

No. 695,996.

Patented Mar. 25, 1902.

C. A. BAILEY.
CARTRIDGE.

(Application filed Aug. 28, 1899.)

(No Model.)

Fig. 1.

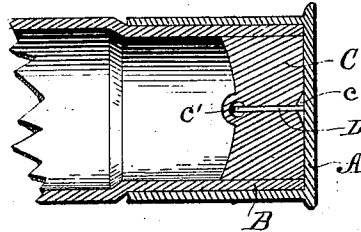


Fig. 2.

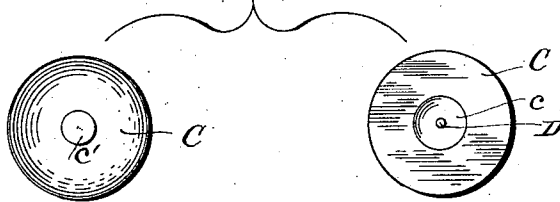
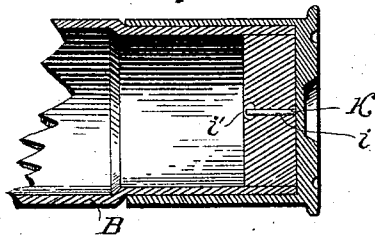


Fig. 3.



Witnesses:-

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CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 695,996, dated March 25, 1902.

Application filed August 28, 1899. Serial No. 728,735. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BAILEY, a citizen of the United States, and a resident of Cromwell, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Cartridges, of which the following is a specification.

The central-fire cartridges in general use are provided with openings through the head or breech to receive the ordinary primer, and when such cartridges are exploded there is an escape of gas through said opening, and though attempts have been made to overcome this objection by reducing the thickness of the head at the center and placing the fulminate on the inner side thereof such attempts have not been entirely successful, owing to the fact that the force of contact of the firing-pin of the firearm results in puncturing the head or causing it to break. The gas which escapes through the head of the cartridge enters the lock-casing of the firearm and results in corroding the lock mechanism and impairs the proper operation of the same.

The object of my invention, therefore, is to provide a central-fire cartridge with a peculiar priming device that will effectually prevent the escape of gas at the breech, said device consisting of a pin let into an opening through a breech-block in the cartridge and so disposed that it will be struck by the firing-pin of the firearm and explode the fulminate at the outer end of said breech-block, the said auxiliary firing-pin fitting the opening in the breech-block very closely in order to prevent an escape of gas through the same.

The invention also consists in certain details of construction relating more especially to the disposition of the fulminate in connection with the auxiliary firing-pin to insure a proper ignition of the powder charge within the cartridge.

The invention is fully described in the following specification in connection with the accompanying drawings, and what I desire to fully protect by Letters Patent is more specifically set forth in the appended claim.

In the drawings which form a part of this specification, and in which like letters of reference indicate similar parts throughout the

several views, Figure 1 is a longitudinal sectional view of a cartridge provided with my improved priming device. Fig. 2 shows detail end views of the breech-block illustrated in Fig. 1. Fig. 3 is a sectional view of a cartridge, illustrating a modification of the breech-block.

The essential feature of my improved cartridge is the provision of an auxiliary firing-pin which is located in the breech-block and movable therein, one end of said pin being covered by the head of the cap, while the other end is adapted to strike off the fulminate, the latter being so located that it will ignite the powder charge of the cartridge.

Referring now more particularly to the drawings, A designates the metal cap of the cartridge, B the paper tube, and C the breech-block. In carrying out my invention the breech-block C is provided centrally with an opening *c*, extending into the same and terminating within a teat or projection *c'*, formed at the center of the inner side of said breech-block, the wall of the teat or projection being comparatively thin for the purpose hereinafter explained.

D designates the firing-pin of the cartridge, which fits snugly in the opening *c* of the breech-block C, with its inner end against the fulminate and the outer end so disposed that it may be struck and cause a movement of the pin to explode the fulminate. It will be understood that the explosion of the fulminate bursts the teat and ignites the powder charge of the cartridge, the wall of the teat being thin for this purpose, as hereinbefore mentioned. The head of the cap A may be thin, as shown in Fig. 1, so that it will give when the firing-pin of the firearm strikes on a line with the firing-pin of the cartridge and impart a sharp movement to said auxiliary firing-pin, and where a thick head is employed for the cap, as illustrated in Fig. 3, such a head is countersunk to provide a thin wall on a line with the auxiliary firing-pin. It is also apparent that the breech-block could be countersunk around the outer end of the firing-pin in order to insure the desired movement of said pin. Though the breech-block and parts carried thereby are shown in Fig. 1 as applied to a paper-tube cartridge, they could

be applied to any other form of cartridge, my idea being to explode the fulminate at the inner end of the breech-block by means of a pin located in the center of said breech-block, the
5 said pin fitting snugly, so that there will be no escape of gas through the rear end of the cartridge.

In the construction shown in Fig. 1, hereinbefore described, the teat or projection at the
10 inner side of the center of the breech-block is an integral part of said breech-block, and it is therefore contemplated to make the latter of wood, though papier-mâché or other suitable material may be employed. In case
15 a metal breech-block is employed the teat should be provided with openings to permit the flash of the fulminate to escape into the powder-chamber of the cartridge.

The modification illustrated in Fig. 3 is similar to the construction illustrated in Fig. 1,
20 with the exception that the teat or projection is dispensed with and the opening for the firing-pin continued through the breech-block, the said opening *i* being slightly contracted
25 at its inner end, as shown at *i'*, in order that the fulminate which is placed in this end of

the opening will be struck off by the firing-pin K striking the same.

The particular priming device hereinbefore described provides for forming an improved
30 central-fire cartridge which will possess decided advantages over the ordinary style of cartridges of this class and can be produced at little or no additional expense.

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

In a cartridge, the combination with the cap, of a breech-block C having an opening extending through the center from the inner
40 end of said breech-block and terminating in a recess forming a thin wall at the outer end of said breech-block, the fulminate being applied on the inner side of said thin wall; together with a firing-pin fitting the opening
45 closely and abutting against the fulminate and head of the cap, as herein shown and described.

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Witnesses:

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