

# EXPLOSIVE BULLETS OF THE CIVIL WAR

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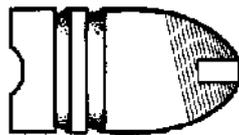


*Battles and Leaders*

## INTRODUCTION

In most conflicts since the creation of man, opposing armies have tried, at one time or another, to use devious weapons to destroy or demoralize their adversaries. It has always been difficult to substantiate the use of such techniques after the cessation of hostilities because in general, those who used them destroyed the evidence that the morality of the moment condemned. A contemporary example is the massive use during the Vietnam War of hunting cartridges loaded with steel darts (in total contradiction with the Geneva Convention) that are today eagerly sought after by cartridge collectors. During the Civil War, both sides used explosive bullets but refused to admit it.

It is important to distinguish between so-called “expansive” and “explosive” bullets. An expansive or fragmentation bullet is a projectile whose nose incorporates a small cavity. Often for aerodynamic purposes, this cavity is sealed by a thin capsule made of brass or copper. This type of projectile is frequently used for big game hunting, but its definition sometimes leads to confusion. At the end of the Indian Mutiny in the late 19<sup>th</sup> century, the press wrongly accused the British of having used so-called “dum-dum” bullets. Dum-Dum was in fact the Indian arsenal that manufactured this type of ammunition. Its functioning is very simple. As the tissues of human beings or animals are in their majority made up of fluids, the penetration in this aqueous environment of a hollow projectile produces an expansion of its nose (one also says that it “mushrooms”). This phenomenon is purely mechanical because, by definition, liquids are incompressible. In contrast, explosive bullets always contain a detonating substance.



*Typical expansive bullet*

The injuries produced by these two types of projectiles can sometimes present similarities. However, the fragments of an explosive bullet found in an injured body are always located in areas that are remote from the initial point of impact.

## CLASSIFICATION

The main idea behind any military invention destined to the infantry is to demoralize the enemy while multiplying the number of its casualties, in other words, to try to wound rather than to kill. Curiously, the explosive bullet does not follow this rule. A projectile capable of exploding inside a man's body induces very serious internal injuries that usually result in death after a short period of time.

The first type of explosive projectile operates on the principle of the artillery shell. As shown on the drawing below, the base of an explosive bullet is pierced by a small channel that is filled with black powder or another explosive compound. When a rifle loaded with such ammunition was fired, the explosion of the propellant charge ignited the powder located in the channel that acted like a time fuse. After a certain amount of time (bigger than the flight time of the explosive bullet), the flame in the channel propagated to the main charge (P) placed in the hollow part of the bullet, thereby producing the bursting and the fragmentation of the lead envelope. This type of projectile will explode in all circumstances, even if it doesn't reach its target. It will therefore cause injuries to people who are in the vicinity of its flight path by the dispersion of exploded lead fragments. In the same way, when an explosive bullet hits a soldier in a non vital area of his body (arm, leg etc..), the explosion of the projectile will cause very serious internal injuries.



*Simple explosive bullet*

The second category of explosive projectiles was conceived with the ignition of the charge achieved by percussion. An igniter made of metallic fulminate, typically fulminate of mercury, caused the explosion of the charge contained in the bullet (usually black powder). This detonator generally consisted in a small metallic stem, more often a simple nail. Upon hitting the target, the nail pierced a brass or copper capsule containing the fulminate. As the percussion caps of the rifles and revolvers of the period contained the same substance, they were often used as the detonating device to trigger the explosion of the main bullet charge. The most common explosive bullet of the Civil War was the *Gardner*, in caliber .54 and .58.



*.54 cal. explosive Gardner bullet with pierced base plate*



*.58 cal. explosive Gardner bullet with solid base plug*

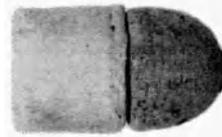


There is a third category of explosive projectiles that we will qualify as "altered bullet". The nose of a large caliber rifle projectile (.69 or more) was pierced by a channel of appropriate dimensions wherein a .22 "short" caliber rimfire metallic cartridge was inserted. D.B. Wesson marketed this type of cartridge in 1856 for the

Smith & Wesson revolver nr. 1. It was manufactured with the percussion face positioned at the front of the bullet nose. The shock of the percussion surface on a hard body such as a bone was sufficient to create the explosion of the cartridge. The .22 lead bullet was usually left in its case, sometimes the head was sawed off or suppressed all together.



Heavy caliber altered bullet

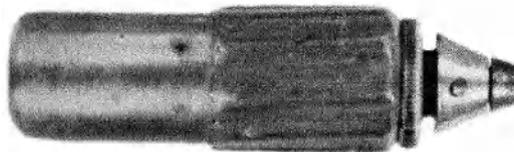


Smoothbore altered bullet

## ANECDOTES

The Federal war department archives assert that 33,350 explosive bullets were supplied to northern troops in 1863. For lack of means of transportation, 10,000 of them were abandoned on the field. This ammunition does not however appear to have been lost for everyone since a report of the sanitary service of the Federal armies mentions 130 cases of injuries caused by explosive bullets fired by Confederate soldiers. Another official report mentions that each man of the 2nd regiment of the New Hampshire Infantry received a quota of forty explosive bullets. This report is dated June 8, 1863, less than a month before the battle of Gettysburg. It is however obvious that the presence of this type of ammunition had no real influence on the issue of the battle. An incident that nobody had anticipated suddenly occurred during the fighting. Shrapnel from bursting shells or rifle shots suddenly struck some cartridge boxes in which men had stored their explosive bullets. These fulfilled their purpose in a somewhat premature way by either killing or severely wounding their owners. Needless to say, their comrades immediately discarded the eminently dangerous packs.

Lately, the catalogue of a very serious American merchant of collection cartridges included a .70 caliber explosive projectile patented by the famous French gunsmith Devisme for use in a 16-gauge rifle. It was probably designed for big game hunting, since its military use has to be excluded. Interestingly, the same merchant claims that Confederate President Jefferson Davis possessed some of these projectiles in his luggage at the time of his arrest ...



.70 cal. Devisme explosive percussion cartridge

## SOURCES

Since the Federal and Confederate authorities never officially admitted that some of their troops were provided with explosive bullets, references to this topic are scarce.

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