

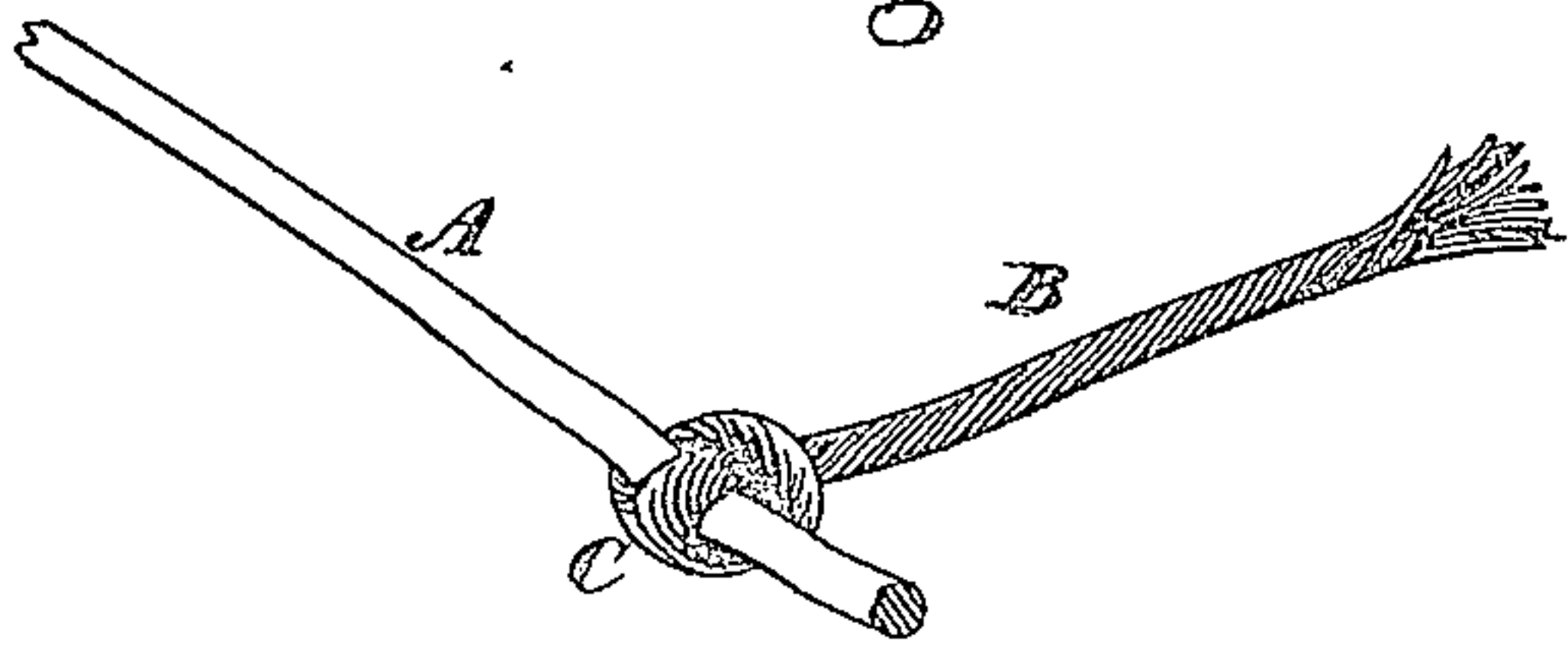
A. S. WALL.

Slow Match for Lighting Fuses.

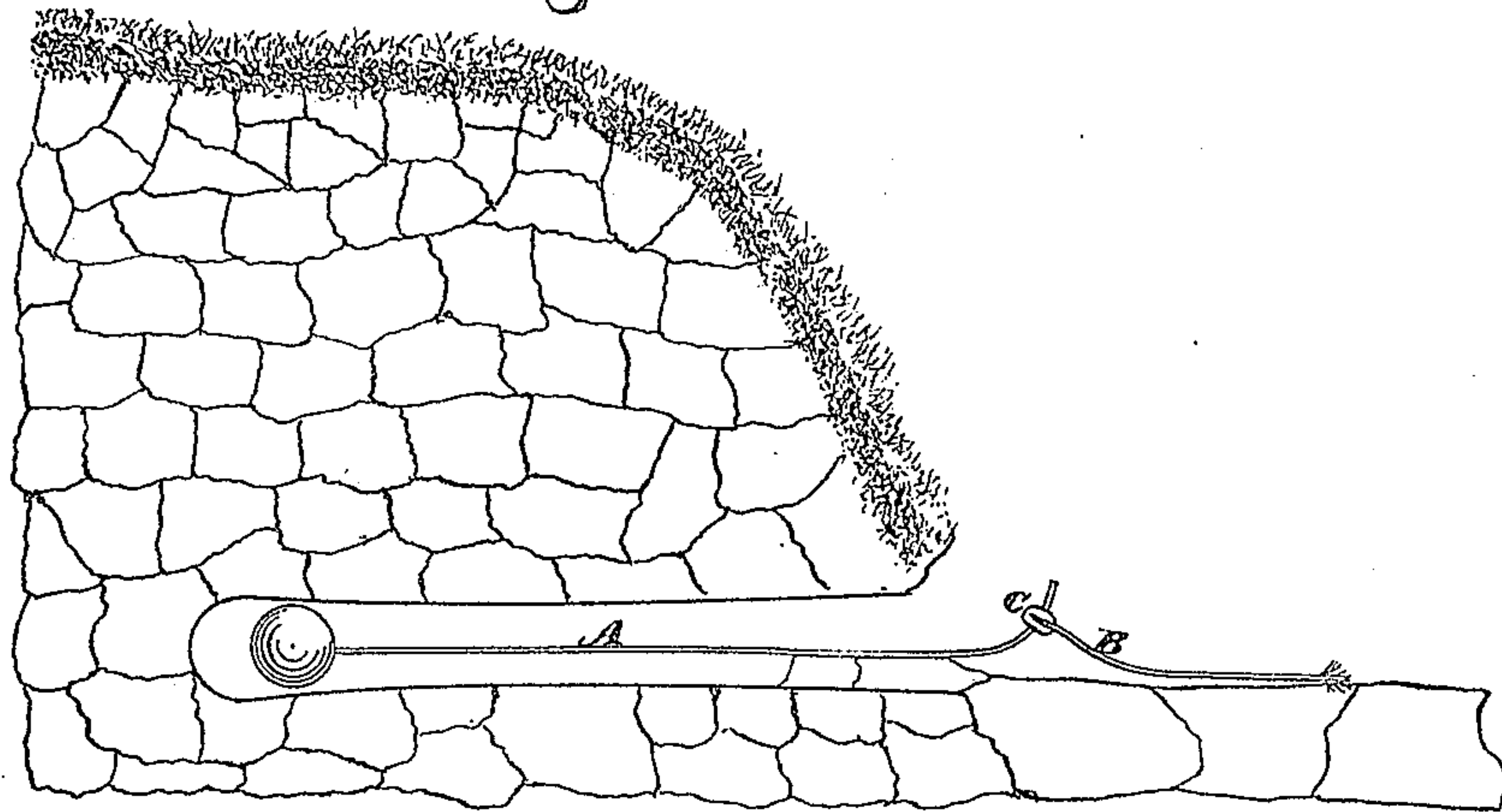
No. 163,903.

Patented June 1, 1875.

*Fig. 1.*



*Fig. 2.*



Witnesses

*Geo. H. Strong.*  
*Jno. L. Boone*

Inventor

*Adam S. Wall*  
*by Dewey & Co.*  
*Attys*

# UNITED STATES PATENT OFFICE.

ADAM S. WALL, OF GRANITEVILLE, CALIFORNIA.

## IMPROVEMENT IN SLOW-MATCHES FOR LIGHTING FUSES.

Specification forming part of Letters Patent No. **163,903**, dated June 1, 1875; application filed March 24, 1875.

*To all whom it may concern:*

Be it known that I, ADAM S. WALL, of Graniteville, Nevada county, State of California, have invented an Improved Slow-Match for Fuses; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

The object of my invention is to provide an improved slow-match for firing the fuses which are used for exploding blasts in mines and other places; and it consists of a wick which is coated with tallow or other substances, which will cause it to burn slowly. One end of this wick or match I secure around the fuse at the point it is to be fired, so that the match will stand at right angles to the fuse. When this match is lighted it will give the miners or other persons time to get away to a sufficient distance before the fuse is fired, and secure a greater certainty and facility of ignition of the fuse.

In the accompanying drawings, A represents a fuse, such as is used for exploding blasts. One end of this fuse enters the drill-hole and communicates with the powder or cartridge which is to be exploded, while the other end extends outside of the hole to the required distance.

The imperfections in the manufacture of these fuses frequently render it dangerous to fire them at once, as the fire may run the whole length of the fuse in a very short time, and thus explode the blast without giving the person who fires it sufficient time to get out of the way.

To avoid this difficulty miners usually place a lighted piece of candle in such a position

that when it burns down to a certain point it will cut and fire the fuse.

My invention consists in the employment of a wick, B, of any desired length, which is saturated with tallow, or other substance that will cause it to burn slowly. One end of this wick I tie around the fuse A, at the point at which it is to be fired, so that it will stand at right angles to the fuse, as shown at Figure 1.

I prefer to make the match by taking a piece of wick which is twice as long as it is desired to make the match, and then doubling it upon itself so as to leave a loop, C, at the doubled end.

I thus provide for the ready attachment of the match to the fuse by passing it around the fuse and drawing the length of the match through the loop, and tightening it upon the fuse.

Now, by lighting the free end of the match it will burn slowly to the fuse, giving the blasters ample time to get out of the way before it reaches and cuts the fuse.

With this match it is immaterial whether the fuse is homogeneously filled or not, and I avoid the trouble of firing it with a candle, as above described.

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

A slow-match, B, for firing blasting-fuses, adapted to have one of its ends secured around the fuse at the point where it is to be fired, substantially as and for the purpose described.

In witness whereof I hereunto set my hand and seal.

ADAM STANFIELD WALL. [L.S.]

Witnesses:

GEO. H. STRONG,  
JNO. L. BOONE.