

(No Model.)

D. B. JAMES.
BLASTING FUSE.

No. 446,919.

Patented Feb. 24, 1891.

Fig. 1.

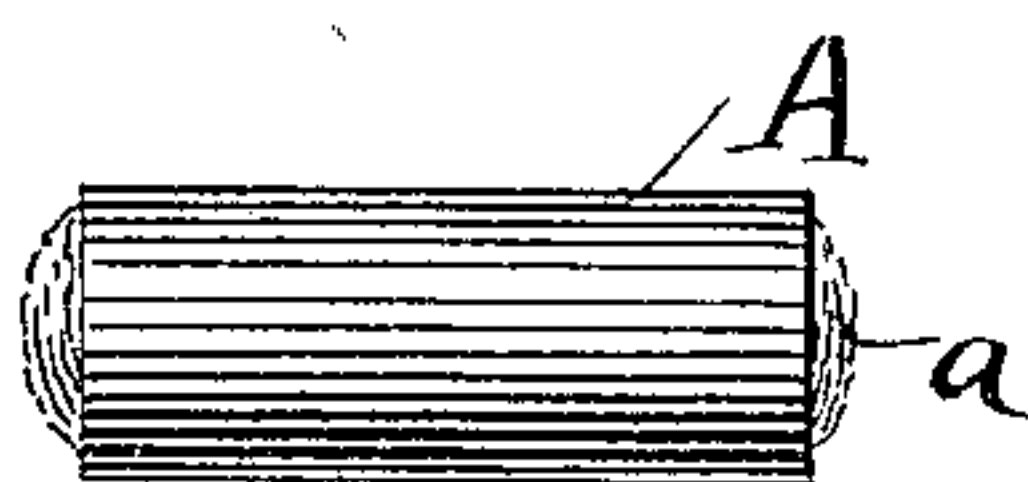


Fig. 2.

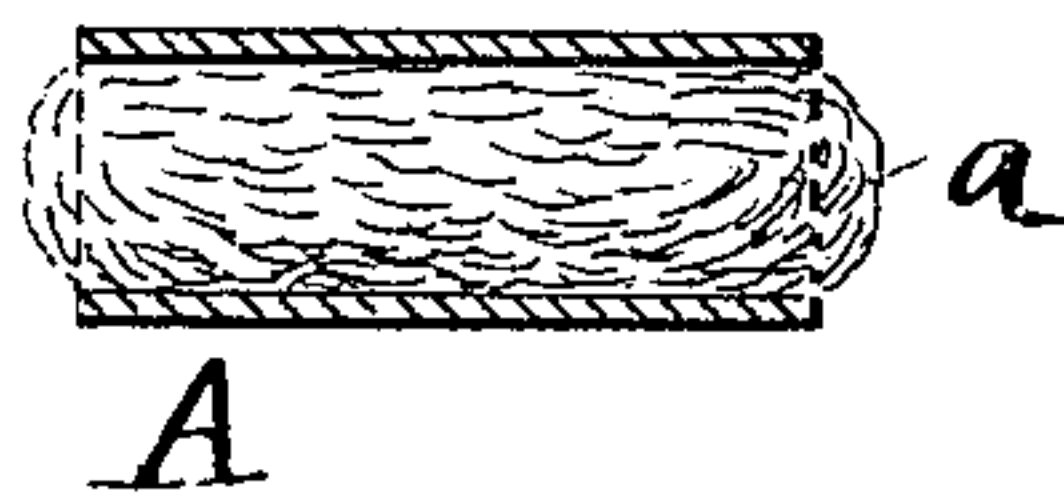
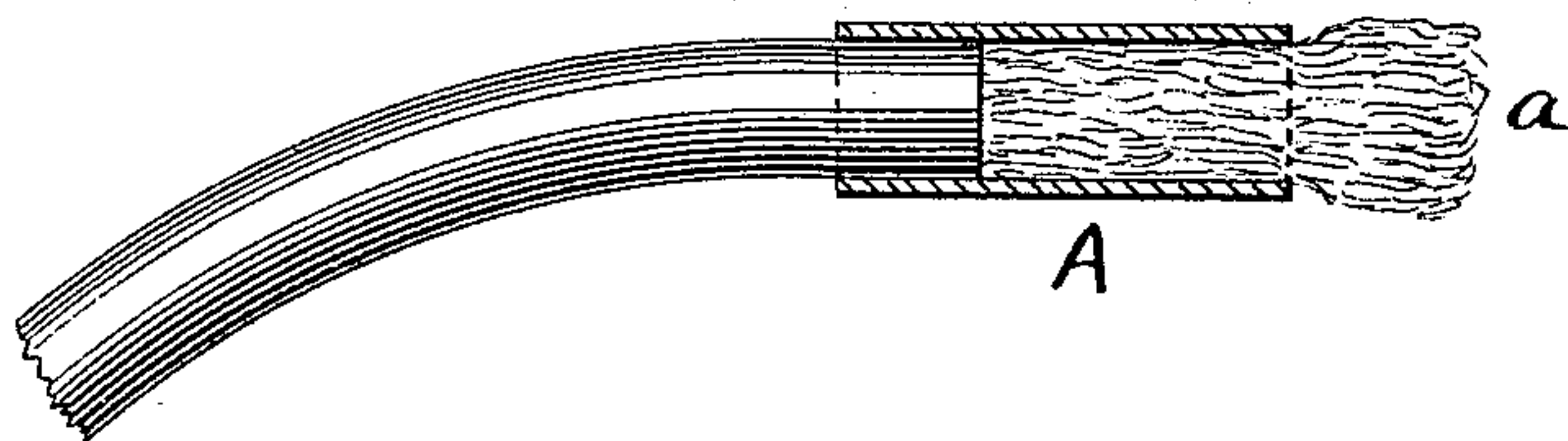


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

DAVID BICE JAMES, OF SAN FRANCISCO, CALIFORNIA.

BLASTING-FUSE.

SPECIFICATION forming part of Letters Patent No. 446,919, dated February 24, 1891.

Application filed April 19, 1890. Serial No. 348,732. (No model.)

To all whom it may concern:

Be it known that I, DAVID BICE JAMES, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Igniting Fuses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in igniting fuses for use in blasting rocks and other hard substances, the object thereof being to provide a device which will be simple and cheap in its construction and effective and unfailing in operation; and to this end my invention consists in the construction and arrangement of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side view of the cartridge shell or cap with the combustible material inclosed. Fig. 2 is a longitudinal section of the same. Fig. 3 shows the cartridge or cap with the combustible material forced out at one end by the fuse, while the other end of the cartridge is telescoped on the end of the fuse in position for igniting.

Like letters of reference designate corresponding parts in the different figures.

My invention aims to provide a safer and quicker way of igniting fuses in conducting blasting or other similar operations, and consists in a cartridge open at both ends and made of paper or any other suitable material.

In the drawings, A represents the cartridge or shell, which is filled or loaded with cotton or any other fibrous substance saturated or impregnated with a solution of saltpeter, sulphur, and charcoal to insure certain combustion in order to positively ignite the end of the fuse upon which the cap or cartridge is placed.

a designates the cotton or other material which is permeated with the solution of saltpeter, sulphur, and charcoal. The shell or tube A is made open at both ends and of such size that either opening will telescope on the end of the fuse. Of course the telescoping will push a certain amount of the combustible material out of position and force it beyond the entrance of the opposite opening, and this projecting material is used to ignite the end of the cartridge, and as the combustible material therein is consumed and the fire reaches the other end it sets off the blast or powder in the fuse B, thus accomplishing its purpose in an effective manner and without the danger usually attendant upon the blasting of rock, &c., in the ordinary and usual way.

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

1. In an igniting device for fuses, the combination, with the fuse, of an open-ended shell or cap containing combustible material, said fuse entering the cap at one end, while the combustible material partially projects at the other end, whereby the device may be ignited, substantially as described.

2. The herein-described igniting device for fuses, consisting of a hollow shell or tube containing cotton permeated with a solution of saltpeter, sulphur, and charcoal, substantially as described.

DAVID BICE JAMES.

Witnesses:

G. P. PHINNEY,
WILLIAM BUTTERFIELD.