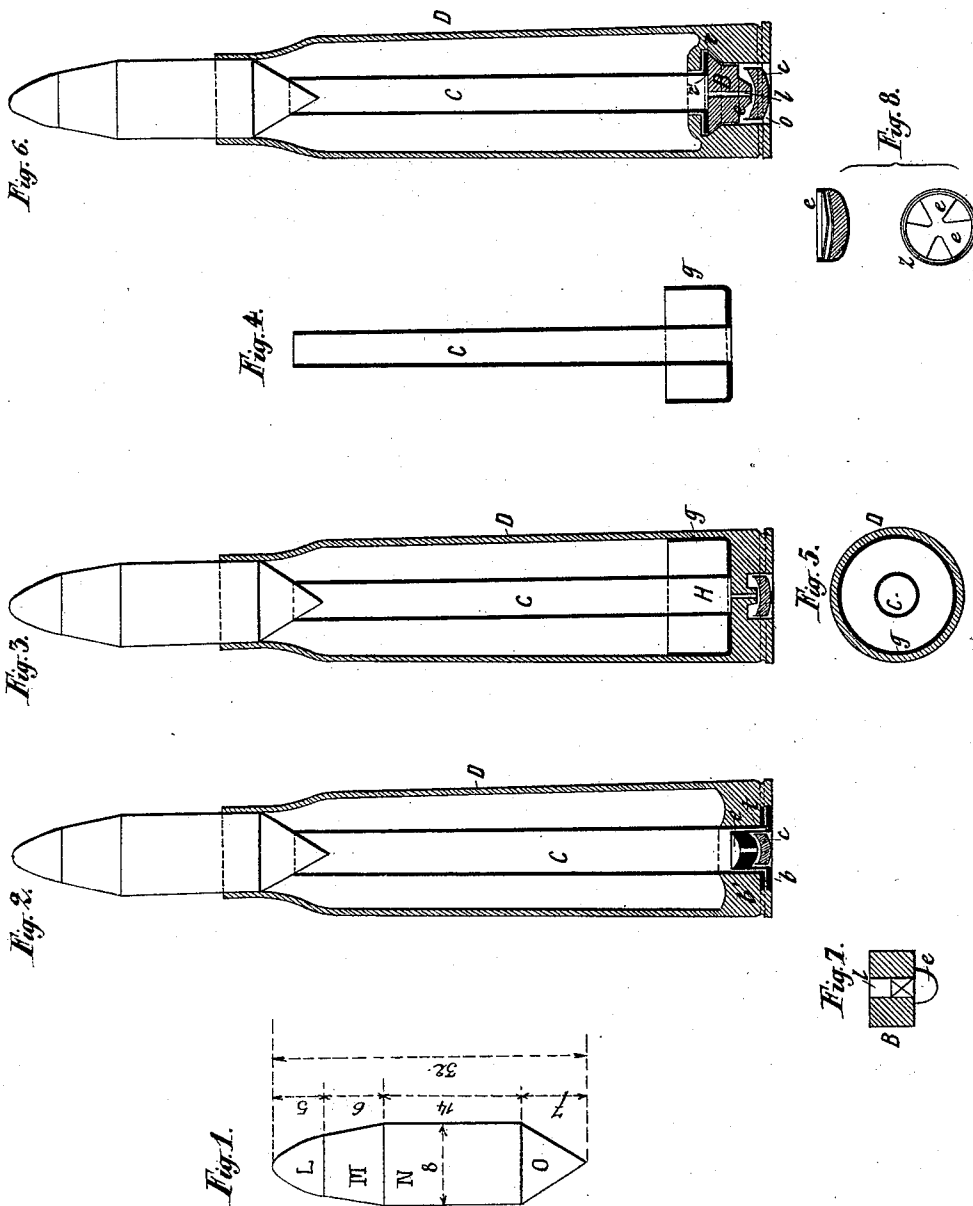


(No Model.)

U. MARGA.
CARTRIDGE FOR FIREARMS.

No. 483,656.

Patented Oct. 4, 1892.



Witnesses:

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CARTRIDGE FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 483,656, dated October 4, 1892.

Application filed January 27, 1892. Serial No. 419,482. (No model.) Patented in England July 17, 1891, No. 12,199; in Germany July 30, 1891, No. 10,494, and in Spain October 29, 1891, No. 12,637.

To all whom it may concern:

Be it known that I, ULDARIQUE MARGA, lieutenant of infantry, of 57 Rue St. Georges, Brussels, in the Kingdom of Belgium, have
5 invented new and useful Improvements in Cartridges for Firearms, (for which no patent has been obtained in any country except in Great Britain July 17, 1891, No. 12,199; in Germany July 30, 1891, No. 10,494, and in
10 Spain October 29, 1891, No. 12,637,) of which the following is a specification.

My invention relates to cartridges for firearms.

The improved cartridge constructed according to the said invention comprises a bullet
15 presenting a new shape, an outer case having a base, a projection or little anvil, a central hole, a percussion-cap, and a groove combined with a small flange, an interior hollow cylinder
20 with devices which serve for fixing it to the bottom of the outer case, and a charge of powder divided into two parts.

In the accompanying drawings some of the principal methods are shown.

25 Figure 1 represents the bullet; Fig. 2, a cartridge in longitudinal section with the mode of fixing the tube; Fig. 3, a cartridge with another mode of fixing; Figs. 4 and 5, details of Fig. 3; Fig. 6, a cartridge with a third modification for fixing the inner cylinder or tube;
30 and Figs. 7 and 8 are details of this system.

The bullet shown in Fig. 1 has a front part L, of a length of about five millimeters, which is truncated and has an ogival point, a truncated part M, having a length of about six
35 millimeters, a cylindrical part N, having a length of about fourteen millimeters, and a conical part O, having a length of about seven millimeters. The bullet thus constructed presents the following advantages: In the firing
40 it engages gradually and without a shock with the flutes of the firearm, encounters less resistance during its trajectory in the air, and facilitates the penetration. As the cylindrical part is of a diameter equal to that of
45 the firearm taken at the base of the flutes, the resistance which the bullet encounters in the gun will be considerably diminished. The aforesaid conical part O facilitates the outlet of air and renders the movement of the bullet
50 more regular by obviating the gyrating move-

ment which is produced in the air during the passage of bullets which do not possess this form at the rear. Among other inconveniences, these gyrating movements exert a retarding action upon the projectile and tend
55 to throw it out of the firing plane. With the improved bullet above described these inconveniences disappear. Moreover, the bullet inserted with its cylindrical part N in the collar of the outer case of the cartridge D, as
60 shown in Fig. 2, extends with its conical part O into an inner cylinder C, thereby realizing the advantages hereinafter set forth.

The outer case of my cartridge presents the
65 general form of ordinary cartridges, but offers the advantage of having a circular groove combined with a small flange, which affords easy extraction and complete obturation. The interior cylinder or tube is fixed to the base
70 in any manner the manufacturer may desire.

In one arrangement of the improved cartridge (shown in Fig. 2) I employ a short tube t, presenting interiorly a projection or little
75 anvil e and at its end a flange b. Upon the said projection or anvil e is placed a percussion-cap c. This short tube forms a plug and is tightly inserted in the extremity of the aforesaid inner tube or cylinder C in such a
80 manner that the said flange b on the plug bears upon a similar flange b' on the cylinder. The whole is fixed by pressure in the base of the outer case D of the cartridge.

In another arrangement (represented in Figs. 3, 4, and 5) the said inner tube or cylinder C is fixed in a cup g, having a diameter
85 equal to the interior diameter of the aforesaid outer case D. This cup is pierced with a central hole which corresponds to the central aperture in the projection or anvil provided in the base of the outer case. The said
90 cup carrying the inner cylinder is fixed by pressure upon the interior bottom surface of the case, so that in the firing the fire will be communicated at first only to the powder contained in the cylinder or tube.
95

A further modification (shown in Fig. 6) has for its object to obviate in the most efficacious manner possible an escape of gas
100 through the base at the time of the deflagration of the powder and enables the manufacture of this cartridge to be carried on under

the simplest and most economical conditions. For this purpose I form a circular opening *o*, having a diameter equal to that of the percussion-cap *c* in the base of the said outer case D. Above this opening I provide a circular groove *r*, above which the opening has a smaller diameter than that of the percussion-cap *c* and presents a flange against which bears a flange *r'* on the tube or cylinder C, introduced into the said case through the base and fixed in its place by pressure.

For the purpose of forming a solid whole, plug B, introduced by pressure into the circular opening *o*, bears upon the flange *r'* of the inner tube or cylinder C. At the same time the pressure will force the metal of this plug into the circular groove *r*, so as to prevent the escape of gas through the base and form one piece with the outer case. The plug B terminates in a projection or little anvil *e* and is pierced with a hole *l*. The ward or anvil can be made separately, in which case it carries a rod of square section, so as not to fill up the hole into which it is introduced by pressure.

Instead of being formed upon the plug B, the ward or anvil may also be provided directly in the percussion-cap *c*, as shown in Fig. 8. In this case the plug is a simple disk pierced with holes. With cartridges such as are employed in large guns the plug B may be screwed into the base of the outer case D, or even form one piece with the inner tube or cylinder C.

This improved cartridge can be easily manufactured at a small cost and readily used in either portable or other firearms, irrespective of their construction.

By dividing the charge of powder into two entirely separate parts I realize the following advantages: When under the action of the hammer of the firearm the priming sets fire to the charge, the powder in the interior case is ignited alone; but as this case is closed above by the conical part of the bullet the latter will engage with the gun before the fire can be communicated to the second part of the charge. The space thus enlarged be-

fore the complete deflagration of the total charge enables the gases resulting from the deflagration to be produced in larger volume, and consequently the pressure upon the sides of the firearm is diminished in the same proportion and the whole useful effect of the gases is brought to bear upon the projectile during its passage through the gun. Moreover, the mechanical action upon the sides of the firearm being less the heating of the same is considerably diminished. Furthermore, by setting fire to the charge in this manner the instantaneous force produced by the deflagration of the powder is changed into progressive force, the movement which it imparts to the projectile being necessarily modified in consequence. From this results that the initial velocity, the range, and the penetration are further increased.

This cartridge enables the employment of very strong powder in large quantities. The inner cylinder may be pierced with holes near the top, in order to hasten the deflagration of the powder contained in the outer case.

I claim—

1. The combination, in a cartridge, of an outer shell having a recessed base, an interior flanged tube engaging the base, and a plug fitting in the recess and engaging the inner tube, said plug carrying the anvil, substantially as described.

2. A cartridge for firearms, consisting of an outer shell having a recessed base, an interior flanged tube engaging said base, a plug B, fitting the recess and clamping the flange of the inner tube, and a cap located in the recess below the plug, substantially as described.

3. A cartridge consisting of an outer case, an inner tube of less length than the outer tube, a bullet having a conical point engaging the inner tube, a cylindrical part held by the walls of the outer shell, a truncated part M, and a projecting ogival point, substantially as described.

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Witnesses:

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