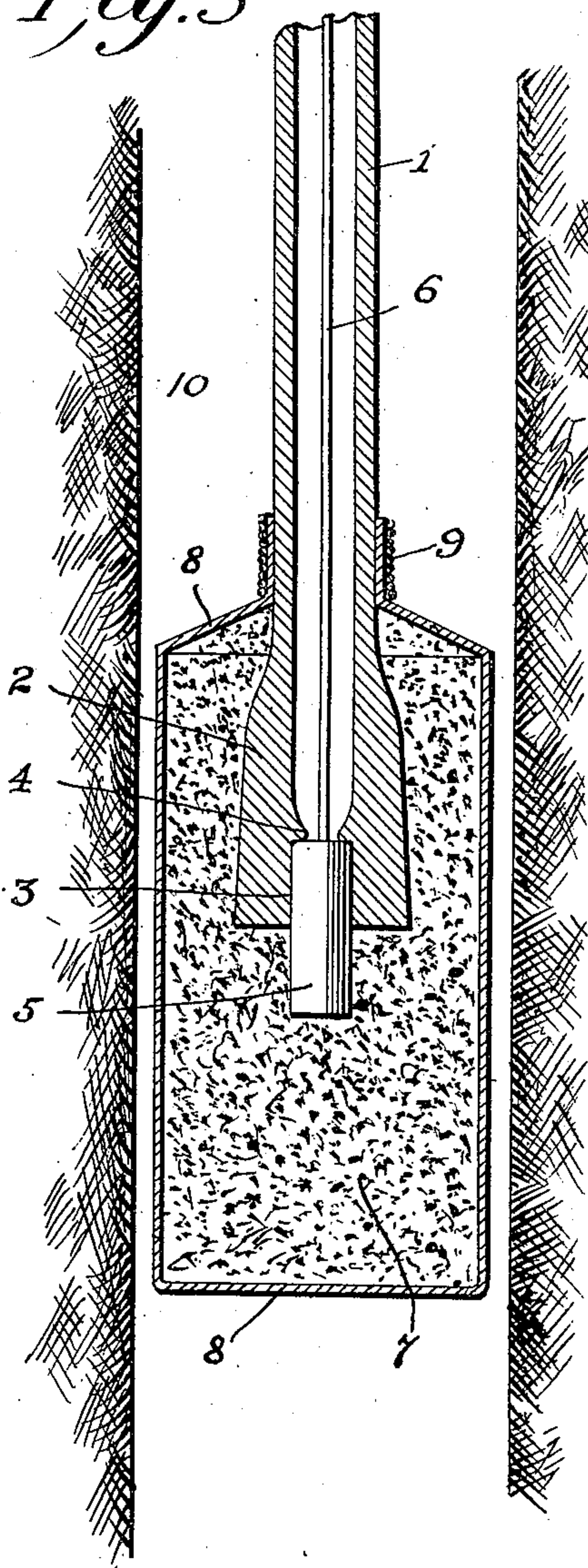
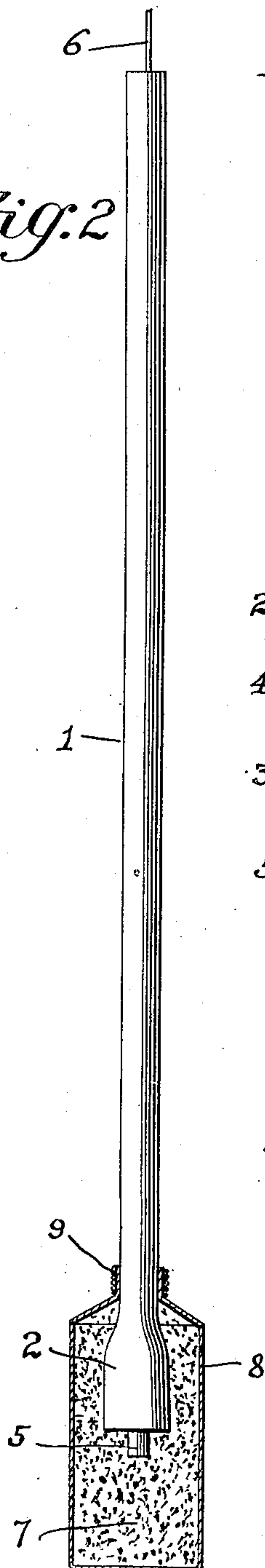
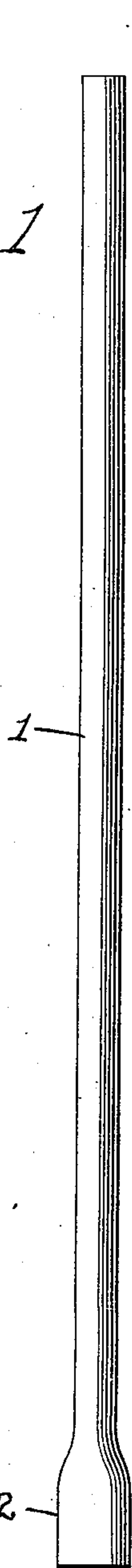


970,372.

Patented Sept. 13, 1910.



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Inventor
Effie R. Harkins
W. E. Schauborn
Attorney

UNITED STATES PATENT OFFICE.

EFFIE R. HARKINS, OF GURNEE, ALABAMA.

BLASTING-BARREL.

970,372.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed April 5, 1910. Serial No. 553,586.

To all whom it may concern:

Be it known that I, EFFIE R. HARKINS, of Gurnee, in the county of Shelby and State of Alabama, have invented a certain new and useful Improvement in Blasting-Barrels, of which improvement the following is a specification.

My invention relates to blasting barrels, and more especially to a barrel designed in blasting coal and other similar material, and permits the exploding of cartridges and dynamite without the use of a fuse or electric apparatus.

The object of my invention is to provide a blasting barrel which shall be simple, strong and inexpensive in construction, and capable of long and repeated use without the same being in any way injured, or its efficiency impaired by the heat or shock of the explosion.

The invention consists of structural characteristics, and relative arrangements of the parts comprising the barrel which will be hereinafter more fully described and particularly pointed out in the appended claims.

Referring to the accompanying sheet of drawing, in which similar reference characters indicate the same parts in the several figures; Figure 1, is a side elevation of the blasting barrel; Fig. 2, is a side elevation of the barrel with the detonating cap, squib, and cartridge in section, when in firing position; and Fig. 3, is an enlarged sectional view of the lower end of the blasting barrel inserted in a blast hole ready to be tamped, with the cartridge cap and squib in position to be fired.

In the drawing 1, represents a barrel having an inside bore preferably of one-fourth inch diameter, and any length desired and provided with an enlarged or reinforced end 2. Within the enlarged end 2, is formed a detonating cap chamber 3, having at its upper end a shoulder 4, which uniformly limits the distance with which the cap 5, is inserted and firmly held in the barrel, and the inner side of the shoulder at the same time forms a guide for placing the firing squib 6, centrally on top of the interior end of the cap 5, as shown in Fig. 3.

7, is a cartridge of explosive suitable for the work to be performed, and is provided with the usual wrapper 8, where upper end

is opened, wrapped and held around and above the reinforced end 2, of the blasting barrel by a string 9. Thus it will be seen that the reinforced end 2, has a double function, of not only resisting the internal bursting force of the cap 5, but at the same time form an outer retaining ledge for firmly holding the cartridge 7, and preventing the same from being displaced off the end of the blasting barrel.

In the operation of my invention, a detonating cap 5, is inserted into the reinforced end 2, of the barrel 1, until it abuts against the shoulders 4, at the top of the chamber 3. One end of a cartridge 7 is then sufficiently opened to admit the insertion of the reinforced end of the blasting barrel with its cap as above described, when the wrapper of the cartridge is drawn up and tied around the barrel just above the reinforced section 2. The blasting barrel with cap and cartridge as shown in Fig. 2 is then correctly placed in a hole 10, (see Fig. 3), previously drilled in a body of coal or other material to be blasted, and the hole filled around the barrel with tamping properly rammed. A squib 6, is then inserted into the bore of the barrel, when its lower end will be properly guided and positioned by the shoulder 4, to the center and interior face of cap 5, when the outer end of the squib can be lighted and the charge exploded.

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

1. A metallic blasting barrel with a bore and integral reinforced hollow end containing a cap chamber, a shoulder to prevent the cap from entering too deep into the barrel located within the barrel and at the inner end of cap chamber.

2. A metallic blasting barrel with a bore and integral reinforced and enlarged hollow end containing a cap chamber, a shoulder within the barrel and at the inner end of cap chamber, to prevent the cap from entering too deep into the barrel and also guide a squib toward the center of an inserted cap.

EFFIE R. HARKINS.

Witnesses:

J. R. HUNTER,
H. W. NABORS.