

(No Model.)

J. GARDNER.
Primer for Cartridges.

No. 230,412.

Patented July 27, 1880.

Fig. 1

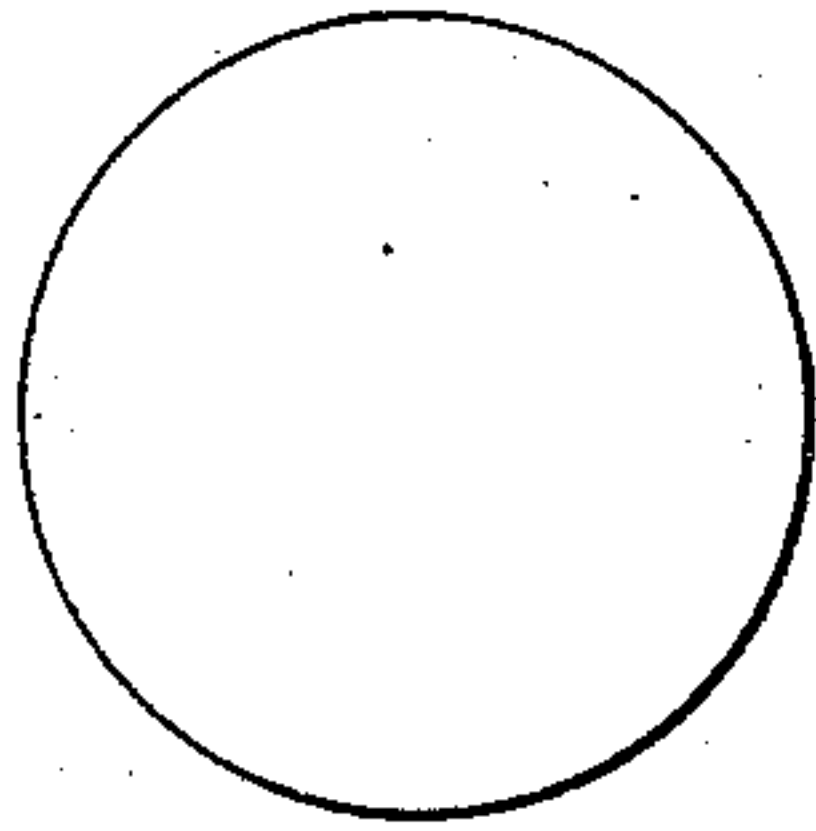


Fig. 2.

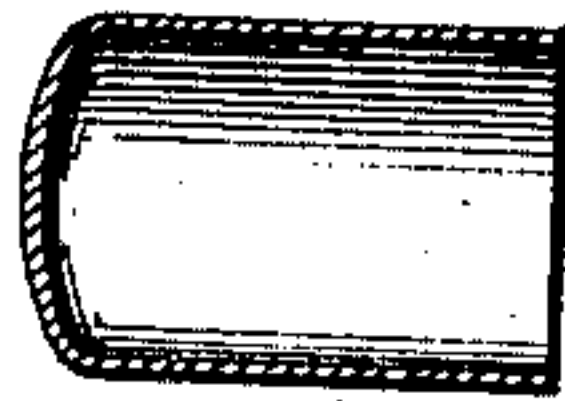


Fig. 3.



Fig. 4.

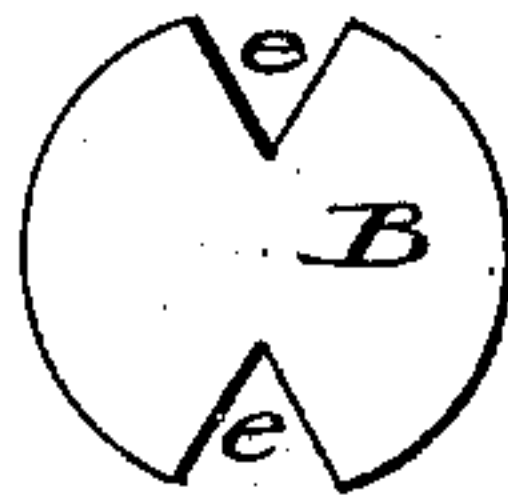


Fig. 5.

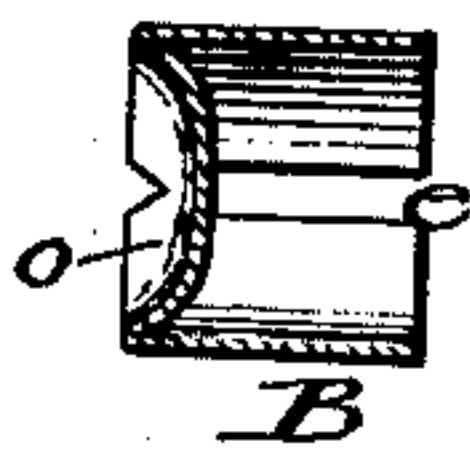


Fig. 6.

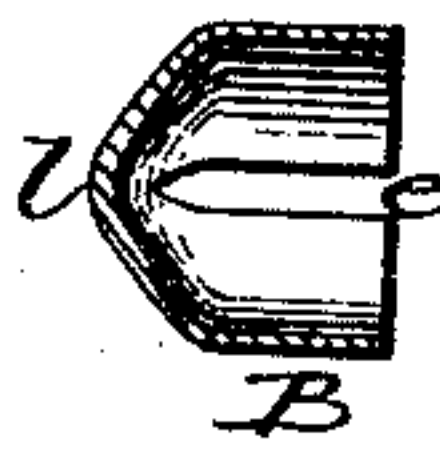


Fig. 7.

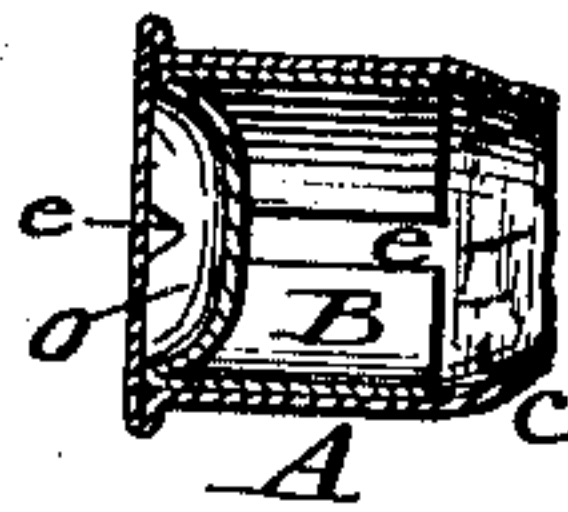


Fig. 8.

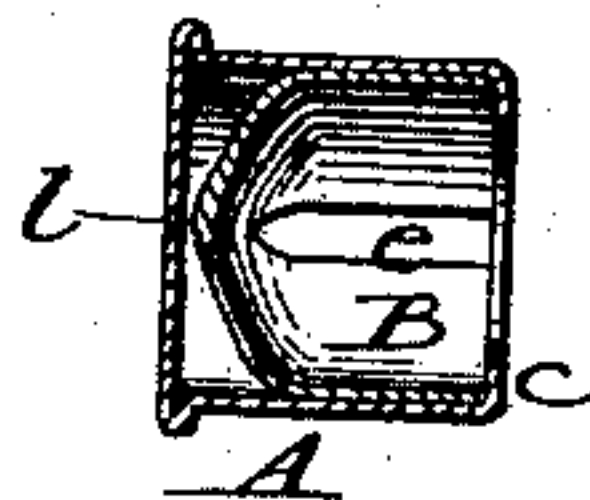


Fig. 9.

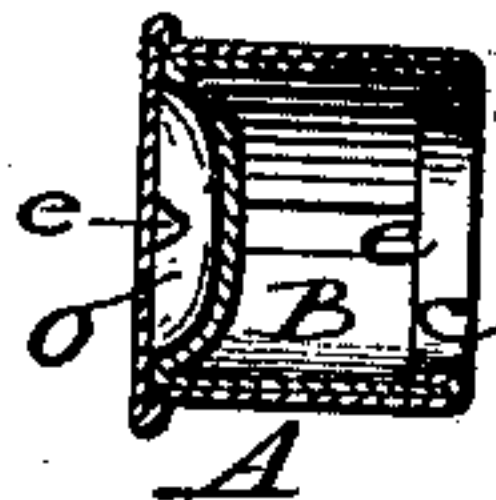


Fig. 10.



Attest.

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UNITED STATES PATENT OFFICE.

JOHN GARDNER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

PRIMER FOR CARTRIDGES.

SPECIFICATION forming part of Letters Patent No. 230,412, dated July 27, 1880.

Application filed June 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN GARDNER, of New Haven, in the county of New Haven and State of Connecticut, have invented certain
5 Improvements in Primers for Cartridges, of which the following is a specification.

My invention relates to primers for cartridges; and the invention consists in forming the anvil of a tubular or cap-shaped piece,
10 inserting it within the primer, and securing it there by turning the edge of the cap over its edge, all as hereinafter more fully set forth.

Figures 1 to 9, inclusive, represent the primer in its various stages of construction and
15 enlarged threefold in order to more clearly show its construction. Fig. 10 is a side elevation of the primer complete of the natural size.

The object of this invention is to produce a
20 primer which will require but little stock in its construction, and which shall have its anvil permanently secured to the cap of the primer, so that the primer may be used in cartridge-shells which have no pocket, as well as
25 in those which are made with a pocket.

To construct a primer on my plan, I first form the body or cap A by drawing it up from a disk of sheet metal, the same as is done in the manufacture of cartridge-shells, and if it
30 is designed to be used with cartridge-shells which have no pockets I form a flange on it, as shown in Fig. 3, Fig. 1 representing the disk before, and Fig. 2 after, it has been drawn up into the cup form. I then construct the
35 anvil B by taking a somewhat smaller disk of metal having two or more notches, *e*, cut in its edges, as represented in Fig. 4, and draw it up into the form of a cup, and of such a diameter that it will fit within the outer case or
40 cup, B. This anvil may have its closed end indented to form a recess, *o*, to receive the fulminate, as represented in Fig. 5, or it may be arched, so as to form a central projecting point, *l*, as represented in Fig. 6, as may be
45 preferred.

It will be observed that when the disk, Fig. 4, is cupped the V-shaped notches *e* will form slots or openings in its sides, which will extend up to the point where the fulminate rests,
50 thus providing vents for the passage of the

flame from the fulminate to the powder in the cartridge-shell, as shown in Figs. 7, 8, and 9.

In case the form of anvil shown in Fig. 5 is adopted, the fulminate will be placed in the
55 recess *o* in the head of the anvil; but in case the form shown in Fig. 6 is adopted, then the fulminate will be placed in the bottom of the case A. In either case, after the fulminate has been applied, the anvil B is inserted within
60 the case A, as represented in Fig. 7, after which the projecting edge *c* of the case A is drawn inward, bent over, and finally folded over the edge of the anvil B by successive
65 steps, as shown in Figs. 7, 8, and 9, the latter showing it as left when finished.

It will be seen that by this method of constructing and uniting the parts the walls of the anvil will rest against and be supported
70 by the surrounding wall of the case A, so that a much thinner and lighter piece of metal will suffice for the anvil, and that by the folding over of the edge of the case A in the manner shown the anvil will be held firmly in place,
75 so as to resist the blow of the hammer or firing-pin, and cannot be driven out into the barrel of the gun nor become displaced in handling.

By making the primer with the flanged head it can be used in cartridge-shells which are simply provided with a hole instead of the
80 usual pocket, thus saving both stock and labor in the formation of the shells. It can also be used to advantage in shells which have a very thin and weak pocket, as the walls of the primer serve to re-enforce the walls of the pocket
85 and prevent them from being ruptured.

If it be desired to use this style of primer in the ordinary cartridge-shells, which are provided with the usual pocket, then the flange
90 on the primer may be omitted, or the mouth of the pocket may be formed with a recess to receive the flange of the primer, as may be preferred. By constructing it without the flange it will be adapted to be used in shells
95 already made in the usual manner; and I therefore propose to make it either with or without the flange, to suit the various styles of shells.

I am aware that primers have been made with anvils of various forms secured to the
100 cap by crimping the edge of the cap over the

outer face of the anvil, as in Patents No. 99,899 and No. 148,532, and therefore I do not claim such; but

What I do claim is—

- 5 A primer consisting of the cap A, with the cup-shaped anvil inserted therein, with its open end or mouth outward, the parts being

fastened together by having the edge of the cap folded over the edge of the anvil, as shown and described.

JOHN GARDNER.

Witnesses:

DANIEL H. VEADER,
EDW. Z. DOW.