Notes for Novices No. 4 - The Centrefire Cartridge

by Anthony Mitchell

In a previous article we looked at the .22 Long Rifle cartridge, which is a rimfire. We will now turn our attention to the centrefire cartridge and how it works. As before, the complete cartridge consists of the bullet, cartridge case and the powder charge. In this article we will look at two popular centrefire pistol cartridges, the .38 Special (left), and the 9mm Luger (right).

Fig.1

The Bullet

The bullet may be of plain lead, like the .38 Special in Fig 1, or jacketed, like the 9mm Luger. Other shapes encountered may be round nose, hollow point, soft nose, etc.

The Cartridge Case

Like the rimfire type, the cartridge case is brass, sometimes nickel plated. The cartridge case may be rimmed, like the .38 Special, or rimless, like the 9mm Luger. Generally speaking, rimmed cartridges are designed for revolvers, while rimless cartridges are designed for automatics.

Calibre

Depending on its origin, the calibre may be expressed in millimetres or inches. This may refer to the diameter of the bullet, the diameter of the bore, or a figure close to it. Other descriptors follow, which may refer to the manufacturer, designer, or the first firearm chambered for it. Two examples are given below.

9mm Luger

The 9mm Luger is also known as the *9mm Parabellum*. It is widely used as a pistol and sub-machine gun cartridge. The European designation is 9 x 19mm. This means it is a 9mm calibre with a cartridge case of 19 millimetres overall length. (If the case was rimmed, it would be 9 x 19R) It first appeared in 1902 in the Luger automatic pistol.

.38 Special

The .38 Special is also known as the .38 Smith & Wesson Special, and was developed by Smith & Wesson for their Military & Police revolver in 1902.

Primer

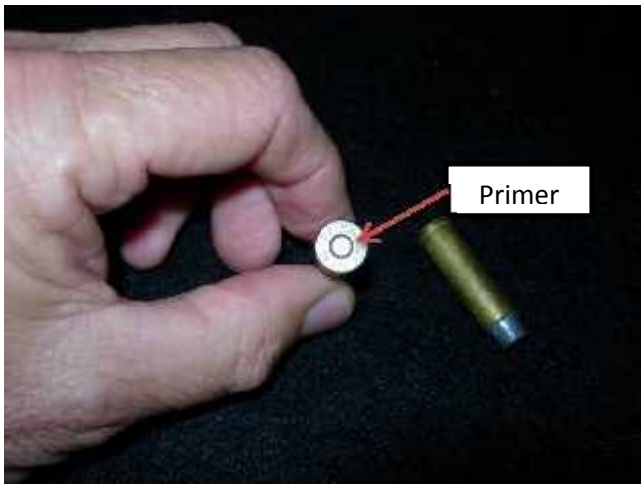

Fig.2

The primer is located in the base of the cartridge in the centre (Fig 2). When struck by the firing pin, the primer ignites the powder charge.

Unlike its rimfire counterpart, centrefire cartridges are able to be reloaded.

Primer (contd.)

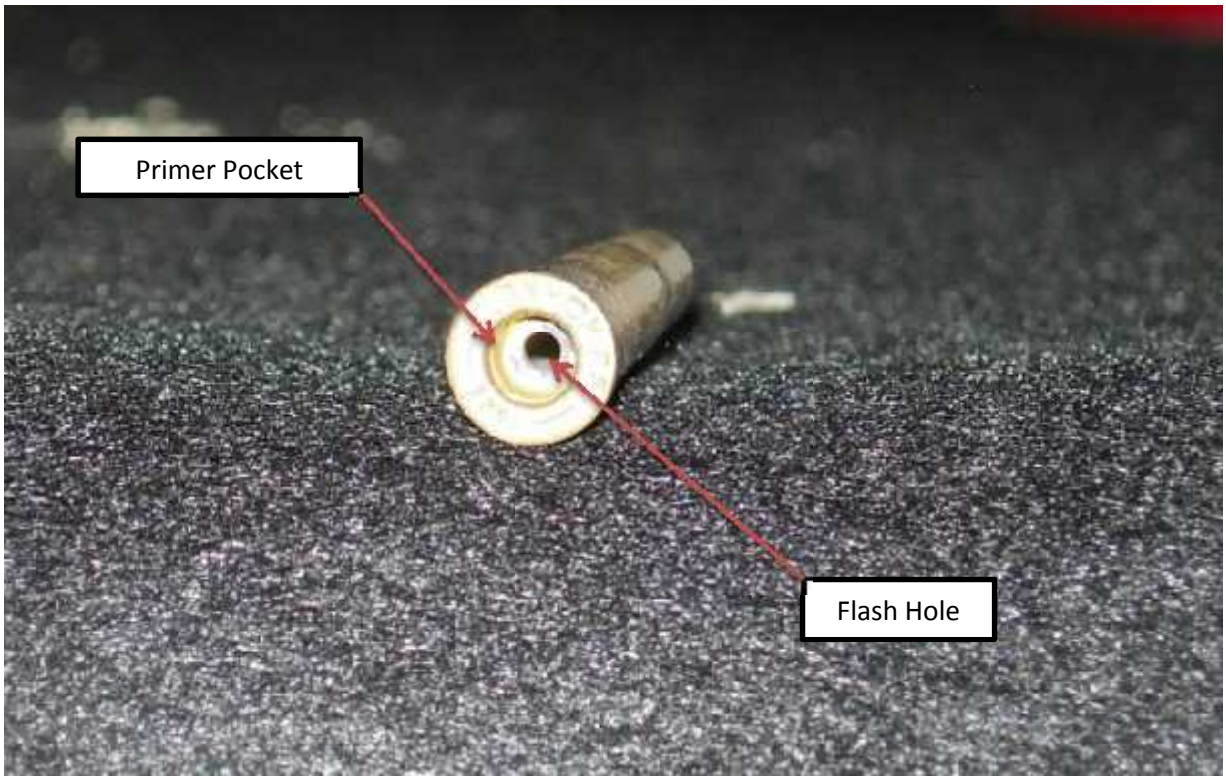

Fig.3

The recess in the base of the cartridge case containing the primer is called the primer pocket. The hole in the primer pocket is called the flash hole. This allows the flame from the primer to ignite the powder charge. Figure 3 shows a cartridge case with the primer removed.

The most commonly encountered primer type is the single flash hole. This is called the Boxer primer, named after its inventor.

Headstamp

If you examine the base of a centrefire cartridge, you will see some markings. This is called the headstamp. While rimfire cartridges usually just have the manufacturer's name, centrefire cartridges have more information.

Military cartridges usually have a factory code followed by the year of manufacture, type of projectile, etc.

Commercial ammunition usually has the manufacturer's name and the calibre. Fig. 4 has two .38 Special cartridges. The one on the left is stamped "+P".

Fig.4

+P Ammunition

Ammunition designated "+P" has been loaded to a higher velocity than standard. (+P means higher pressure)

Check before using any +P ammunition in your gun, as many older guns may not be suitable.

Safety

Always check that your ammunition is compatible with your gun, if in doubt, ask.

Until next time, have a happy and safe shoot!