A. H. BOGARDUS.

Pyrotechnic-Signal Cartridge.

No. 216,552. Patented June 17, 1879.

Fig. 1

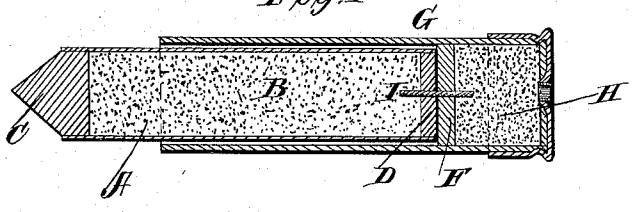
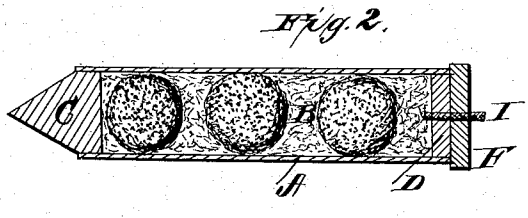


Fig. 2.



WITNESSES

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ADAM H. BOGARDUS, OF ELKHART, ILLINOIS.

IMPROVEMENT IN PYROTECHNIC-SIGNAL CARTRIDGES.

Specification forming part of Letters Patent No. **216,552**, dated June 17, 1879; application filed January 14, 1879.

To all whom it may concern:

Be it known that I, ADAM H. BOGARDUS, of Elkhart, in the county of Logan, and in the State of Illinois, have invented certain new and useful Improvements in Fire-Works; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is to facilitate the throwing of signals at night, the discharging of sky-rockets and other fire-works without liability of accident, and for other purposes; and to this end the nature of my invention consists in so preparing the fire-works—for whatever purpose they may be used—that they can be discharged from a gun, whether breech or muzzle loader, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a longitudinal section of my invention as applied to the cartridge-shell of a breech-loading gun. Fig. 2 is a similar section of the invention alone.

A represents a tube or tubular shell of any suitable dimensions, and made of paper, pasteboard, or any other material suitable for the purpose. This shell or tube is to contain the fire-works B, of any desired character, and is closed at the front end by a conical or other plug, C, and at the rear end is inserted a wad, D, for closing said end. To this wad is fastened another wad, F, which is larger in diameter than the shell or tube, and forms a head for the same. A fuse, I, passes through the two wads D and F, as shown.

The tube A is intended to be discharged from a gun, either breech or muzzle loader, the wad F being made of suitable size to fit within the cartridge-shell G of a breech-loader, as shown in Fig. 1, or to fit the barrel itself of the muzzle-loader. In either case a charge of powder, as at H, is first put in, and then the tube A inserted and rammed thereon. As the gun is fired the tube A is thrown out by the explosion of the charge H, which ignites the fuse I, so as to afterward explode the fire-works.

The fuse I may be cut at any length desired, so as to time the discharge of the fire-works.

The wads D and F may be made of one piece, if desired, equally as well as in two separate pieces.

This invention may be used for a variety of purposes, and may be fired from pistols equally as well as from larger arms.

I am aware that signal-balls and signal-lights have been discharged from guns, and I do not claim such, broadly, as my invention.

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

The combination of the tube A, containing fire-works, a compressible wad, B, the head F, of larger diameter than the tube, and the fuse I, passing through the wad, whereby the tube becomes adapted to be fired from a muzzle-loader or a breech-loader, substantially as herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ADAM H. BOGARDUS.

Witnesses:
C. H. WATSON,
ABRAHAM S. KLEINMAN.