Jan. 5, 1926. 1,568,069

I. T. JENKINS

SQUIB

Filed July 9, 1925

Fig. 1.

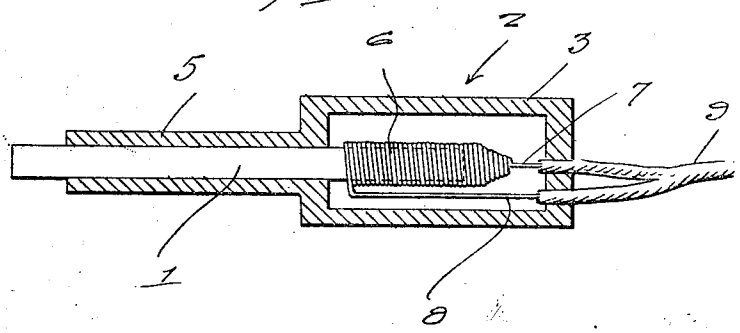


Fig. 2.

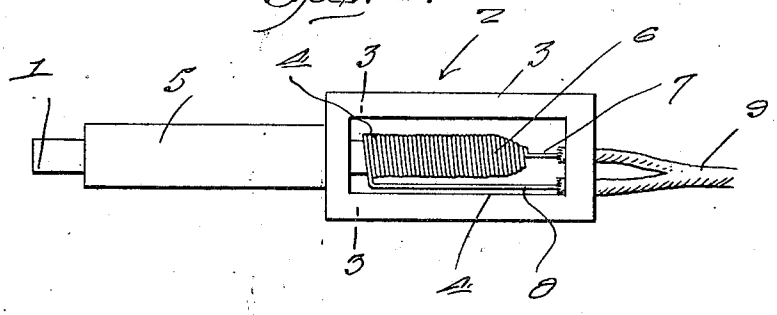
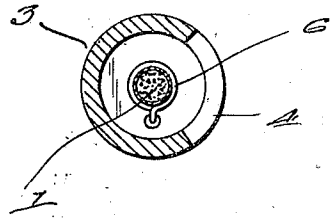


Fig. 3.



Inventor

I. T. Jenkins

By Clarence A. O'Brien

Attorney

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UNITED STATES PATENT OFFICE.

ISAAC T. JENKINS, OF TUNKHANNOCK, PENNSYLVANIA.

SQUIB.

Application filed July 9, 1925. Serial No. 42,473.

To all whom it may concern:

Be it known that I, ISAAC T. JENKINS, a citizen of the United States, residing at Tunkhannock, in the county of Wyoming and State of Pennsylvania, have invented certain new and useful Improvements in a Squib, of which the following is a specification.

This invention relates to an improved squib highly adaptable for use by miners for exploding a charge of powder used for disrupting and dislodging coal, rock, and the like.

A common form of squib is a tube of soft reed paper filled with a readily inflammable powder. The end of the squib adapted to be ignited is dipped into sulphur or nitre, and a common match or other source of flame is applied to the treated end to ignite the squib. This, as is well known, is dangerous procedure.

In view of the foregoing circumstances, I have conceived of a means whereby an electric current may be utilized for igniting the treated end of the squib from a distant point, whereby to relieve the attendant of the danger otherwise encountered.

The particular structure employed for accomplishing the end specified will become apparent from the following detailed description taken together with the accompanying drawings, and the appended claim setting out the alleged improvement.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a central longitudinal section cut through the improved device.

Fig. 2 is a side elevation of the same, and

Fig. 3 is a cross section taken approximately upon the plane of the line 3—3 of Fig. 2.

In the drawings, the reference character 1 designates the squib. This is of somewhat conventional form and comprises the usual tube made from straw, reed paper or its equivalent and filled with an appropriate kind of explosive powder. The end to be ignited is treated in the usual way by dipping in sulphur, nitre, or an equivalent material. In accordance with my idea, however, a novel holder 2 is provided for the squib and this holder embodies a cylinder 3 having a rectangular opening 4 on one side and provided at one end with a cylindrical bored extension 5 providing a bushing through which the squib 1 is inserted.

It is to be noted that the squib is of a length to extend beyond the outer end of the bushing and having its inner end positioned within the cylinder 3 and exposed through the side opening in the latter. Arranged within this cylinder is a wire coil 6 fastened to form a pocket into which the ignitable end of the squib is extended. This coiled pocket is provided with two take-off wires 7 and 8 at its end which are extended through one end of the cylinder and encased in appropriate insulation 9. The insulated wires extend to a suitable source of electric current supply, such as a battery, the same not being shown.

With the arrangement specified, it is obvious that when the current passes through the wires and pocket forming coil, the latter acts as a resistance and is heated to such an extent as to ignite the end of the squib which is fitted into it. The squib being placed in the whole containing the charge, affects the charge-off and the explosion occurs when the attendant or operator is at a remote point. Hence, the operation is not attended by the usual dangers encountered.

A careful consideration of the description in connection with the drawings will enable persons skilled in the art to which the invention relates to obtain a clear understanding of the same. Therefore a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

Having thus described my invention, what I claim as new is:—

A device of the class described comprising a hollow cylinder having an elongated opening on one side and an open ended tubular extension at one end, a squib fitted into and extending through said extension with its inner end located in said cylinder, and a resistance coil supported in said cylinder, the coil being formulated to provide a pocket for reception for the inner end of said squib.

In testimony whereof I affix my signature.

ISAAC T. JENKINS.