J. H. GILL.

Anvil for Cartridge-Primers.

No. 220,472. Patented Oct. 14, 1879.

Fig. 1.

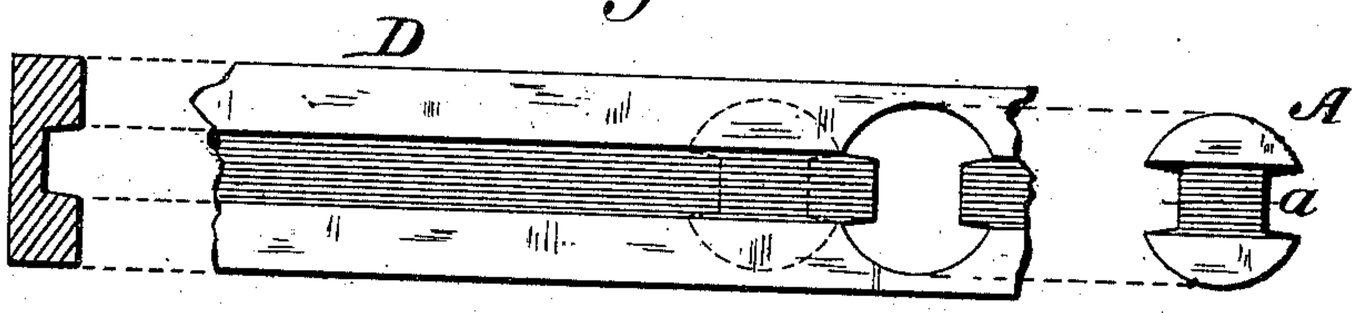


Fig. 2.

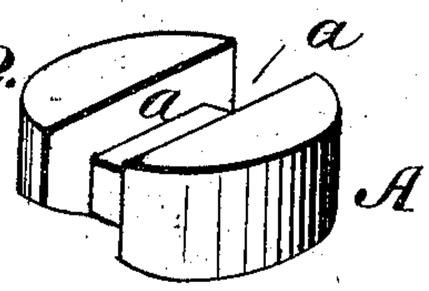


Fig. 3.

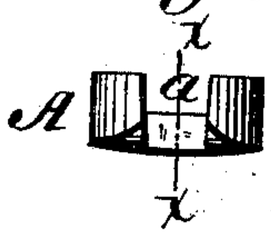


Fig. 4.

Fig. 5.

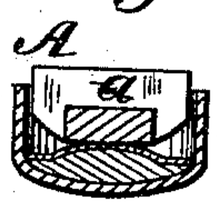


Fig. 6.

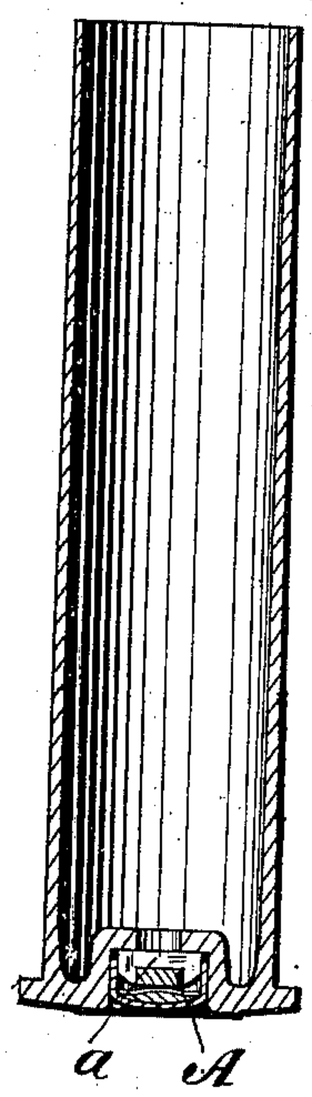
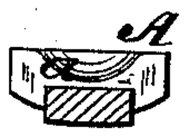


Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE.

JABEZ H. GILL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ANVILS FOR CARTRIDGE-PRIMERS.

Specification forming part of Letters Patent No. **220,472**, dated October 14, 1879; application filed July 29, 1879.

To all whom it may concern:

Be it known that I, JABEZ H. GILL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Anvils for Cartridge-Primers, of which the following is a specification

My invention has reference to that class of anvils which are used in cup-shaped primers or caps. It relates to an improved anvil, consisting of a solid metal disk having a groove formed transversely across one face and through the two edges.

Figure 1 is a view illustrating the form of the strip or blank, the manner in which the anvils are punched therefrom, and the form of the anvil; Fig. 2, a perspective view of the anvil; Fig. 3, an edge view of the same; Fig. 4, a central cross-section of the same on the line *x x;* Fig. 5, a sectional view, showing the anvil in place in a primer; Fig. 6, a sectional view of a cartridge-shell with the primer and anvil in place therein. Figs. 7 and 8 are, respectively, an edge view and a sectional view, illustrating the anvil in a slightly-modified form.

A represents the anvil, consisting merely of a thick solid disk of metal having a groove, *a*, formed across one face from side to side and through or across the two edges to the back. It is designed to fit closely within a cap or primer of ordinary form, and in practice is inserted therein in the manner shown, with its grooved face outward, so that when inserted into a cartridge-shell the groove will afford a free passage for the flame to the vent or opening in the base of the shell.

When the primer is in place the anvil receives a solid support from the shell, and, by reason of its stiffness and peculiar form, it offers a solid surface, upon which the fulminate may be exploded with ease and certainty.

The anvil may be made in a flat form, as represented in Figs. 3, 4, and 5, or it may be slightly dished, and thereby made convex on the back, as shown in Figs. 7 and 8.

The anvils may be made in any suitable way or by any suitable mechanism; but it is preferred to produce them by first rolling or drawing a long strip of metal, D, with a groove in its center, and then punching the anvils therefrom, as represented in Fig. 1, a punch being used which will at the same time that it cuts out the body of the anvil form the extensions of the groove through the edges.

I am aware that anvils have been made in a great variety of forms, and that many of them were of such form that when in place passages existed in the cartridge for the transmission of the flame to the powder; but I am not aware that any one has hitherto produced a circular-disk primer with a groove carried directly across its front face and backward through the edges.

My primer is advantageous in that it is exceedingly cheap, that it affords a solid support for the fulminate, that it is applicable to all externally-recessed shells, and that it permits the flame to pass in a short and direct course to the powder.

Having described my invention, what I claim is—

The herein-described anvil, consisting of a circular disk of metal provided with a groove extending directly across its face and backward through the edges, as shown.

JABEZ H. GILL.

Witnesses:
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