

(No Model.)

E. J. COTTER.
SQUIB.

No. 337,307.

Patented Mar. 2, 1886.

Fig. 1.

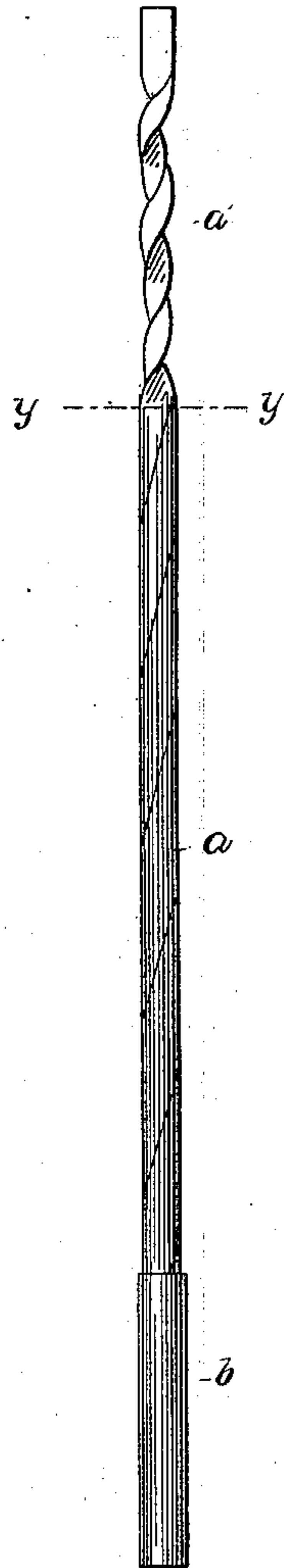


Fig. 3.

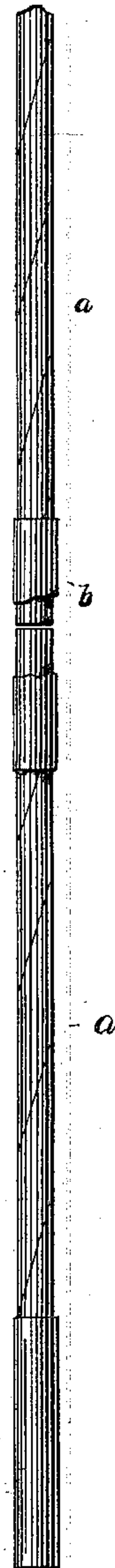
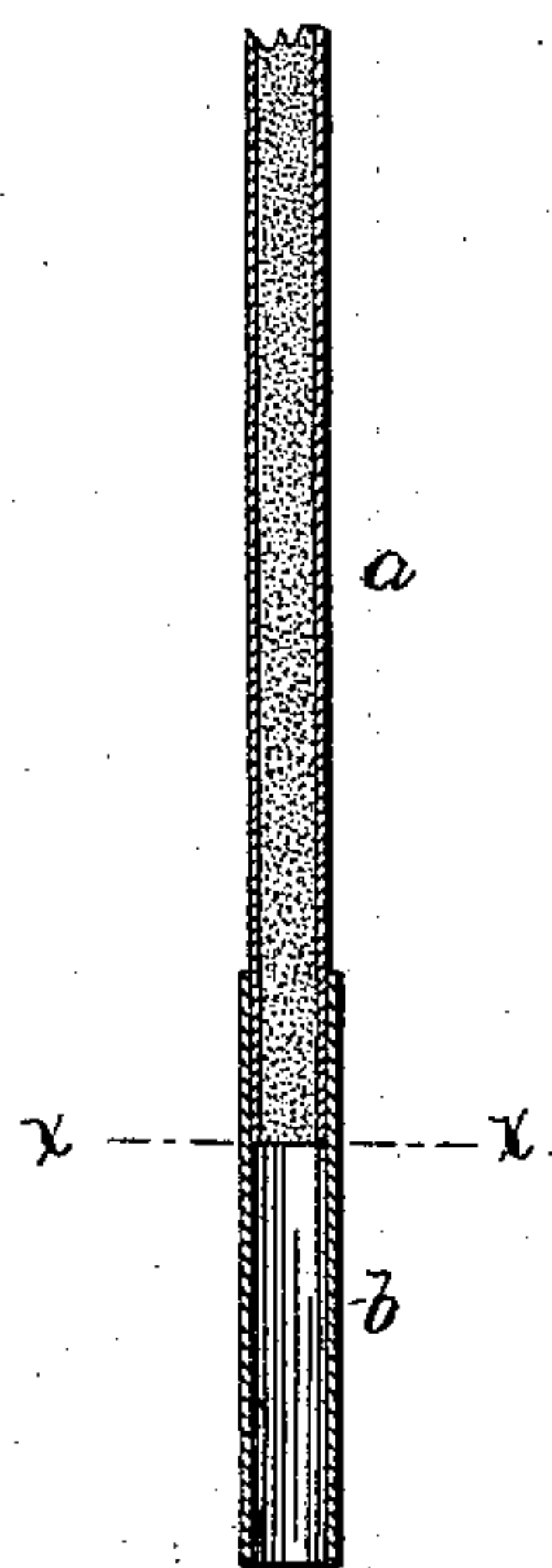


Fig. 2.



Witnesses.

M. H. Barnes.
G. P. Kramer.

Inventor.

Edward J. Cotter
By R. S. & A. Lacey Attys.

UNITED STATES PATENT OFFICE.

EDWARD J. COTTER, OF FRACKVILLE, ASSIGNOR TO JOHN J. KEATING,
MICHAEL J. WAYNE, AND JAMES COBBLEY, OF MAHANOEY PLANE, PA.

SQUIB.

SPECIFICATION forming part of Letters Patent No. 337,307, dated March 2, 1886.

Application filed April 25, 1885. Renewed January 20, 1886. Serial No. 189,182. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. COTTER, a citizen of the United States, residing at Frackville, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Squibs; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to squibs; and it consists in the improvements hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 shows a side view of a squib having my improvement attached thereto. Fig. 2 is a section of a squib, showing the improved sleeve attached thereto in section, and Fig. 3 shows two squibs united together by my improvement.

a represents a squib of ordinary make, the lower end of which is left open, the powder being compressed therein by any well-known means, so as to form a plug, which prevents the looser powder in the main body from dropping out.

On the lower end of the squib *a*, I fix a sleeve, *b*, made just large enough to fit snugly on the outside thereof, as shown. It is fixed immovably in place, and extends beyond the end of the squib, so as to provide sufficient length of tube to receive the end of an additional squib, when required. This sleeve or tube is made of paper, so that it may be easily torn off flush with the end of the squib to which it is made fast.

When it is desired to lengthen the squib by adding another squib, *a'*, the twisted end *a'* is torn off down to the powder, and this broken end is inserted in the lower end of the sleeve *b*, and pushed up till it joins with the lower end of the first squib, as shown in Fig. 3.

The sleeve *b*, when not needed for splicing, is pinched off at a point flush with the squib to which it is attached. By this means of joining a squib of any desired length may be made in a very few seconds.

I am aware that an attachment has been made by which a number of fuses are ignited at one and the same instant, said attachment consisting of a series of tubes branching from a common point, each tube in the series being designed to receive the end of a fuse, an explosive material being located at the focal point to ignite all the fuses simultaneously. Such construction I disclaim, as it is foreign to my invention and would not subserve the same purpose.

By my invention, having one end of the fuse provided with a coupling-sleeve, any length of fuse desired may be readily and quickly obtained by coupling a number of fuses together, the free end of the one being slipped into the sleeve or coupler of the other, thus avoiding the extra expense of keeping in stock fuses of different lengths, and also the loss occasioned by breaking long fuses to obtain short ones, as is often done.

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

1. A squib for blasting purposes having a coupling-sleeve surrounding one of its ends, the explosive material within such end being compressed to form a wad, as and for the purposes set forth.

2. As an improved article of manufacture, a blasting-squib of uniform diameter having a coupling-sleeve permanently attached to one end, substantially as described, and for the purposes specified.

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

EDWARD J. COTTER.

Witnesses:

J. B. JONES,

D. L. MORGAN.