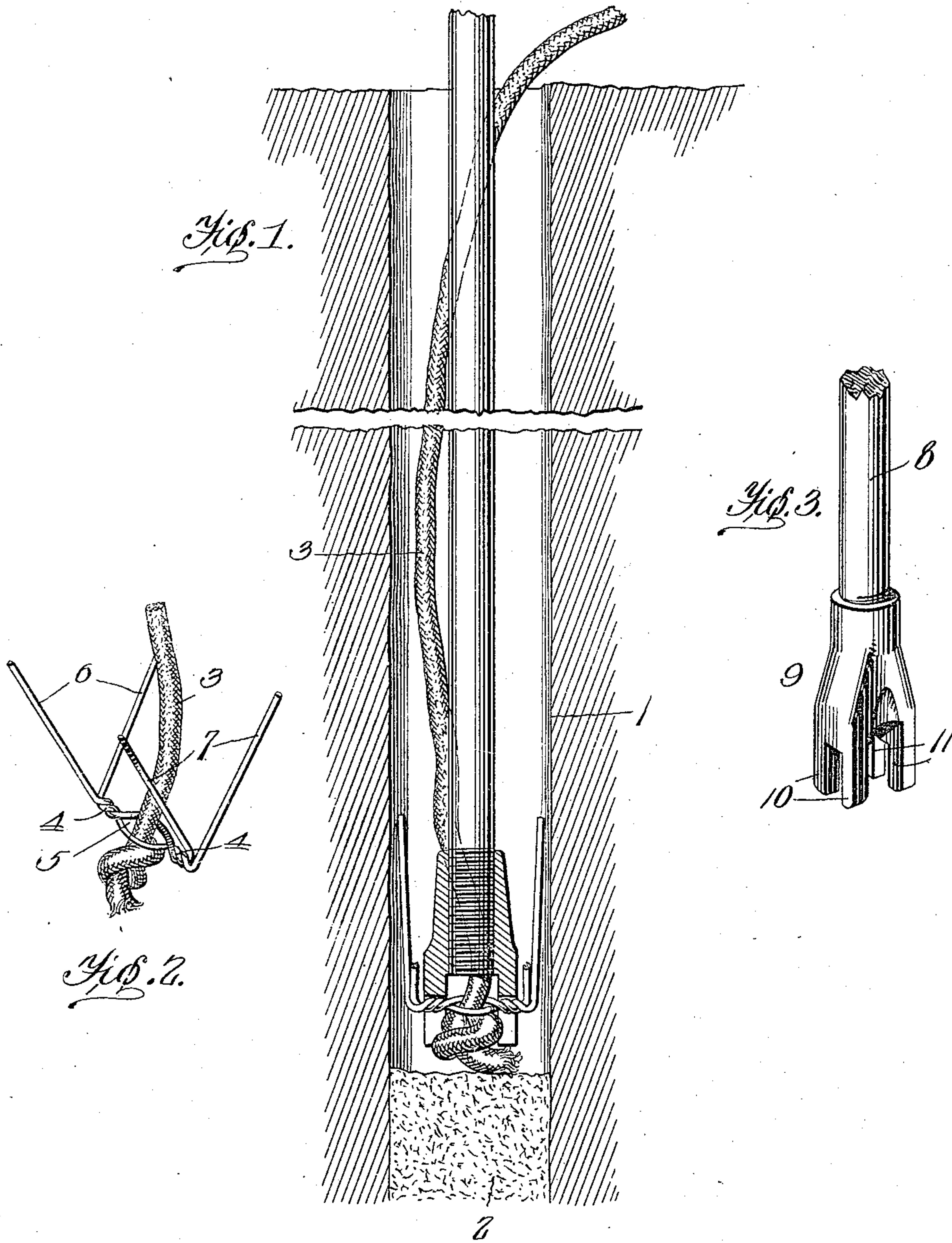


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PATENTED NOV. 5, 1907.

R. O. GROOMS.
FUSE HOLDER.

APPLICATION FILED FEB. 26, 1906.



Attest
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UNITED STATES PATENT OFFICE.

ROBERT O. GROOMS, OF OTTUMWA, IOWA.

FUSE-HOLDER.

No. 870,531.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed February 26, 1906. Serial No. 303,034.

To all whom it may concern:

Be it known that I, ROBERT O. GROOMS, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Fuse-Holders, of which the following is a specification.

The object of my invention is to produce a new and useful fuse-holder, for use in connection with blast-fuses, whereby the fuse may be held in its place above the charge, and comprehends also means for guiding such a fuse-holder to its desired position.

My fuse-holder is accordingly provided with spring-pressure means, preferably self-contained, which are intended to bear against the walls of a drill-hole, and the guiding means aforesaid comprise a member shaped to correspond with the structural peculiarities of the fuse-holder, so that it may be employed to drive the latter evenly to position.

In the accompanying drawings, which are to be taken in connection with this specification: Figure 1 is a view, partly in section, showing my invention in use in a drill-hole; Fig. 2 is a view of the fuse-holder proper; Fig. 3 is a similar perspective of the guiding member; and Fig. 4 is a top plan view showing the fuse-holder with its fuse in position in a drill-hole.

Referring to the numerals on the drawings, 1 indicates a drill-hole, and 2 the blasting charge at the inner end thereof.

3 is a fuse of the ordinary kind, whereby the charge is to be exploded. It is to the means for holding this fuse in its position, and for guiding it to position that my invention relates.

The fuse-holder proper, shown in Fig. 2 in perspective, preferably consists essentially of a middle body portion adapted to clasp or retain the fuse 3, and in connection with said body part means for maintaining it in position in a drill-hole.

A simple and cheap exemplification of the foregoing is illustrated in the drawings, wherein the fuse-holder is shown as made of two pieces of wire, somewhat resilient, twisted about one another to form a substantially straight body portion 4, with an eye 5 for the reception of fuse 3, the ends 6—6 and 7—7 of said twisted wires at the respective ends of the body portion 4 being bent in planes substantially at right angles to said body portion, the said ends 6—6 and 7—7 diverging according to the degree of resilience desired. Within the eye 5 the fuse 3 is to be held, as by passing it therethrough

and knotting its end; or it may be held by compression, or otherwise.

For the purpose of guiding the fuse-holder to its place in the drill-hole, I have provided a rod 8, having at its end a member 9 adapted when the fuse is in the holder, to straddle the fuse and engage the body portion 4 of the holder at either side of the fuse. As shown the member 9 is a metal ferrule, adapted to be screwed upon the rod 8, having two parallel pair of prongs 10—10 and 11—11, the said prongs being adapted to engage the body portion 4 of the fuse-holder, and the space between said pairs of prongs adapted to fit over the fuse 3.

In operation, the fuse-holder is entered into a drill-hole, the diverging ends 6—6, 7—7 of the wires up, the ferrule 9 is applied to the holder 4 as just described, and as shown in Fig. 1, and the fuse-holder with its fuse guided home by means of rod 8 to position above the charge. Thereupon the rod is withdrawn, and the fuse-holder will be held in its place by the spring-pressure of the wire-ends 6—6, 7—7 against the walls of the drill-hole, as clearly shown in Fig. 4.

It is to be understood that I do not limit myself to the particular forms of fuse-holder and guiding-member shown and described, and also that the former need not necessarily be made of wire; the same may be constructed of sheet metal or the like, properly shaped, and provided with fuse- and position-retaining means. But all such modifications are contemplated as within the scope and terms of my invention, as defined in the appended claims.

What I claim is:—

1. In a fuse-holder, a body-portion adapted to retain a fuse, self-contained means for keeping the holder in position in a drill-hole, and means for guiding the holder to its desired position, said means comprising a ferrule shaped to engage the body portion of the holder and straddle the fuse carried thereby.

2. In a fuse-holder, a straight body portion with a fuse-holding eye, consisting of twisted wires whose ends at either end of said body portion are bent in planes at right angles to the body portion, and a rod provided with a ferrule having two parallel pair of prongs, said prongs being adapted to engage the body of the holder at either side of the eye aforesaid, and the space between the pairs of prongs being adapted to fit over said eye.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT O. GROOMS.

Witnesses:

L. W. CLARK,

L. C. HARDSOGG.