

(No Model.)

W. GARDNER.
CARTRIDGE.

No. 304,926.

Patented Sept. 9, 1884.

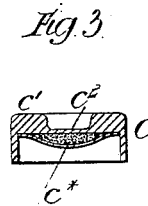
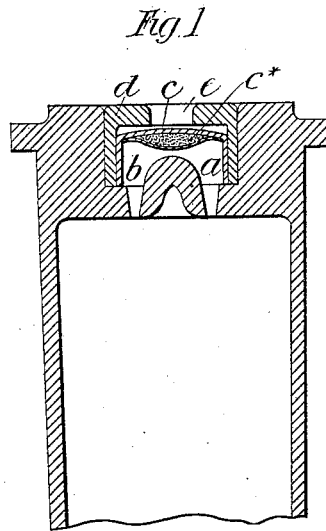


Fig. 2

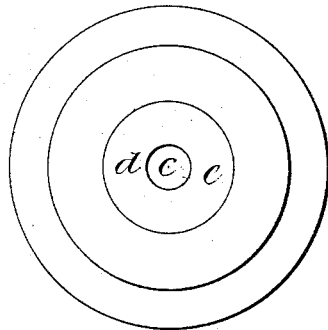
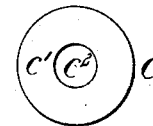


Fig. 4



Witnesses
J. A. Lutherford
Robert Emmett

Inventor:
William Gardner.
By James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM GARDNER, OF LONDON, ENGLAND.

CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 304,926, dated September 9, 1884.

Application filed April 18, 1883. (No model.) Patented in England February 9, 1883, No. 724.

To all whom it may concern:

Be it known that I, WILLIAM GARDNER, of London, England, engineer, have invented new and useful Improvements in Cartridges for

5 Breech-Loading Fire-Arms, (for which I have obtained a patent in Great Britain, No. 724, bearing date February 9, 1883,) of which the following is a specification, reference being had to the accompanying drawings.

10 My invention relates to cartridges for breech-loading fire-arms, and is designed to provide means whereby the firing of such cartridges by any instrument other than those especially provided therefor will be impossible.

15 The said invention is more especially designed for the protection of cartridges used in magazine-guns, so that neither of the cartridges in the magazine can be accidentally fired by the impact of the cartridge lying behind it. I thus obviate an element of danger

20 in the use of these arms, and provide the means for preventing in future fatal or even serious accidents from the above-named cause. The said invention consists, essentially, in

25 providing a guard, shield, or protector, which is placed outside or above the cap or priming in the cavity or recess containing the same. This shield or guard has sufficient strength to resist a blow or pressure from a blunt object—

30 such as the end of a projectile or bullet—but is perforated or reduced in thickness at the center, so that the pin or needle provided in the gun for the purpose of firing the cartridge will, when driven forward by the hammer or other

35 device used for firing the gun, easily penetrate the said shield and strike the cap or priming. In the accompanying drawings I have shown two examples of my invention.

40 Figure 1 is a longitudinal central section of one kind of cartridge, and Fig. 2 is an end view of the same. Fig. 3 is a longitudinal section, and Fig. 4 an end view, of the cap of a cartridge constructed according to a modification of my invention hereinafter described.

45 Like letters indicate the same parts in all of these figures.

My invention may be applied to any kind or class of metallic cartridges, or to cartridges with a metallic base. For example, in a cartridge constructed with what is known as the

formed by raising or striking up the metal, as shown at *a*, Fig. 1, at the bottom of a recess or cavity, *b*, in the base of the cartridge, or in a cartridge where an anvil is provided by fixing

55 a piece of metal in the said cavity—I place a cap or primer, *c*, formed of very thin metal, in the cavity *b*, surrounding the said anvil, and I place over this cap the aforesaid shield or guard, (shown at *d*.) It will be seen that this shield *d* is substantially of the same shape as the cap *c*, and extends to the bottom of the said cavity, its outer surface lying flush, or nearly so, with that of the base of the cartridge. The said shield has at its center, or that part which corresponds in position with the priming or fulminate *c** in the cap, a hole, *e*, sufficiently large to admit the firing pin or needle; or, instead of a hole, I in some cases attenuate the center of the guard or shield *d*—that is to say, I form a

60 central recess or cavity in the said guard or shield, leaving a slight thickness of metal, which will not practically offer any resistance to the entrance of the firing pin or needle, which will be driven through the same to strike

65 the cap or priming. I modify this device by using, in some cases, a protector or shield in the form of a simple flat plate or disk placed over the cap or primer *c* in the cavity *b*, the said disk having a central

70 hole formed in it, or having its center attenuated or reduced in thickness, as and for the purpose above described. In some instances I dispense with the separate external shield or protector, *d*, and construct the cap to serve as the protector of the priming. For this purpose I make the top or end portion of the cap of thick metal, as shown at *c'* in Figs. 3 and 4, so that it will not be practicable to compress or force in the same by a

75 blow from another projectile or other object to which the cartridge is likely to be subjected; but I attenuate the center of the cap or form therein a cavity or recess at *c**, leaving only a slight thickness of metal at this part to hold and cover the priming *c**, but not sufficient to prevent or obstruct the entrance of the firing-pin when driven forward in the act of firing the gun.

My invention is applicable not only to the manufacture of new cartridges, but to old or existing metallic cartridges of any kind, wheth-

er the same are to be used for magazine-arms or for rifles, pistols, mitrailleuses, or other guns.

What I claim is—

- 5 1. A cartridge provided with a shield or guard for protecting the cap or priming against an accidental blow or impact, the sides of said shield extending to the bottom of the cavity in the end of the cartridge for the priming, and its outer surface covering the top of the cap or
10 priming and lying flush, or nearly so, with that of the base of the cartridge, and provided with a central hole or attenuated portion, substantially as described.
- 15 2. A shield for protecting the cap or priming of a cartridge against an accidental blow or impact, formed with an end covering the cap or

priming of sufficient strength to resist pressure from a blunt object, and attenuated or perforated to permit its penetration by a sharp point, and having sides, the outer surfaces 20 whereof extend in a straight line from their lower edges to the top surface of its outer end, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing 25 witnesses.

WILLIAM GARDNER.

Witnesses:

J. WATT,

JNO. DEAN,

Both of 17 Gracechurch Street, London.