

Forensic Firearm Identification

Wham! Bam! Thank you Ming!

- The invention of _____ led to the development of firearms.
- Gunpowder first appeared in use in _____ over a thousand years ago, but was used primarily in firecrackers and only sparingly in weapons for military use (canons and such)
- The knowledge of gunpowder manufacture spread to Europe in the 14th century did _____ at first lead to military usage.
- Once they realized how much damage a _____ can do to a knight's armor or a fortification, the use of firearms proliferated rapidly.

Slide 2

The 1st handheld guns were essentially mini- _____; you loaded some gunpowder & a steel ball & lit a fuse.

Slide 3

- W _____ typically resulted in the need for improved weapons technology.
- In the late 1800's, the _____ quickly became popular due to its size & _____ loading.
 - It only had to be reloaded every _____ shots instead of after each shot.

Slide 4

- H _____ reigned supreme for the past 200 years & to this day, remain the most & readily available firearm.

Firearms

- Forensic analysis is vital to solve a crime that uses a _____.
- In 2004, there were _____ homicides in the United States.

Types of Firearms

- H _____
- S _____
- R _____
- M _____ guns



Different Types of Firearms

- *Semiautomatic Pistol*
 - A _____ firearm requiring a _____ pull of the trigger for each shot fired, and which uses the energy of discharge to perform a portion of the operating or firing cycle*

- **Revolver**

- A firearm with a cylinder having chambers so arranged as to rotate around an axis and be discharged successively by the same firing mechanism.*

- **Double Action** - A mechanism in which a pull of the trigger cocks and release the .*

Different Types of Firearms

- **Revolver**

- **Single Action** - An action requiring the cocking of the hammer before sufficient pressure on the trigger releases the firing mechanism.*

- **Bolt Action Rifle**

- A firearm that is manually loaded by the reciprocation and engagement of a

Different Types of Firearms

- **Lever Action**

- A design wherein the breech mechanism is cycled by an external lever generally the receiver.*

- **Slide Action**

- An action which features a movable forearm which is actuated in motion parallel to the barrel by the shooter. Also known as ACTION.*

Manual, Semi-Automatic, Automatic

- In manual guns, the user must a round into the , either manually or through the action of the weapon between shots.

- In semi-automatics, a pull is needed per round fired.

- In contrast, a fully automatic firearm, can to as long as the trigger is held or until it runs of ammunition.

Centerfire Ammunition

- C (unfired)

- B

- Gun P

- Cartridge Case

- P

Caliber

Caliber: the of the gun barrel

- Caliber is recorded in

Figure 18-8 The caliber of a bullet is its diameter.



- hundredths of an inch (.22 & .38)
- millimeter (9mm)

Ammunition

- Headstamp - (or combination thereof) stamped into the head of a cartridge case or shotshell to identify:
 - the caliber, gauge or
 - give additional information.*

Shotgun Ammunition

- **Shotshell** - A cartridge containing projectile(s) designed to be fired in a shotgun. The cartridge body may be metal, plastic or paper.*
- **Shot** - Typically spherical or
- **Wadding** - Plastic which holds the shot

Rifle Ammunition

- **Bottleneck Cartridge** - A cartridge case having a main diameter and a distinct angular shoulder stepping down to a smaller diameter at the neck position of the case.* *Typically associated with rifle ammunition.*

Hollow-Point Bullets

- Contain a hollow cavity in the
- Hollow-tip bullets are designed to “expand” upon impact - to cause more tissue damage - used for
- They can be partially jacketed (soft-point) or fully jacketed
- If they are partially jacket, they are called soft-point hollow nose bullets

Types of Bullets

■ Full Metal Jacket

- A projectile in which the bullet encloses the entire core with the usual exception of the base.*

Types of Bullets

■ Jacketed Soft Point

- A bullet designed with the soft lead core exposed at the tip.
- **Cannelure** - A circumferential groove generally of a shallow appearance in a bullet or cartridge case.* Typically found on revolver and rifle bullets

Types of Bullets

- **Jacketed Hollow Point**

- A bullet designed with a **hollow point**, typically **encased in a jacket**, surrounding the lower portion. The nose of the bullet has a **hollow point**.

Types of Bullets

- **Lead Round Nose**

- An **un-jacketed** projectile made of a **lead** alloy with a **round** nose.

Types of Bullets

- **Semi-wadcutter**

- A bullet designed with a **flat** nose and sharp shoulder

Types of Bullets

- **Wadcutter**

- A **flat-nosed** bullet design having a sharp shouldered nose intended to **cut through** target paper cleanly to facilitate easy and **accurate** scoring.*

Types of Bullets

- **Boat Tail**

- A specific design of bullet having a **boat tail** or a truncated **boat tail** base.*

Bullets

- Bullets come in different **calibers**, **weights**, and **types**.
- When bullets hit objects they can break apart or become **deformed**.

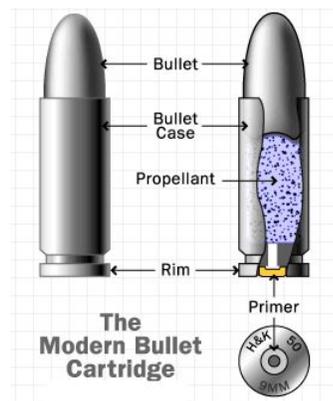
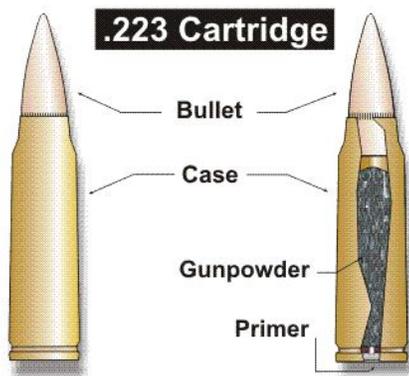


Figure 18-7 The sequence of events in the firing of a bullet.

