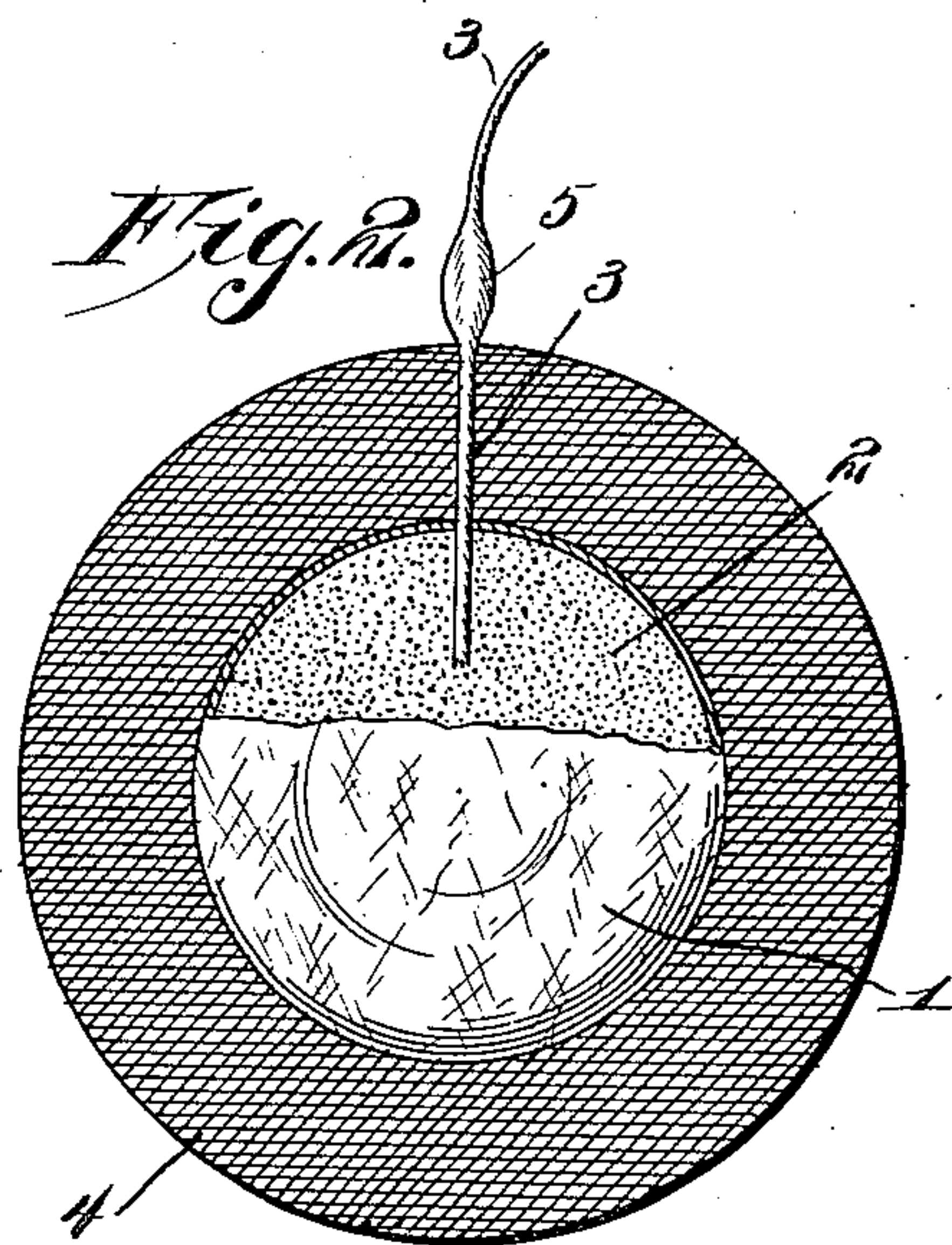
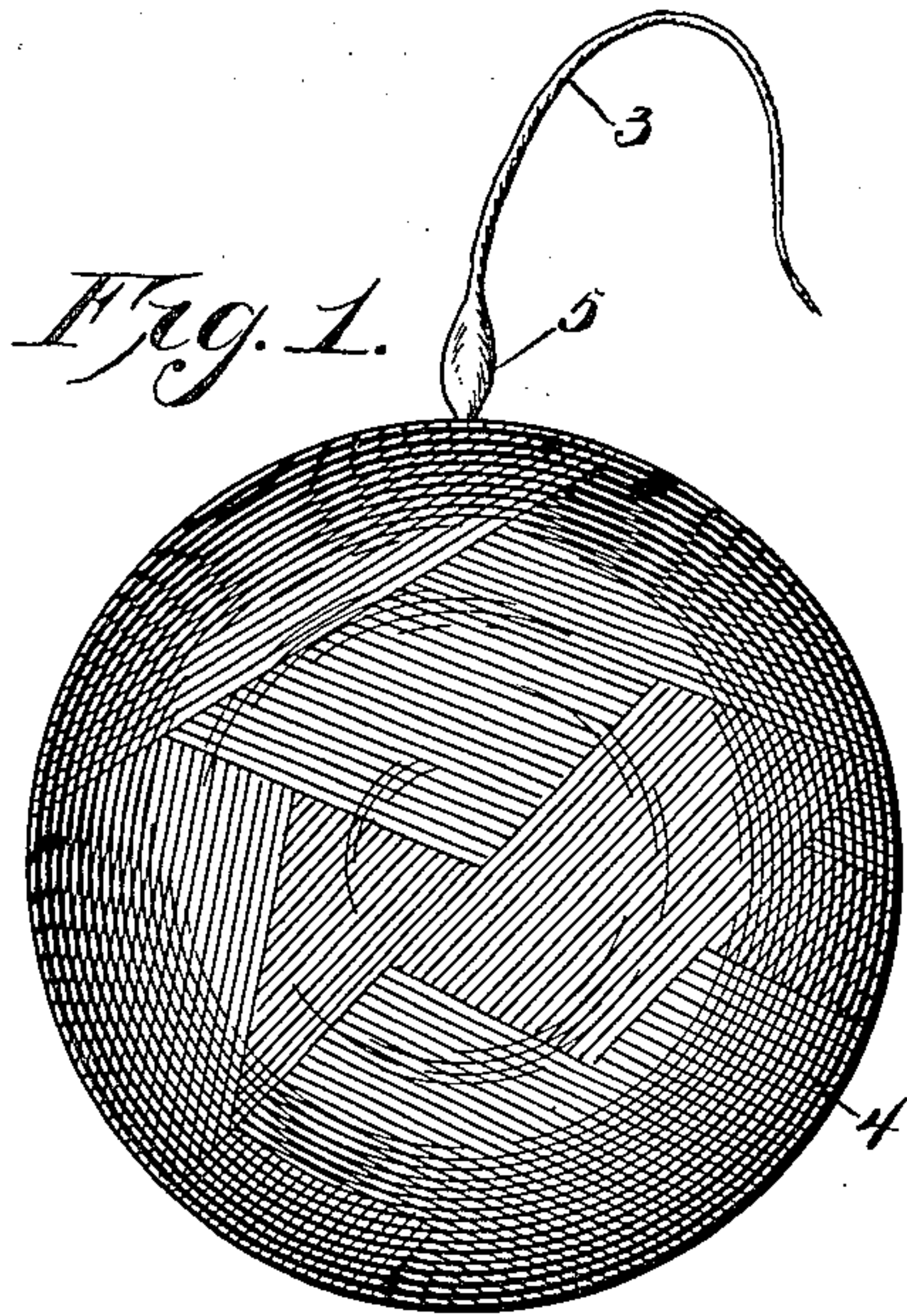


No. 818,950.

PATENTED APR. 24, 1906.

W. A. GILMER.  
FIREWORKS.

APPLICATION FILED SEPT. 14, 1905.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM A. GILMER, OF BROADVIEW, TENNESSEE, ASSIGNOR OF ONE-HALF TO J. A. SMISER.

## FIREWORKS.

No. 818,950.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed September 14, 1905. Serial No. 278,418.

*To all whom it may concern:*

Be it known that I, WILLIAM A. GILMER, a citizen of the United States, residing at Broadview, in the county of Maury and State of Tennessee, have invented certain new and useful Improvements in Fireworks; 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 fireworks and the process of making same, and is more particularly an improvement in devices of this character adapted to explode with a loud concussion.

The object of the invention is to provide a spherical body in which is embedded an explosive charge adapted to be ignited by a fuse extending through the body.

Another object is to provide a spherical body formed of one or more strips of fibrous material which are wound about the explosive charge to produce a device of proper size and contour.

With the above and other objects in view the invention consists of certain novel features of construction and combination of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, I have shown the preferred form of my invention. In said drawings, Figure 1 is a side elevation of the device, and Fig. 2 is a section there-  
through.

Referring to the figures by numerals of reference, 1 is a bag or receptacle of paper, cloth, or other material containing powder 2 or other suitable explosive. This bag and its contents are preferably compressed, so as to assume a substantially spherical form, and a fuse 3 is placed with one end therein. Bag 1 is then inclosed by winding threads of cotton or other material therearound, so as to produce a spherical body 4, which can be made of any desired size. The windings can be made in any manner desired, and when the operation is completed the fuse 3 will project through the body of the explosive, as shown in the drawings. That portion 5 of the fuse adjacent the surface of the device is considerably enlarged and contains a greater amount of powder than does the balance of the fuse, so that a "flash" will occur just prior to the ignition of the charge 2 by the fuse, and this

flash will serve as a warning preliminary to the explosion.

The device herein described is adapted to be thrown like a ball after the fuse has been ignited, and as the body of the device is formed of threads no danger will result from the explosion because there are no hard particles to be projected. By producing a spherical explosive the area presented to the atmosphere is greatly increased and the concussion is increased proportionately.

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

1. The herein-described process of producing fireworks consisting of first inclosing an explosive charge within a receptacle extending a fuse into the charge and then winding threads upon the receptacle and about the fuse so as to produce an outer shell or body of threads and which completely incloses the charge.

2. A device of the character described comprising an explosive charge, a body inclosing the same and formed of threads wound about the charge, and a fuse extending from the charge.

3. A device of the character described comprising a receptacle, an explosive charge therein, a fuse extending from the charge, and a body or shell inclosing the charge and its receptacle and surrounding the fuse, said body comprising threads wound about the charge.

4. A device of the character described comprising a body formed of wound fibrous material, an explosive charge inclosed by the body and disposed at the center thereof, and a fuse extending from said charge and through the body, said fuse having an enlarged portion adjacent the surface of the body.

5. A device of the character described comprising a spherical body formed of wound fibrous material, an explosive charge inclosed within the center of the body, and a fuse extending from said charge and through the body, said fuse having an enlarged portion adjacent the surface of the body to produce a flash.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. GILMER.

Witnesses:

J. E. HENDERSON,  
M. E. COURTNEY.