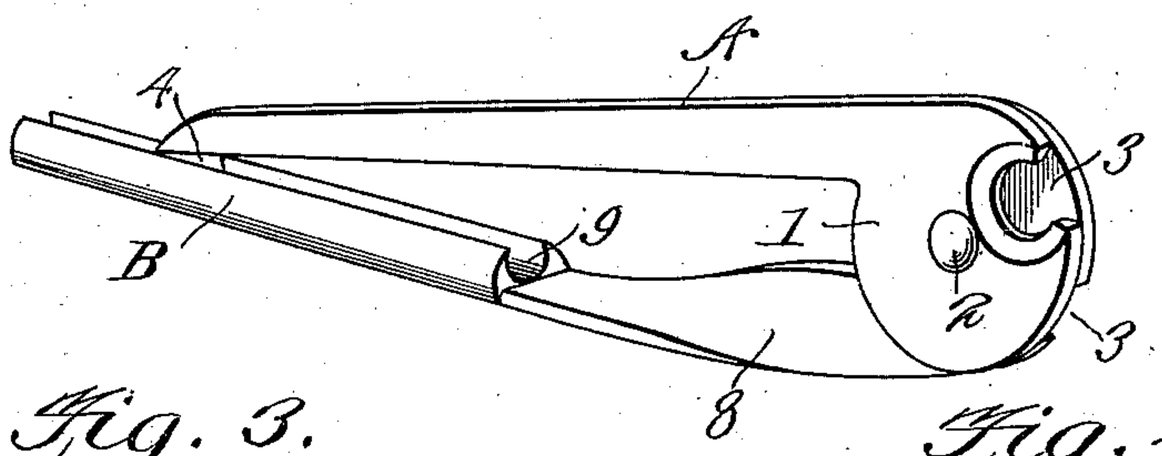

Fig. 2.

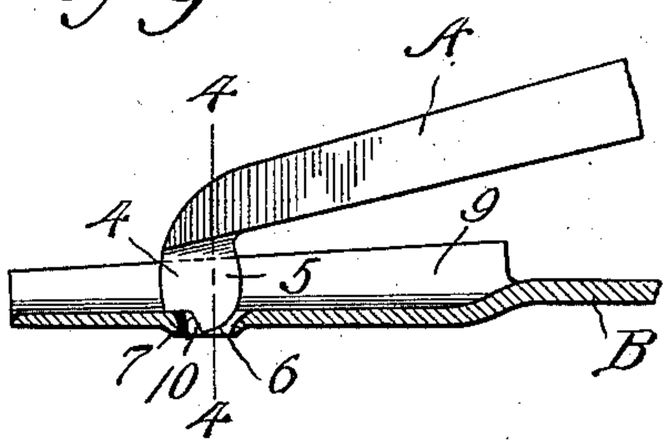

Fig. 3.

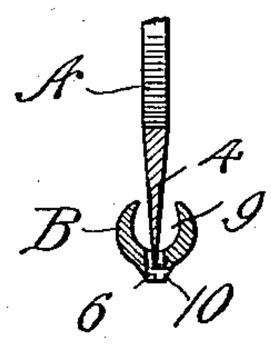

Fig. 4.

Witnesses

Frank B. Hoffman.

C. Bradway.

Inventor.

Samuel H. Lunsford

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

SAMUEL H. LUNSFORD, OF LINTON, INDIANA.

MINER'S COMBINED FUSE CLIPPER AND SPLITTER.

975,968. Specification of Letters Patent. **Patented Nov. 15, 1910.**

Application filed February 1, 1910. Serial No. 541,303.

To all whom it may concern:

Be it known that I, SAMUEL H. LUNSFORD, a citizen of the United States, residing at Linton, in the county of Greene and State of Indiana, have invented new and useful Improvements in Miners' Combined Fuse Clippers and Splitters, of which the following is a specification.

This invention relates to a combination tool designed more especially for use by miners or blasters for cutting the fuses into the desired lengths and splitting the ends thereof to facilitate the ignition of the outer ends of the fuse and the lighting of the explosive with the inner end of the fuse.

The invention has for one of its objects to improve and simplify the construction and operation of tools of this character so as to be comparatively simple and inexpensive to manufacture, of durable and substantial design, reliable and efficient in use and readily manipulated.

Another object of the invention is the provision of a tool consisting of two hingedly connected elements which have clipper jaws or cutters adjacent their hinged ends and on one of which is formed an open side fuse receiving socket or seat and on the other is a splitter blade that is caused to pierce the fuse by bringing the elements together, so that while the tool is held in position by one hand the fuse can be drawn longitudinally out of the tool by the other hand to split the fuse.

With these objects in view, and others as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claim appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention; Figure 1 is a perspective view of the tool showing the same open. Fig. 2 is a perspective view showing the tool closed. Fig. 3 is a longitudinal section of the splitter members of the tool. Fig. 4 is a transverse section on line 4—4 of Fig. 3.

Similar reference characters are employed to designate corresponding parts throughout the several views.

Referring to the drawing A and B designate the two members or elements of which the tool is composed, and these may be sheet metal stamping, drop forgings or castings and they are of such size that the complete tool will be about four inches in length so that miners or blasters can conveniently carry the tool in the pocket. Both elements are formed with circular disk-shaped heads 1, each at one extremity of its elements and the heads are connected together by a pivot 2 passing centrally through the heads so that the elements are hingedly connected. In the periphery of each head is a circular recess 3, the edges of which form fuse clipping means. When the recesses of both heads register, a fuse can be inserted, as shown by dotted lines in Fig. 1, and by moving the free ends of the elements toward each other, the fuse will be severed transversely.

On the free end of the member of element A is a splitting blade 4 that has a cutting edge 5 disposed at right-angles to the length of the element and is located at the inner portion of the blade. The splitter blade is formed integral with the element A and is in the shape of a depending extension which is finished into a knife edge at its bottom 6, which is continuous with the knife edge 5. The outer edge of the blade is recessed at 7 to form a shoulder, which engages with the other member or element B, during the insertion of the blade into the fuse for limiting the extent of the insertion and preventing the cutting edges of the blade from coming into contact with the element B. The element B is made of a flat strip and the intermediate portion thereof is given a quarter twist at 8, and the longitudinal edges of metal strips are bent upwardly at the extremity of the element B to form a longitudinally extending tubular seat or socket for receiving the end of the fuse to be split, the said socket being open at the top throughout its length to permit the fuse to be seated more easily in the socket. The bottom of the socket 9 has an opening 10 large enough to accommodate the bottom extremity of the blade 4, and the shoulder formed by the recess 7 strikes the bottom of the socket or the fuse seat to prevent the blade from entering the opening 10 so far that the cutting edge of the blade will contact with the metal and become dull.

After the fuse is severed to the desired

length, the end to be split is placed in the seat 9 while the element A is raised, the inserted end of the fuse being shown by dotted lines. The element A is depressed by the thumb of the hand which is holding the tool, so that the blade 4 will pierce the fuse. While the elements A and B of the tool are held in closed position, as shown in Fig. 3, between the thumb and the fingers of the closed hand, the fuse is drawn outwardly longitudinally so that the end will be split. After this is done the tool is opened and the opposite end of the fuse inserted to be severed in like manner.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the invention.

What I claim as new and desire to secure by Letters-Patent is:

A tool comprising two members, one member consisting of a single piece of metal formed at one end with a disk and having its shank extending tangentially therefrom and terminating in a blade extending at an angle to the length of the shank, one corner of the blade being recessed to form a stop; the other member consisting of a single piece of metal formed at one end with a disk and having a shank extending therefrom, the end of the shank being formed into a longitudinally-extending cylindrical seat open at one side, said seat having an opening into which the blade enters to a depth limited by the stop of the blade engaging the seat, the shank between the disk and seat being twisted; and a rivet passing through the disks for pivotally connecting the members together.

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

SAMUEL H. LUNSFORD.

Witnesses:
BRUCE FLEETWOOD,
M. N. THAYER.