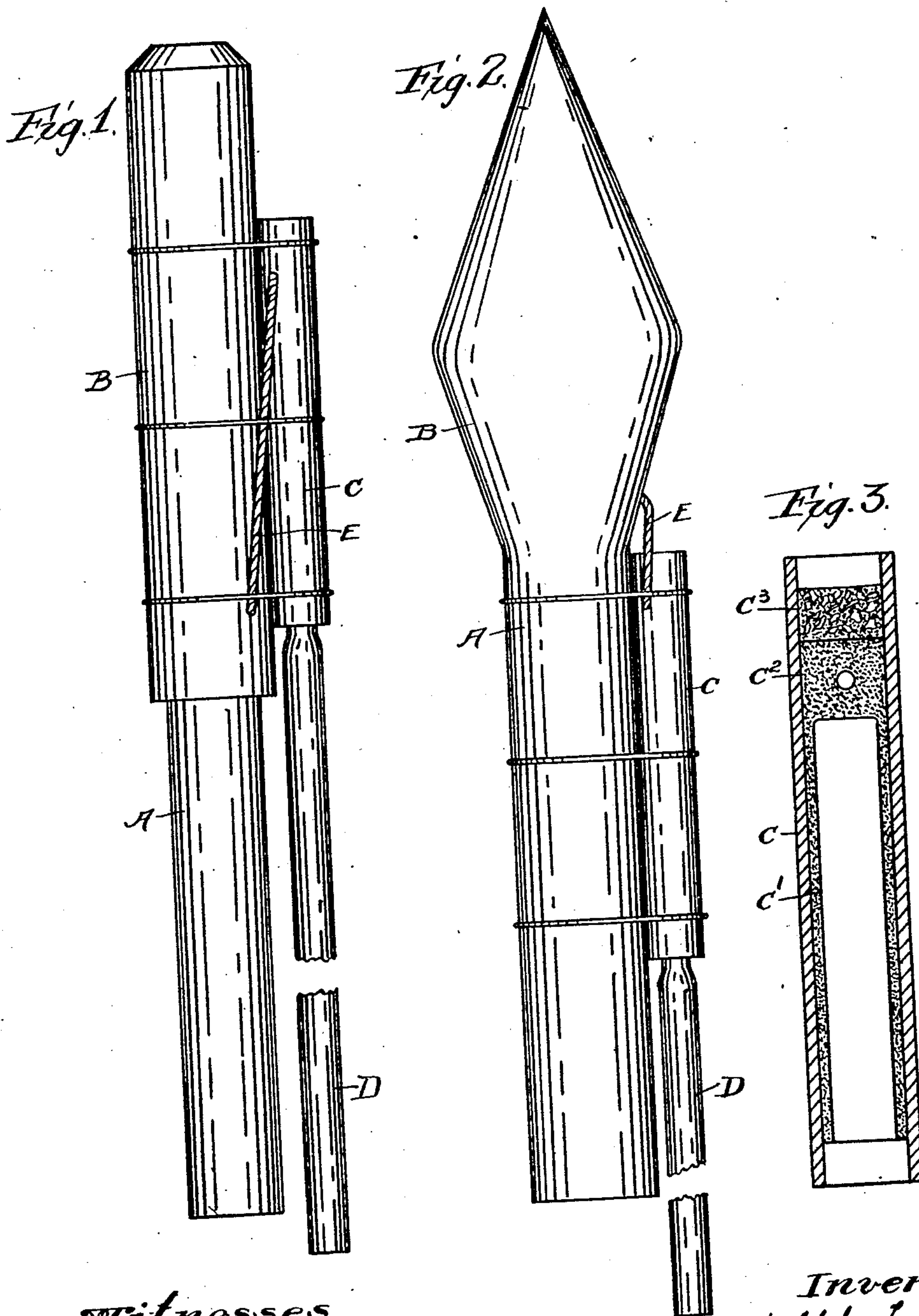


Patented June 22, 1909.

925,567.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPH L. DUE, OF READING, OHIO.

SKY-ROCKET.

No. 925,567.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed April 26, 1909. Serial No. 492,177.

To all whom it may concern:

Be it known that I, ADOLPH L. DUE, a citizen of the United States, residing at Reading, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Sky-Rockets, of which the following is a specification.

My invention relates to the class of rockets used for pyrotechnic displays, and more particularly to the method of attaching the sticks to such rockets. It is well known, and has long been known, that the use of such rockets, and especially the use of the larger sizes, involved danger by reason of the fact that the sticks, being permanently attached to the body of the rocket, which, not being disrupted by the explosion, adheres to the stick and makes one end heavier than the other so that the stick descends with its longitudinal axis practically vertical. The long fall imparts such momentum that the stick, coming down head on, is a dangerous factor.

The object of my invention is to provide a rocket, adapted to serve the ordinary function of a sky-rocket, but free from the dangers resulting from the end-on descent of the stick. In Letters Patent #917,027, granted me April 6, 1909, for improvement in sky-rockets, I have described a method of accomplishing this result which is effective when it is practical to secure the stick to an explosive head.

The especial object of the present invention is to provide means for forcing the sticks from parachute, hanging chain, and other rockets in which the head does not explode, though the invention is capable of use with all kinds of rockets.

The invention consists in the parts and combination and arrangement of parts hereinafter described and claimed.

In the drawings Figure 1 is a side elevation of a rocket of ordinary form embodying my invention and showing the stick attached to the head of the rocket; Fig. 2 a side elevation of a parachute rocket embodying my inven-

tion and showing the stick attached to the body of the rocket; and Fig. 3 a vertical section of the stick socket.

A represents the body of the rocket, B the head, C the stick socket and D the stick. The stick socket has a light but rigid casing *c*, preferably of paper, provided throughout the portion of its length which is to receive the stick, with a lining *c'* of some combustible substance which explodes upon ignition but not by concussion. Above this lining the socket contains a charge *c²* of the explosive occupying the entire diameter of the socket, and of substantial thickness. The top of the socket is closed with a head *c³* of non-combustible and practically solid substance such as clay. From the interior of the head of the rocket a fuse E leads to the interior of the explosive charge *c²*.

The explosive lining and charge are rammed compactly, the lining being rammed over a spindle corresponding with the end of the stick which is to enter the socket.

In operation, when the rocket reaches its highest altitude, the expelling charge, carried by the head, is ignited and ignites the fuse which in turn ignites the explosive charge in the stick-socket and causes the stick to be released from the socket.

I claim as my invention:

1. The combination, with the head and body of a sky-rocket, of a stick-socket comprising a socketed casing, a lining and end-charge of explosive substance; and a fuse leading from the head of the rocket to the explosive charge.

2. The combination, with the head and body of a sky-rocket, of a stick-socket comprising a casing, a head of non-combustible material, a lining and end-charge of explosive substance; and a fuse leading from the head of the rocket to the explosive charge.

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Witnesses:

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