

G. LUGER.
CARTRIDGE HAVING MULTIPART PROJECTILES.
APPLICATION FILED MAR. 5, 1906.

926,431.

Patented June 29, 1909.

FIG. 1.

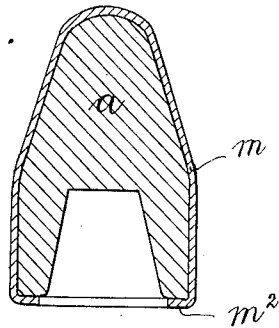


FIG. 2.

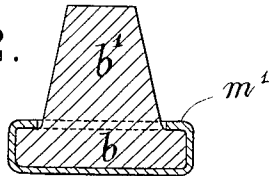


FIG. 3.

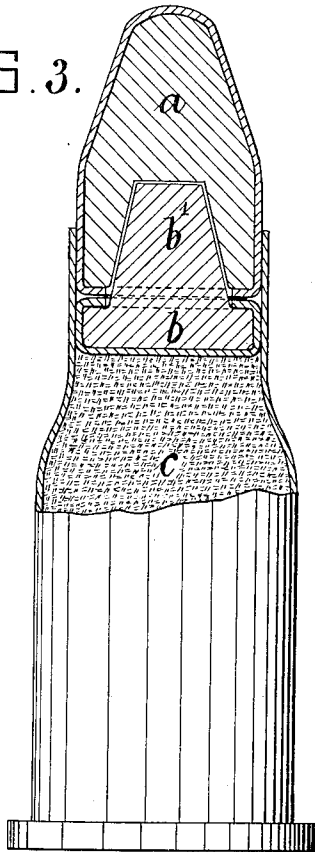


FIG. 4.

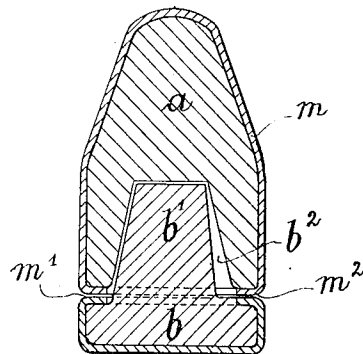
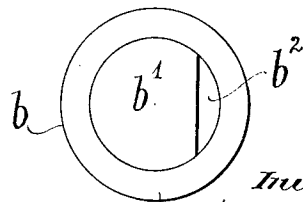


FIG. 5.



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Witnesses

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UNITED STATES PATENT OFFICE.

GEORG LUGER, OF CHARLOTTENBURG, GERMANY.

CARTRIDGE HAVING MULTIPART PROJECTILES.

No. 926,431.

Specification of Letters Patent.

Patented June 29, 1909.

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To all whom it may concern:

Be it known that I, GEORG LUGER, a subject of the Emperor of Austria-Hungary, residing at 28 Weimarerstrasse, Charlottenburg, Germany, have invented new and useful Improvements in Cartridges Having Multipart Projectiles, of which the following is a specification.

This invention relates to that class of projectiles in which a cartridge is provided with a plurality of bullets which take separate flights, the variations in size and weight of the respective bullets causing them to take different trajectories terminating in approximately the same zone and thus increasing the chance of hitting the target or other object.

The objects of the invention are to improve the construction of the respective bullets so as to insure their separate trajectories, and also to provide means for insuring the prompt separation of the bullets without creating a retarding force.

In the accompanying drawing, Figures 1 and 2 show vertical sectional views of two bullets designed to be contained in a cartridge case, the entire projectile being illustrated in Fig. 3. Figs. 4 and 5 show a vertical section and plan view, respectively, of a modified form of embodiment.

Referring to the drawing *a* designates the forward bullet or projectile proper. This is designed to act upon being impelled from a firearm exactly like the usual single bullet, being contained in a cartridge case or shell *c* of the ordinary or any preferred construction, and of such form and weight as are best adapted to insure a precision shot. The bullet is designed to rotate in its flight by reason of the twist in the bore of the firearm. The bullet *a* is shown formed with a rounded extremity although it may obviously be of ogival formation if desired. Its inner or rear end is formed with a central axially-extended slightly tapered recess or chamber, while an inclosing jacket *m* of steel, nickel or other hard metal, incloses the outer surfaces of the bullet and overlaps the edge of the inner end thereof as at *m'*. The center of gravity of the bullet *a* is well toward its outer or forward extremity.

The auxiliary bullet *b* is formed with a central tapering post or projection extending forwardly and designed to fit in and be accommodated by the recess of the bullet *a* when the two are positioned within a cartridge shell, as shown in Figs. 3 and 4. The

inner or rear body portion of the bullet *b* is of diameter corresponding to that of the inner end of bullet *a* and this body is inclosed by a hard metallic jacket which overlaps the edge or shoulder of the outer or forward face, as at *m'* to about the same extent as the jacket *m* overlaps the edge of the inner or rear face of the bullet *a*. The center of gravity of the bullet *b* is thus at the rear or what I have termed the body portion thereof. The post or projection of bullet *b* constitutes a piercing contact in addition to its office of holding the two bullets in the desired relative positions. This post, however, does not cause the parts to bind together but enables them to readily separate.

From the foregoing it will be apparent that the differences in the relative locations of the centers of gravity of the two bullets will cause them to take differing trajectories, that of the bullet *b* having, in practice, a tendency to deviate laterally from the trajectory of bullet *a* owing to the air resistance on the front shoulders, while the bullet *a* or projectile proper will follow the trajectory of the precision shot.

It is of importance to the successful operation of projectiles of this type that the bullets shall separate promptly and with certainty and thus avoid their retardation. This is not always possible owing to the fact that in the firing the two bullets become jammed together. By my invention this difficulty is successfully obviated. The overlapping parts of the hard metallic jackets of the two bullets constitute abutting surfaces which successfully resist the impact following the firing of the arm.

In Figs. 4 and 5 I have shown the circular post or projection of bullet *b* with a segment cut therefrom forming a flat surface *b'*. The purpose of this is to promote the deviation of bullet *b* from the trajectory of bullet *a* by imparting an eccentric gyratory movement.

While I have illustrated the cartridge provided with but two bullets, it is obvious that any number may be employed, each of the bullets in the rearward succession having such disposition of weight as to insure its separate trajectory.

I claim as my invention:

1. In a projectile, a cartridge shell, and a plurality of bullets contained therein designed to gyrate in their flights, the forward bullet having a recess at its inner end and a contact surface surrounding said recess, and

the next succeeding bullet having a forward post or projection fitted in said recess and having an angular shoulder surrounding said post and designed to bear against said contact surface.

2. In a projectile, a cartridge shell, and a plurality of bullets contained therein designed to gyrate in their flights, the forward bullet having a recess at its inner end and a metallic jacket inclosing said bullet and overlapping the edge of the inner end thereof, and the next succeeding bullet having a forward post or projection fitted in said recess and having a peripheral shoulder at the base of said post, and a metallic jacket inclosing said second bullet and overlapping the forward edge of said shoulder.

3. In a projectile, two bullets in tandem

arrangement, the forward bullet having a circular tapered bore at its inner end, and the second bullet having a circular conical post fitting in said bore, the circularity of said post being interrupted by a flat surface, whereby a recess is provided between said post and the wall of said bore.

4. In a projectile of the class described, a shell or casing, two bullets therein in tandem arrangement and abutting surfaces of hard metal intermediate said bullets

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORG LUGER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.