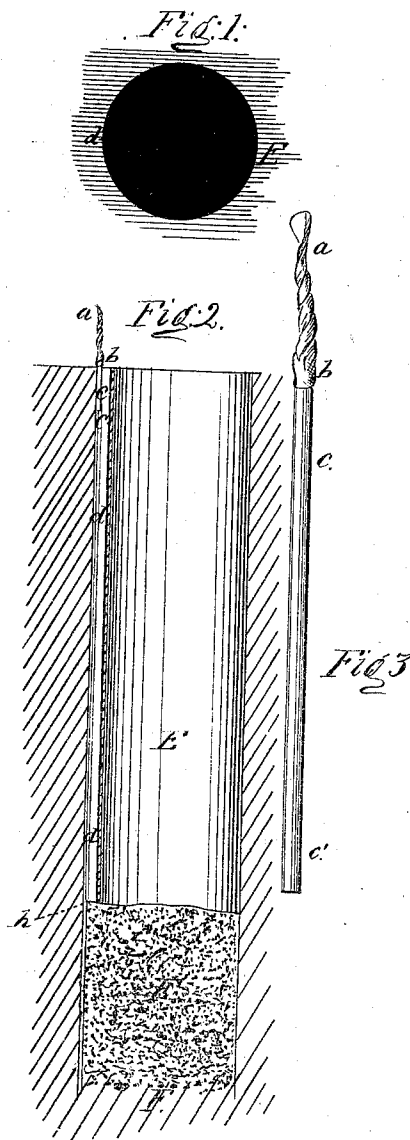


S. H. DADDOW.
Squibs for Blasting.

No. 143,396.

Patented September 30, 1873.



Witnesses:
William V. Farnley
Mellard F. Feise

Inventor:
Samuel Harris Daddow.

UNITED STATES PATENT OFFICE.

SAMUEL HARRIES DADDOW, OF ST. CLAIR, PENNSYLVANIA.

IMPROVEMENT IN SQUIBS FOR BLASTING.

Specification forming part of Letters Patent No. **143,396**, dated September 30, 1873; application filed October 20, 1871.

To all whom it may concern:

Be it known that I, SAML. H. DADDOW, of St. Clair, Schuylkill county, Pennsylvania, have invented a certain new and useful Improvement in Miners' Squibs, of which the following is a specification:

This invention relates to a new and useful improvement in squibs for the use of miners in the process of blasting coal, rock, &c.; and it consists in the construction and arrangement of the parts hereinafter described.

Figure 1 shows the position of one of the squibs in the drill-hole. Fig. 2 is a side view of the drill-hole, showing the positions of the cartridge and squib. Fig. 3 is a side elevation of the squib complete.

a represents the match or combustible portion of the squib, which is secured to the top of the tube *c*. The squib-tube is an artificially prepared or manufactured imitation of straw, as used for blasting. The tube may be drawn from sheet brass or other ductile metal, and made very light and thin, or prepared from

paper or other suitable material. One end of the squib-tube *b* is saturated with a solution of niter, liquid sulphur, or other inflammable material, or fitted with a match. The squib is then filled with powder and sealed at the end *c'*.

The squib *a b c c'* may be used in the usual manner, or in the same manner in which the straw squib is used, and the operation of firing the charge in the cartridge is the same.

If desired the tube may be coated with a fire-proof composition of soluble glass or other suitable composition for the purpose of rendering it incombustible.

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

As a new article of manufacture, the squib with a match permanently attached thereto, substantially as shown and described.

SAML. HARRIES DADDOW.

Witnesses:

WM. V. PARMLEY,
M. F. GEISE.