Sept. 23, 1930. B. CALLAS 1,776,487

BLASTING CAP PROTECTOR

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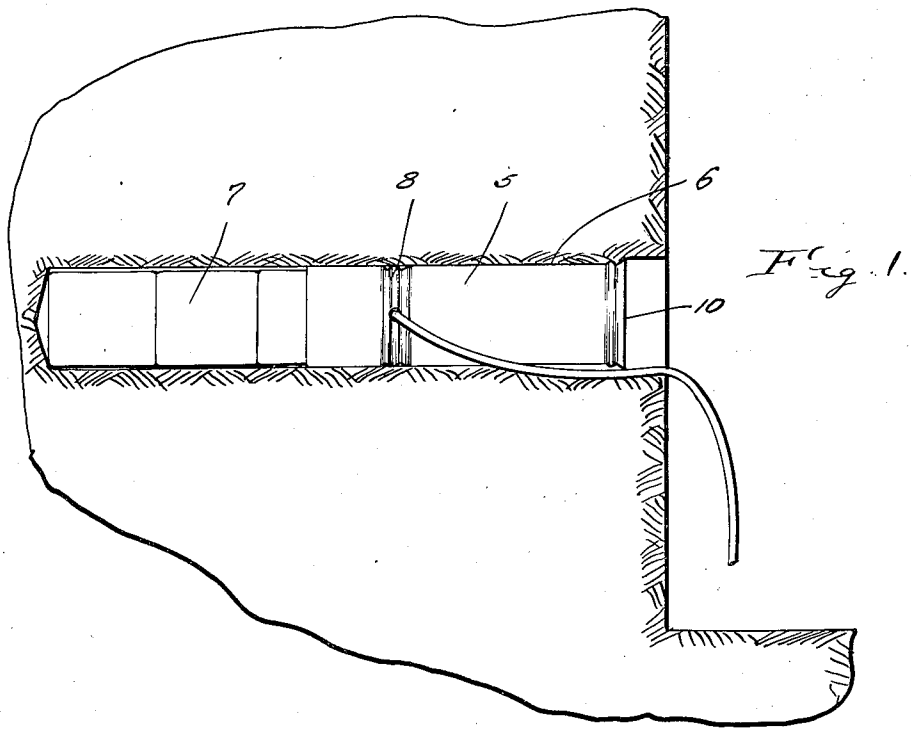


Fig. 1.

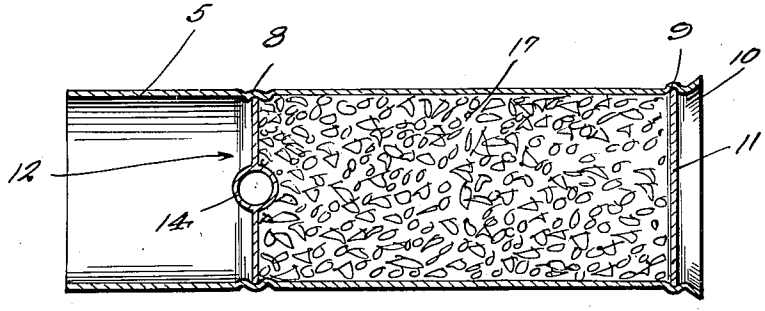


Fig. 2.

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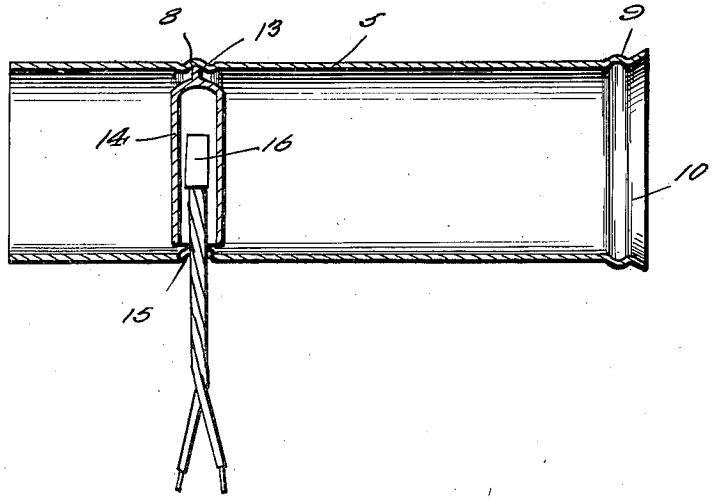
Attorney

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Fig. 3.



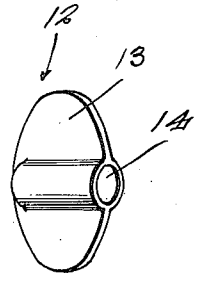
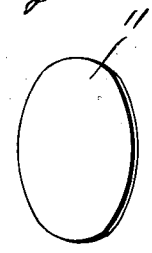


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE

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BLASTING-CAP PROTECTOR

Application filed November 22, 1929. Serial No. 409,058.

This invention appertains to new and useful improvements in blasting caps and has as its principal object to prevent the exploded charge from back-firing into the open and exploding surrounding gases, outside of the charged bore.

Through the use of this novel safety cap, serious damage and personal injuries will be prevented, with the ultimate end in view of lessening the cost of mine maintenance.

During the course of the following specification and claims, numerous other important objects and advantages of the invention will readily become apparent to the reader.

In the drawings:—

Figure 1 represents a cross sectional view through a wall of a mine showing a drilled bore with the charge set.

Fig. 2 represents a longitudinal sectional view through the improved device.

Fig. 3 represents another longitudinal sectional view through the improved device.

Fig. 4 represents a perspective view of the cap container.

Fig. 5 represents a disk for closing one end of the cylinder.

Referring to the drawings, wherein like numerals designate like parts, it can be seen that the numeral 5 represents the cylinder which is adapted to be placed within the drilled bore 6 so that the dynamite or explosive 7 must act against the material being mined. The cylinder 5 is provided with a corrugation 8 adjacent one end thereof and a corrugation 9 at the opposite end thereof.

The latter end of the cylinder is flared as at 10 to permit the insertion of the disc 11 into the cylinder so that the same will become seated in the said corrugations after the cap container, generally referred to by numeral 12 has been assembled. This cap container comprises a disc 13 with a tube 14 extending diametrically across the same, the same being closed at one end and open at its opposite end to permit the insertion of the cap.

This open end of the tube 14 registers with an opening 15 in the cylinder 5 so that the ignition device 16 may be inserted into the cap tube 14 in the manner shown in Figure 3. The disc 13 is to be engaged in the cylinder within the corrugation 8 and the chamber between the disc 13 and the disc 11 is to be filled with suitable material 17, such as rock, or the like.

Some of the dynamite 7 will seat within the cylinder 5, not occupied by the rock 17. It will thus be seen that these caps may be readily assembled in position within the cylinders 5 during the operation of blasting in mines. Thus the hazard of carrying these blasting caps will be minimized without materially increasing the cost of production.

While the foregoing specification specifically sets forth the invention, it is to be understood that numerous changes in the shape, size and material may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described the invention, what is claimed as new is:

1. A blasting cap protector comprising a disc, and a cap receiving chamber disposed transversely across the said disc and being open at one end and closed at its opposite end, said disc being adapted for disposition within the usual drilled bore packing cylinder.

2. A drilled bore packing unit comprising a cylinder having an internal circumferentially extending groove adjacent one end, a partition adapted to be set within the said groove, said partition having a receptacle thereon for the reception of a blasting cap, a removable closure at the opposite end of the cylinder, said mentioned end of the cylinder being squared to facilitate the insertion of the said closure.

3. A drilled bore packing unit comprising

a cylinder having an internal circumferentially extending groove adjacent one end, a partition adapted to be set within the said groove, said partition having a receptacle thereon for the reception of the blasting cap, a removable closure at the opposite end of the cylinder, said mentioned end of the cylinder being squared to facilitate the insertion of the said closure, the said receptacle on the said partition having its open end registerable with an opening in the said cylinder to permit the insertion of ignition wires into the said receptacle.

In testimony whereof I affix my signature.

BILL CALLAS.