

W. H. SMITH.

CARTRIDGE.

No. 99,721.

Patented Feb. 8, 1870.

Fig. 1.

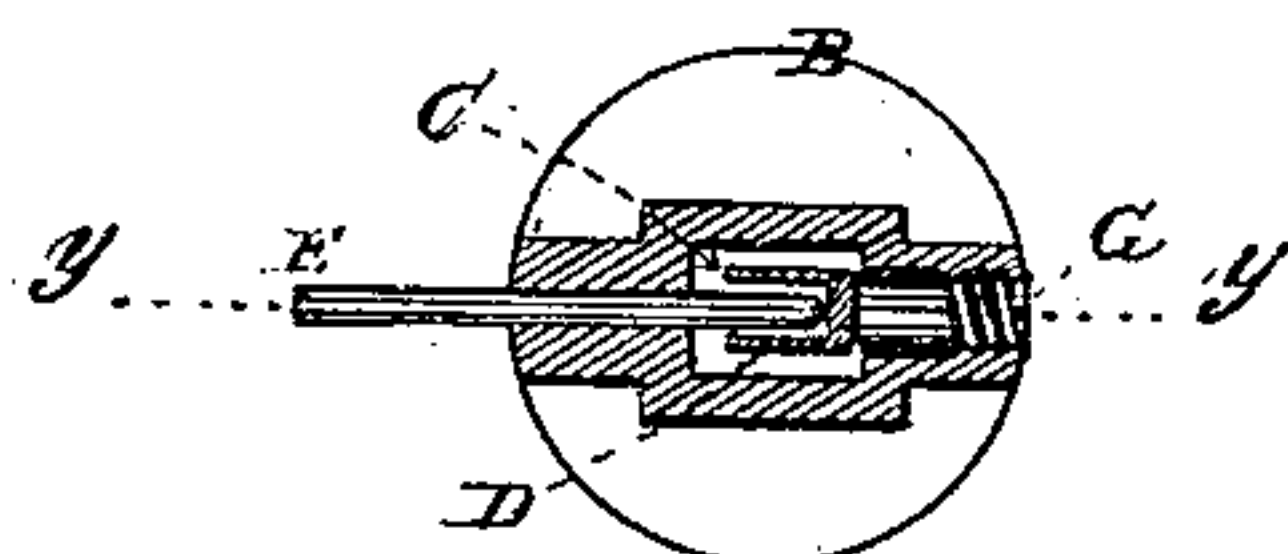


Fig. 3.

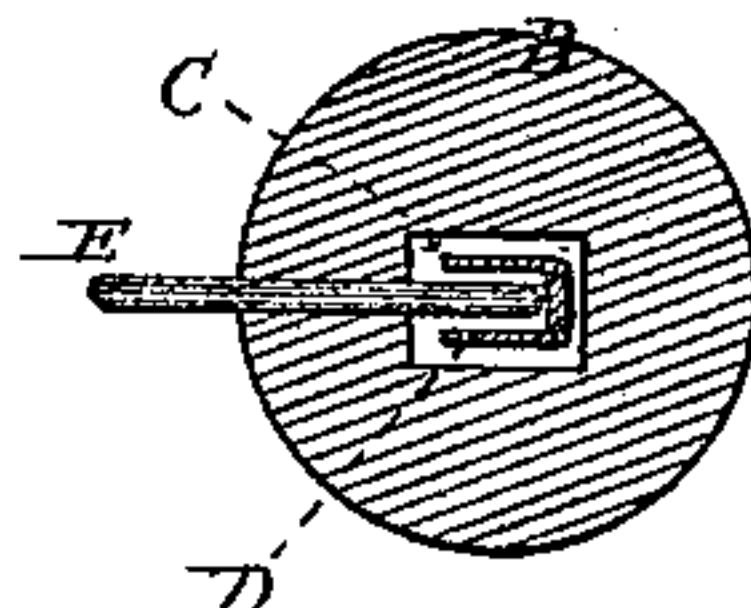


Fig. 2.

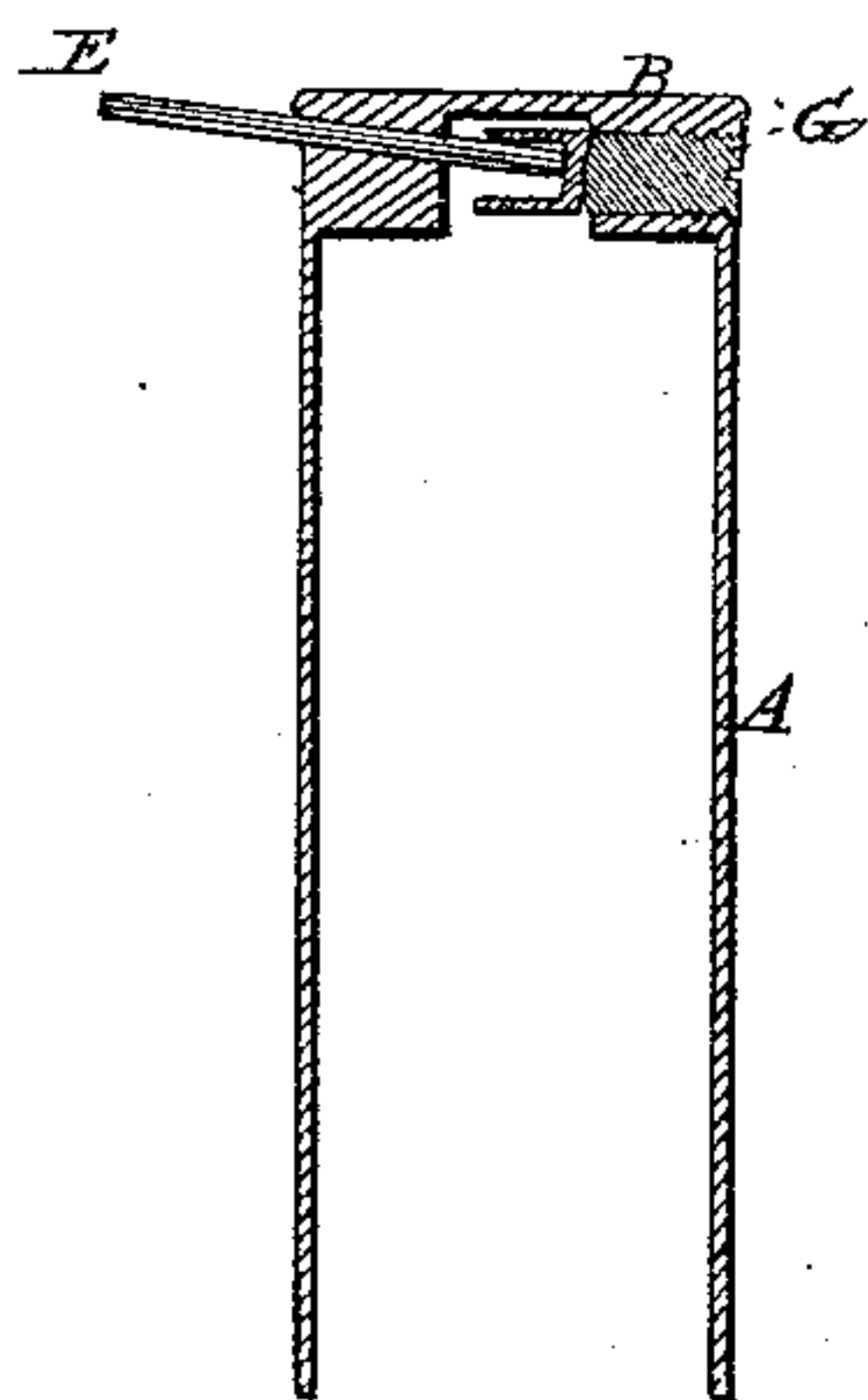
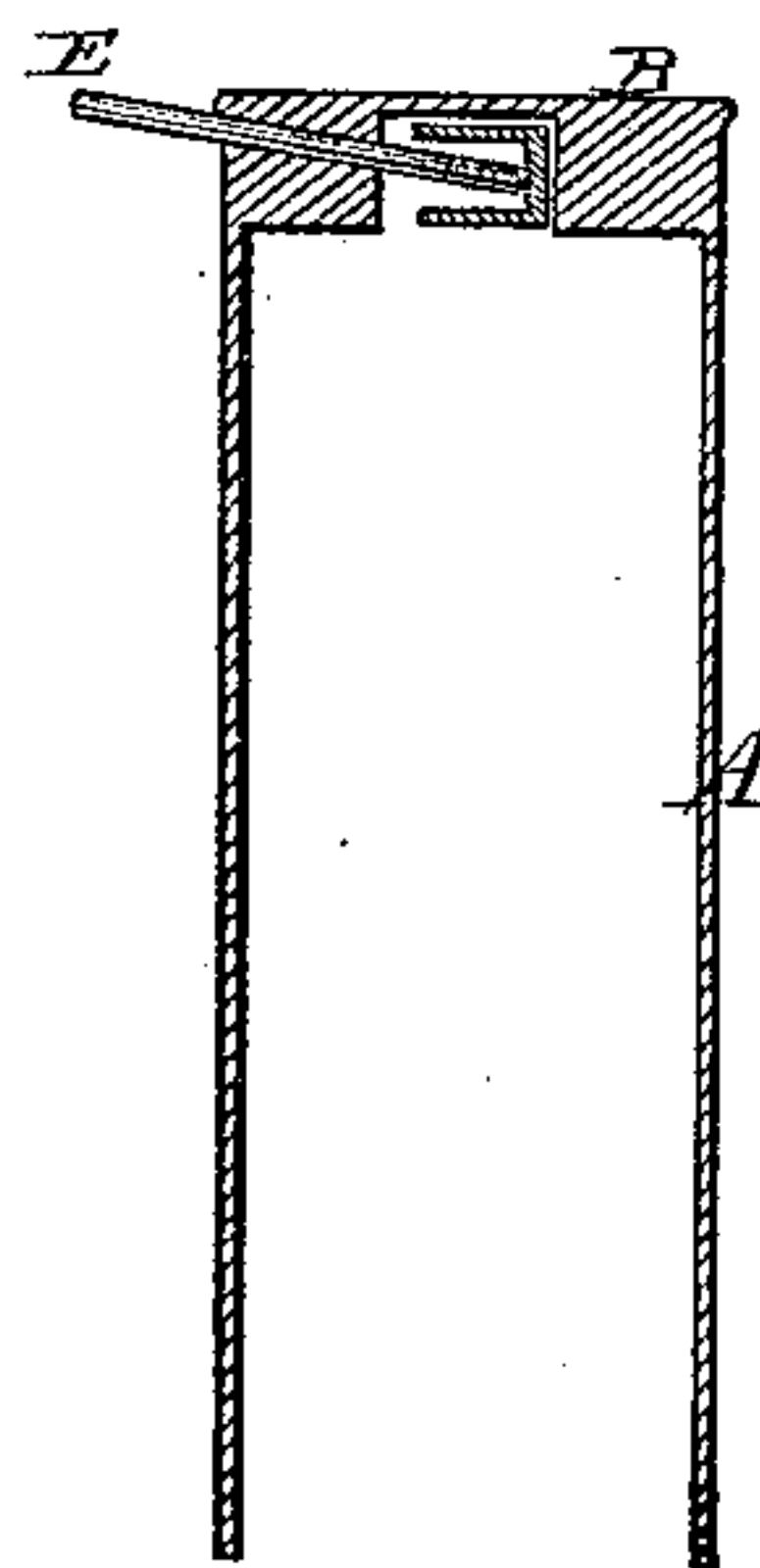


Fig. 4.



Witnesses.

Chas. H. Poole
Saml. J. Marr

Inventor.

William H. Smith
by Randle & Dyer

Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM H. SMITH, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 99,721, dated February 8, 1870.

To all whom it may concern :

Be it known that I, WILLIAM H. SMITH, of Charlestown, in the county of Middlesex, and in the State of Massachusetts, have invented certain new and useful Improvements in Cartridges; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a cross-section of the head of my improved cartridge, on the line *xx* of Fig. 2. Fig. 2 is a central longitudinal section of the same, on the line *yy* of Fig. 1. Fig. 3 is a cross-section of an ordinary "pin-fire cartridge," on the line *zz* of Fig. 4. Fig. 4 is a central longitudinal section of the same, on the line *z' z'* of Fig. 3.

Letters of like name and kind refer to like parts in each of the figures.

My invention relates to a class of cartridges in which the cap is exploded by means of a pin passing through the wall of said cartridge into said cap; and it consists in providing within the head of the cartridge a suitable chamber, opening radially outward, for the introduction and reception of the cap, which chamber is closed by means of a screw, the inner end of which forms a seat or anvil for said cap, and upon which it is exploded.

In Figs. 3 and 4 is shown an ordinary pin-fire cartridge, consisting of a shell, A, and head B, the latter of which is provided with a recess, C, for the reception of a cap, D.

The cap D is placed at a right angle with the bore of the cartridge, so that its closed end may rest upon one end, *c*, of the recess, in which position it receives a pin, E, that, passing downward and slightly forward through the shell and head, has its inner end resting within said cap, and against the fulminating compound contained therein, so that a slight blow upon the outer end of the pin will cause said compound to explode.

The above-described cartridge can only be capped while uncharged, and even then the use of machinery is required in performing such operation, so that if, when charged, the cap fails to explode, it is necessary that said charge be removed before supplying a fresh cap, by which means much inconvenience and loss of time are occasioned.

These objections are entirely removed in my improved cartridge, which, as seen in Figs. 1 and 2, consists of a shell, A, head B, recess C, and pin E, as in that hereinbefore described, and, in addition thereto, has provided in and through the head B, opposite to the inner end of the pin E, a circular opening, F, having a sufficient size to freely admit the cap D, through which opening said cap may be introduced into and placed in position within the recess C.

The opening F is closed by means of a plug, G, having upon its outer end a male screw-thread, corresponding with and fitting into a female screw-thread within the outer edge of said opening, and when in place the inner end of said plug forms an anvil for, and upon which the cap may be exploded.

The plug G is provided with a suitable slot across its lower end, for the reception of a screw-driver; but as the only office of the screw is to keep the plug from falling out of the cartridge, when the latter is removed from the gun, said plug may be so loosely fitted as to allow of its removal from the opening by means of a penknife, or a finger-nail, even.

As thus constructed, it will be seen that the cartridge at any time may be capped, or the cap removed therefrom for safety, when desired, without in the least disturbing the charge, by which means great convenience, economy, and safety result.

Having thus fully set forth the nature and merits of my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a pin-fire cartridge, an opening passing radially through the wall thereof into the recess for the reception of the cap, and closed by means of a removable plug, so that said cap may be placed in position within said cartridge, or removed therefrom, after the same is charged, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of December, 1869.

WM. H. SMITH.

Witnesses:

ROLLINS SMITH,
S. S. WILLSON.