

(No Model.)

F. DU PONT MARSTON.  
SIGNAL TORCH.

No. 478,623.

Patented July 12, 1892.

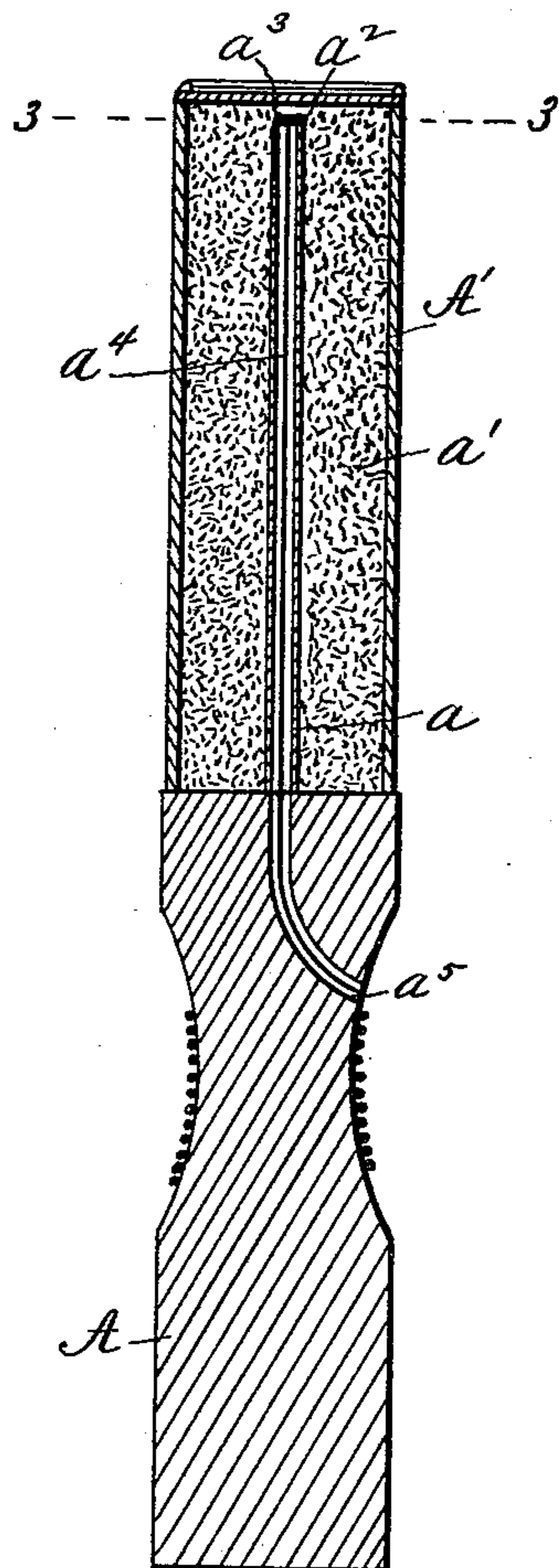


Fig. 1.

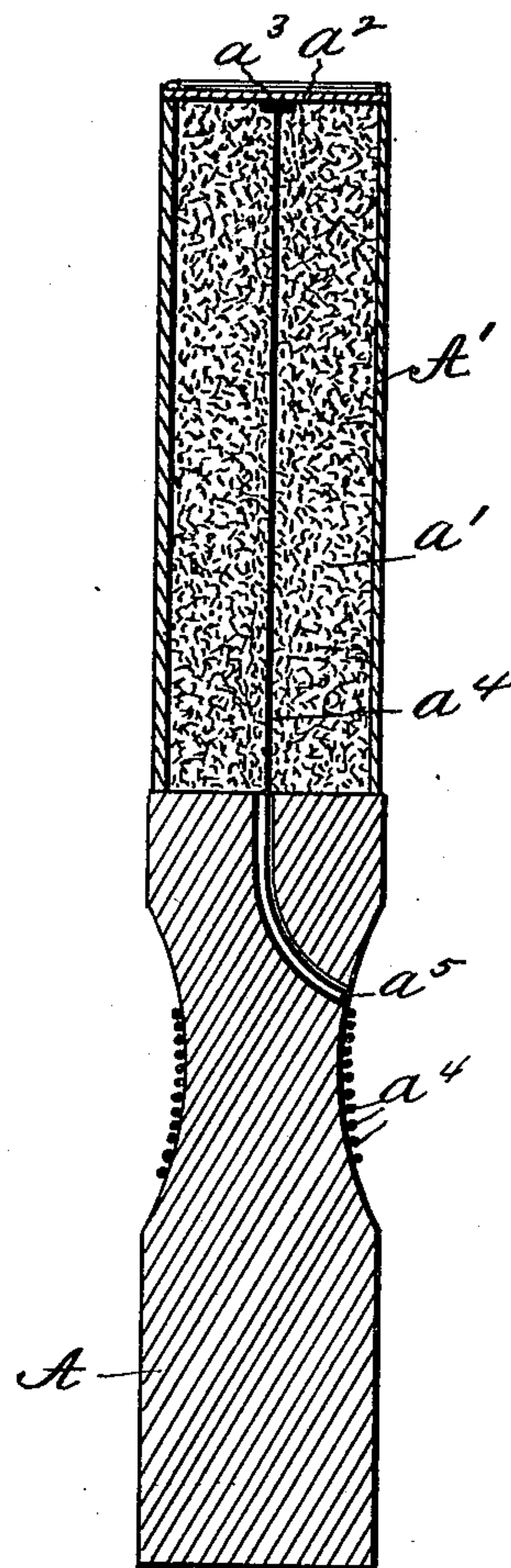


Fig. 2.

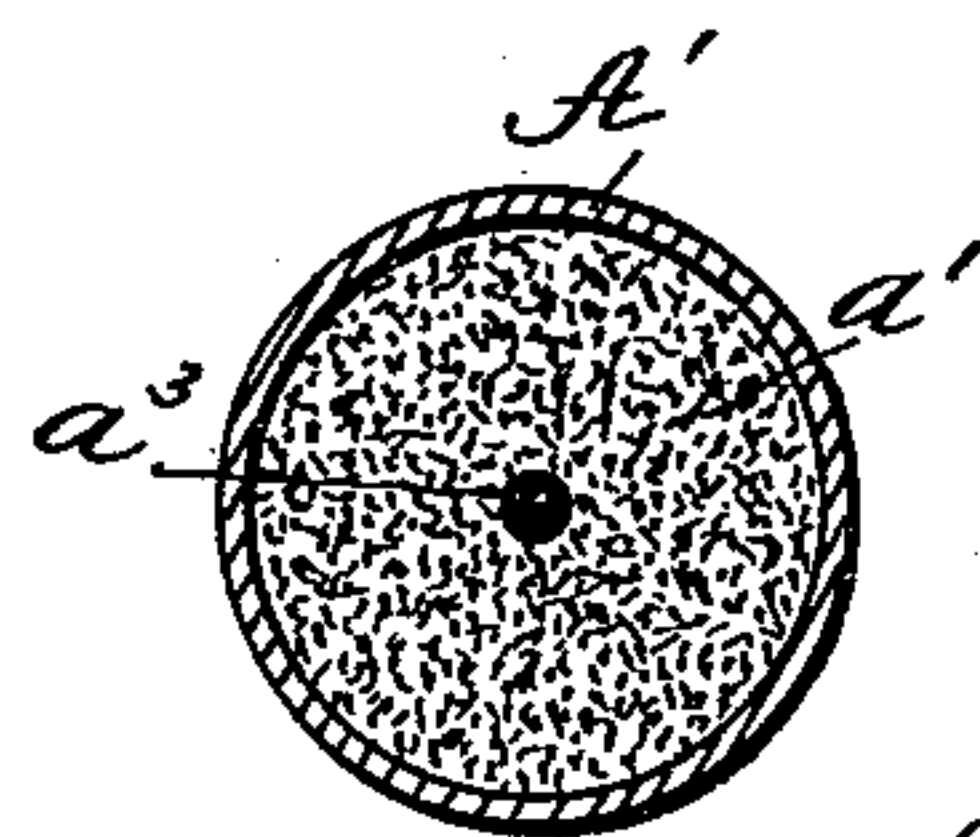


Fig. 3.

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Witnesses

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per  
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# UNITED STATES PATENT OFFICE.

FRANK DU PONT MARSTON, OF TOMS RIVER, NEW JERSEY.

## SIGNAL-TORCH.

SPECIFICATION forming part of Letters Patent No. 478,623, dated July 12, 1892.

Application filed March 24, 1892. Serial No. 426,265. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK DU PONT MARSTON, a citizen of the United States, residing at Toms River, in the county of Ocean and State of New Jersey, have invented certain new and useful Improvements in Signal-Lights; 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 that class of signals known as "Coston lights."

The lights now in use require that the operator carry a large holder that is provided with a socket for the signal and a striker for exploding the cap or fulminate that fires the fuse. When one signal has been used, it is withdrawn from the socket and a new one put in its place. The fuse for firing the signal is placed outside of the signal and is subject to wear in carrying, and is also subjected to dampness and other causes that may render it inoperative. These deficiencies are sufficient to often render the device useless, and in very cold weather, the watchman, owing to the cold, finds great difficulty in changing the signals, and is weighted down by the holder which he has to carry during his watch.

The object of my invention is to do away with these holders and also the fuse, and thus remove all objections that have heretofore existed.

The invention consists of constructions and combinations, all as will be hereinafter described in the body of the specification, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents an elevation, partly in section, of the preferred form of device; Fig. 2, a section showing a modification, and Fig. 3 a transverse section on line 3 3, Fig. 1.

A represents the handle or holder of the signaling device, and A' the shell containing the signal. These two parts are preferably joined together inseparably, but of course can be made separable, if desired, without departing from my invention. In the drawings the shells are shown secured to the handle or holder, the top of which serves as a base

for the material  $a'$ , forming the burning or signaling part of the signal to rest upon.

In Fig. 1 a tube  $a$  is shown extending from the base to a point at or near the wad  $a^2$ , which covers the top of the material  $a$  and is held in place by crimping the top of the shell over the outer part of the wad in the usual manner. Upon the top of tube  $a$  a friction-primer  $a^3$  is placed. Through the friction-primer passes a wire  $a^4$ , which is passed down through the tube  $a$  and opening  $a^5$  in the handle to the outside of the signal where it can be grasped for the purpose of exploding the friction-primer and fire the signaling material. The wad is forced out of the signal by the explosion and leaves the signaling material to burn in the manner designed. The wire when not in use is coiled around the handle to be out of the way and at the same time can be readily removed or uncoiled by the operator to give the necessary jerk to explode the friction-primer.

In the device shown in Fig. 2, the tube  $a$  is dispensed with and the friction-primer attached directly to the under side of the wad. The operation in both cases is exactly the same.

These lights can be made as large or small as necessary. The best size would probably be about five or six inches, a size which the operator can carry in his pocket. As the device outside of the signaling material may be made very cheap, the whole device can be thrown away without much loss, after the signal has been used. It is obvious that this construction overcomes the defects heretofore pointed out of the device now in use.

What I claim as new is—

1. A signaling device consisting of a shell having a charge of signaling material and an explosive friction-primer, a wad covering the contents of said shell, and a wire passing through said friction-primer and said shell, for the purpose set forth.

2. A signaling device consisting of a handle, a shell having an explosive friction-primer above the signaling material and closed at the top by a wad, and a wire passing through said friction-primer and down through the shell and handle to the outside of the handle.

3. A signaling device consisting of a shell having a tube extending from its bottom, signaling material around said tube, a friction-primer upon said tube, a wad for closing the top of the shell, and a wire passing through said friction-primer and extending through said tube to a point outside the shell.

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

F. DU PONT MARSTON.

- Witnesses:

WILLIAM JEFFREY,  
I. W. CARMICHAEL.