(No Model.)

T. M. PIERCE.

FIREWORKS TORCH.

No. 494,488. Patented Mar. 28, 1893.

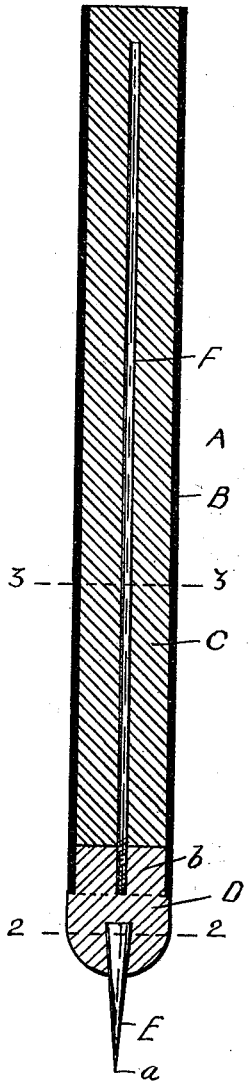

Fig. 1.

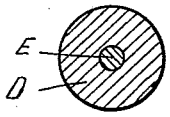

Fig. 2.

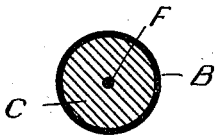

Fig. 3.

WITNESSES.
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UNITED STATES PATENT OFFICE.

THOMAS M. PIERCE, OF CONCORD, MASSACHUSETTS.

FIREWORKS-TORCH.

SPECIFICATION forming part of Letters Patent No. 494,488, dated March 28, 1893.

Application filed May 13, 1892. Serial No. 432,886. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. PIERCE, of Concord, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Fireworks Torches or Signal, of which the following is a full, clear, and exact description.

This invention has for its object the manufacture of fireworks torches or signals whereby a comparatively thin casing or tube of paper or other suitable sheet material for the fireworks composition can be used for it to burn freely, and yet have the requisite strength of the torch for use, and the invention consists of a fireworks torch composed of a casing or tube for the fireworks composition having a wire or rod or stem secured thereto and extending preferably centrally up through the chamber of the casing or tube substantially as hereinafter fully described, and the invention also consists of a fireworks torch, composed of a casing or tube for the fireworks composition having a block or plug in its lower end having a wire or rod or stem secured thereto and extending preferably centrally up through the chamber of the casing or tube all substantially as hereinafter described reference being had to the accompanying sheet of drawings in which

Figure 1, is a vertical central longitudinal section of a fireworks torch constructed according to this invention; Figs. 2 and 3, a cross section of Fig. 1, respectively on lines 2—2, and 3—3, Fig. 1.

In the drawings A represents a fireworks torch of which B is a casing or tube of paper or other suitable sheet material, C the fireworks composition, and D a plug or stopper in the lower end of the tube or casing and secured in any suitable manner. The plug D is preferably made of cast iron and when it is cast, a sharp pin or point E is cast therein to project by its pointed end *a*, substantially as shown by which the torch can be supported in the ground or plank or other place when the torch is burning.

Rigidly secured in the inner end *b* of the plug and extending up centrally longitudinally in the chamber of the casing or tube is a wire or rod or stem F, which rod or wire or stem is screwed into the plug as shown or it can be secured thereto in any suitable manner. The plug with its upwardly extending stem or wire or rod is secured in place and then the fireworks composition is placed in the casing and firmly pounded down as usual.

To produce the best practical result in the use of the torch the casing should burn up as fast as the composition, and in such case it is desirable to have the casing made of thin paper or other material to burn freely and quickly with the composition, but when made of paper or other material thin enough to accomplish this result, the torch will not have sufficient strength and will be easily broken in transportation and use, and to make the casing of paper or other material thick enough to give the requisite strength the thickness is liable to interfere with the perfect burning of the torch, but with the application of the central wire or rod or stem with the casing filled with the composition, the requisite strength of the torch is secured enabling the casing to be made of quite thin paper or other material, for the perfect burning of the torch. The central wire or rod can be secured in any suitable manner to the lower end of the casing when the plug is dispensed with, but with the plug, it is preferable to secure it thereto; it can be made of a small paper tube, and secured in any suitable manner, or it can be made of any suitable material and form, but metal is preferable as it can be smaller than if made of wood or paper or like material. It can be arranged at one side of the case in lieu of centrally, but it is preferable to have it central.

The plug can be of any suitable material and secured to the casing in any suitable manner and the pointed stem or end can be screwed in the plug or secured thereto in other ways than as shown, or the plug and point can be made in one piece, or the plug, stem and point made in one piece or they can be made in any suitable manner. The central wire, rod or stem can be shorter than as shown or any length desired.

Having thus described my invention, what I claim is—

1. A fireworks torch, consisting of a tube or casing, fireworks composition therein, and a central longitudinal wire or rod, or stem extending within the casing, and secured thereto.

2. A fireworks torch, consisting of a tube or casing, fireworks composition therein, a plug or stopper at the lower end and a central longitudinal wire, or rod, or stem secured to the plug.

3. A fireworks torch consisting of a tube or casing, fireworks composition therein, a plug or stopper at the lower end having a pin or point at its outer end and a central longitudinal wire, or rod, or stem secured to said plug and extending within the casing.

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

THOMAS M. PIERCE.

Witnesses:
EDWIN W. BROWN,
CARRIE E. NICHOLS.