

F. W. SMITH.
BLASTING-CARTRIDGES.

No. 177,024

Patented May 2, 1876.

Fig. 1.

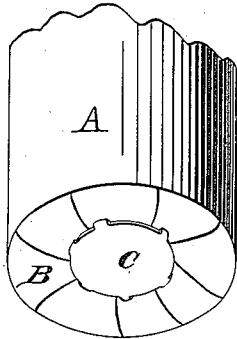


Fig. 2.

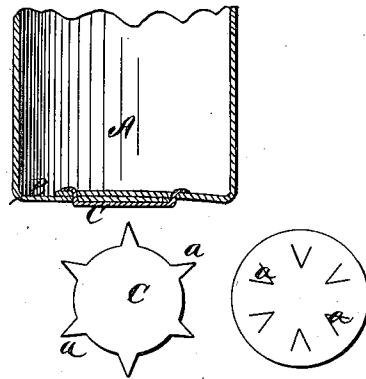


Fig. 3.

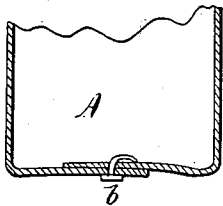


Fig. 4.

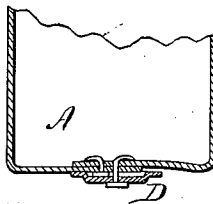
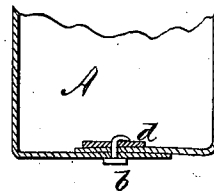


Fig. 5.



WITNESSES

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FRIEND W. SMITH, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO PAUL A. OLIVER, OF WILKESBARRE, PENNSYLVANIA.

IMPROVEMENT IN BLASTING-CARTRIDGES.

Specification forming part of Letters Patent No. 177,024, dated May 2, 1876; application filed March 6, 1876.

To all whom it may concern:

Be it known that I, FRIEND W. SMITH, 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.

My invention relates to blasting-cartridges; and it consists in a paper case or cylinder, having its bottom closed by folding the paper inward, and fastening the same by one or more rivets, disks, or other suitable metallic fastenings, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of the lower end of a blasting-cartridge embodying my invention. Fig. 2 is a vertical section of the same, with plan views of the metallic fastening. Figs. 3, 4, and 5 are sections, showing various forms of fastening.

A represents a case or cylinder for blasting-cartridges, made of paper, and having its lower end closed by folding the paper inward in any suitable manner to form the bottom B. The folds of the paper forming this bottom are

fastened together by means of a metal disk, C, struck up, with prongs *a* projecting either from the body or the edge of the disk, said prongs being pressed through the paper from the outside and clinched on the inside.

In some cases I may use a simple rivet, *b*, as shown in Fig. 3, also clinched on the inside. In such case a washer, *d*, may be placed on the inner end of the rivet before the same is clinched, as shown in Fig. 5.

In other cases I may use a metal disk, D, on the outside, with a rivet passed through and clinched on the inside. Separate rivets may then be used, if required, to fasten the bottom before said disk is riveted on.

A blasting-cartridge case constructed in this manner can be manufactured at but very little expense.

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

In a blasting-cartridge case, formed of paper or other similar material, the material being folded under at the bottom, a metallic fastening, which is passed through from the bottom and clinched on the inner side, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of March, 1876.

FRIEND W. SMITH.

Witnesses:

H. A. HALL,
J. M. MASON.