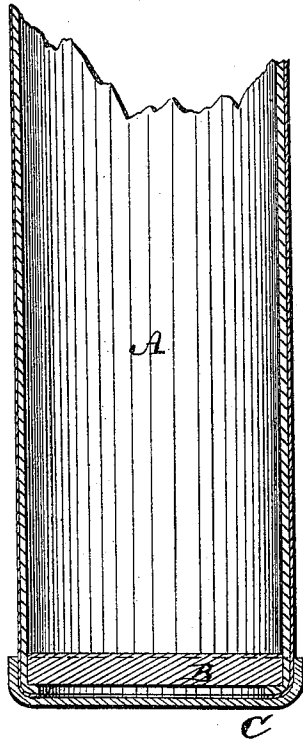


F. W. SMITH & F. EGGE.

BLASTING-CARTRIDGE.

No. 171,441.

Patented Dec. 21, 1875.



WITNESSES

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By

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UNITED STATES PATENT OFFICE.

FRIEND W. SMITH AND FREDRICK EGGE, OF BRIDGEPORT, CONNECTICUT,
ASSIGNORS TO PAUL A. OLIVER, OF WILKESBARRE, PENNSYLVANIA.

IMPROVEMENT IN BLASTING-CARTRIDGES.

Specification forming part of Letters Patent No. **171,441**, dated December 21, 1875; application filed
November 18, 1875.

CASE B.

To all whom it may concern:

Be it known that we, F. W. SMITH and FREDRICK EGGE, of Bridgeport, in the county of Fairfield and in the State of Connecticut, have invented certain new and useful Improvements in Blasting-Cartridges; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

Our invention relates to cartridges for holding powder for blasting purposes; and it consists in the construction of the same, as hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a longitudinal section of our improved blasting-cartridge.

We form a tube, A of linen, muslin, paper, or any desired light material, and we then place a cap, c, over one end. This cap may be made of metal or any other stiff material. A solid plug, B, of wood or other material, is then forced into the cap. This plug acts as a wedge in the end of the tube A, between it and the sides of the outside cap.

Heretofore in blasting-cartridges two caps have been used—as, for instance, in the patent of F. W. Smith and Fredrick Egge, Oc-

tober 12, 1875; but the wooden plug is cheaper and forms an equally good joint.

By the use of the wooden interior plug the exterior metal cap is more completely braced at all points, and the danger which might arise from the use of an interior metal cup is avoided.

The cartridge-case and its cups are never used but once, as, after the first blast, the entire cartridge is entirely destroyed; hence it is all-important to form the same as cheaply as possible.

The wooden plug is the cheapest, and is fully as effectual, and considered by some miners more safe in its use than the interior metal cup heretofore patented to us.

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

A blasting-cartridge, A, formed of a tube of paper, muslin, or other suitable material, and having its bottom held in place by means of a solid plug, B, forced in from the inside, and an exterior cup, C, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 29th day of October, 1875.

FRIEND W. SMITH.
FREDRICK EGGE.

Witnesses:

C. L. EVERT,
WM. E. DISBROW.