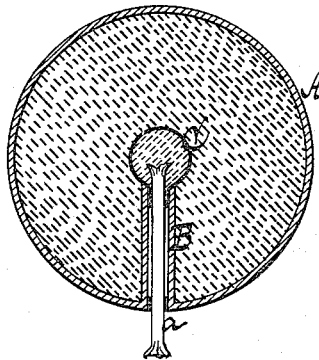


(No Model.)

E. F. LINTON.  
PYROTECHNIC SIGNAL.

No. 262,440.

Patented Aug. 8, 1882.



WITNESSES:

*Otto Aufeland*  
*William Miller*

INVENTOR

*Edward F. Linton*

BY

*Van Hook & Haupp*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

EDWARD F. LINTON, OF EAST NEW YORK, N. Y., ASSIGNOR TO THE UNEXCELLED FIREWORKS COMPANY, OF NEW YORK.

## PYROTECHNIC SIGNAL.

SPECIFICATION forming part of Letters Patent No. 262,440, dated August 8, 1882.

Application filed May 10, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD F. LINTON, a citizen of the United States, residing at East New York, in the county of Kings and State of New York, have invented new and useful Improvements in Pyrotechnic Projectiles, of which the following is a specification.

This invention is an improvement in the garniture or furnishing of aerial pyrotechnic devices, and is designed to be used as such in connection with public or private displays of fire-works in the day-time only.

Heretofore the production of color in pyrotechnics has been accomplished by means of the ignition and combustion of compositions of various well-known chemicals, which in burning disclose by reflective properties the various colored effects familiar to all engaged in the business. The fact is by their burning only are these colors produced, and also the strong light of day renders them capable of use in the night-time only.

By my invention I propose to produce beautiful colored clouds in broad daylight of any desired tint or color or combination of various-colored cloud effects. To attain this result I place in an explosive shell, rocket-head, or other pyrotechnic device designed for exhibition at an elevation above the surface of the earth a dry non-inflammable colored or glittering substance in a powdered, comminuted, or granulated form, so arranged in connection with the general and special form of a pyrotechnic device that when released therefrom in any manner by the action of such device it will become spread in cloud-like form, and thereby produce "clouds" of any desired color or size.

The drawing represents a section of a shell.

In the example shown by this drawing, the letter A designates the case of a shell filled with non-inflammable material in a comminuted state. A fuse-tube, B, is placed in the

bottom of the shell, on the inner end of which an explosive cartridge, C, is placed. This cartridge is ignited by the fuse, which in its turn is ignited by the charge in the cannon from which the shell is thrown into the air. The fuse *a* is made of such length that it will not explode the cartridge until the shell has risen to the desired height in the air, when the explosion of the cartridge will rend the case A of the shell, spread the comminuted non-inflammable material into the desired shape, forming a cloud visible in day-time.

Instead of constructing the shell to be projected by a cannon, it may be combined with a rocket which is propelled by the force of the powder in its tail, the shell in this case forming the pot of a rocket; or the device may be elevated into the air by a balloon or by any other suitable means.

The material in the shell may consist of brightly-glittering particles, so that when said shell explodes a cloud of the most dazzling brilliancy is formed; or it may be filled with variously-colored materials, forming a correspondingly-colored cloud on the explosion of the shell.

What I claim as new, and desire to secure by Letters Patent, is—

A pyrotechnic shell composed of a case inclosing a non-inflammable colored or glittering substance in a comminuted form, an explosive cartridge, and a fuse projecting from the case and connecting with the cartridge, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

EDWARD F. LINTON. [L. S.]

Witnesses:

J. HERMANN WAHLERS,  
E. F. KASTENHUBER.