Section II

Safety Devices, Safe Handling, and Gun Laws
Chapter 9

Understanding Firearms

Anatomy Lessons

Anatomy of a Revolver

Revolvers are handguns that store extra cartridges (1) in multiple chambers (2) within a rotating cylinder (3). When the trigger (4) is pulled, the hammer (5-uncocked position) falls from its cocked position (6-phantom), striking the firing pin (7) which impacts the cartridge (contains primer, powder, and bullet) causing the bullet to discharge out through the barrel (8). Other features include the grip (9), and the cylinder release lever (10). Revolvers can be designed with many intrinsic safety features including: A. Grip Safety, B. Drop Safety (transfer bar), and C. Built-in Lock. Note: Single-action handguns require the hammer to be manually cocked. Double-action handguns are cocked by pulling the trigger but can also be manually cocked. Double-action-only handguns can only be cocked when the trigger is pulled. Each of these types of actions can be found on revolvers and pistols.

Anatomy of a Pistol

Semi-automatic pistols are handguns that store extra cartridges (1) in a magazine (2) usually located in the grip (3) of the gun. When the trigger (4) is pulled, the hammer (5-uncocked position) falls from its cocked position (6-phantom), strikes the firing pin (7), which impacts the cartridge in the chamber (8),

Illustrations and explanations courtesy of the Firearm Injury Center, Department of Emergency Medicine, Medical College of Wisconsin. For current diagrams, refer to www.mcw.edu/fic "handgun glossary".
and discharges the bullet out through the barrel (9). The energy from the discharge causes the slide mechanism (10) to operate, opening the breech and expelling the fired cartridge case. This allows a new cartridge to automatically enter the chamber from the magazine as the slide closes. These components are all attached to the frame (11). Pistols can be designed with many intrinsic safety features including: A. Loaded Chamber Indicator; B. Manual Thumb Safety; C. Grip Safety; D. Magazine Safety; E. Drop Safety (firing pin block); and F. Built-in Lock.

Anatomy of a Bullet

At any given caliber, ammunition may come in many different forms depending on the shape, length, and mass of the bullet, and on the amount of powder used to fire it. The simplest bullets (common in .22 caliber) are of plain lead and have a rounded nose. Pistol ammunition often comes with bullets covered in a copper jacket to improve the ease of rapid firing. (The term “full metal jacket” refers to a bullet which is completely enveloped in such a layer of copper.) The shape of bullets may be modified from the basic rounded nose, usually as an attempt to increase the wounding potential of the bullet. Hollowpoint bullets are the best example. The nose of the bullet dips down into a crater like a volcano. When such a bullet strikes tissue, the impact force causes the bullet to expand.

The caliber refers to the diameter of the bullet. Thus, “9 millimeter” caliber refers to ammunition with bullets approximately 9 millimeters in diameter.

Anatomy of a Bullet section taken from “Ring of Fire”, a report from the Violence Prevention Research Program, University of California, Davis and the Firearm Injury Center, Department of Emergency Medicine, Medical College of Wisconsin.