

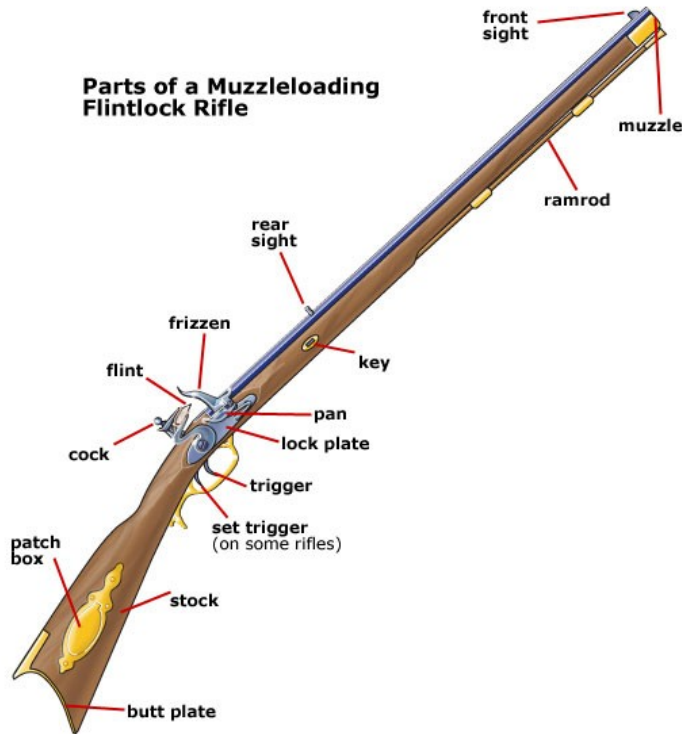
# Muzzleloading 101

September 20<sup>th</sup>, A.D. 2024

## I. Muzzleloader History

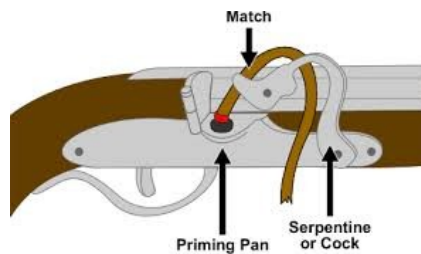
- I. Gunpowder invented in China - A.D. 1000
- II. Adoption of guns in Europe - A.D. 1320
- III. Flintlock adopted - A.D. 1620
- IV. Caplock adopted - A.D. 1830
- V. Metallic cartridges adopted, replacing muzzleloaders - A.D. 1873

## II. Parts of a Muzzleloader

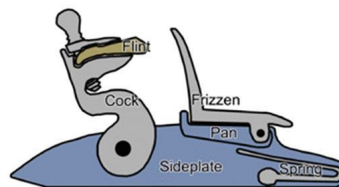


### I. Lock

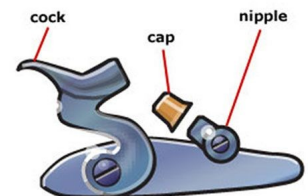
- I. Matchlock, Flintlock, Caplock



### Flintlock



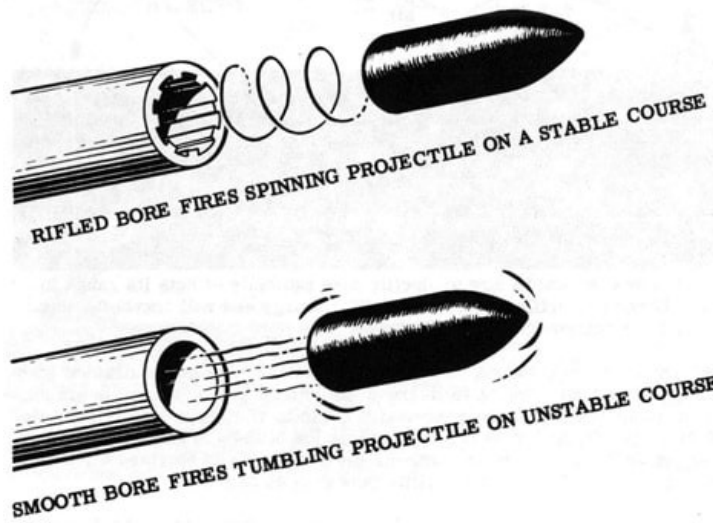
### Percussion Lock



### II. Barrel

- I. Smoothbore vs. Rifled

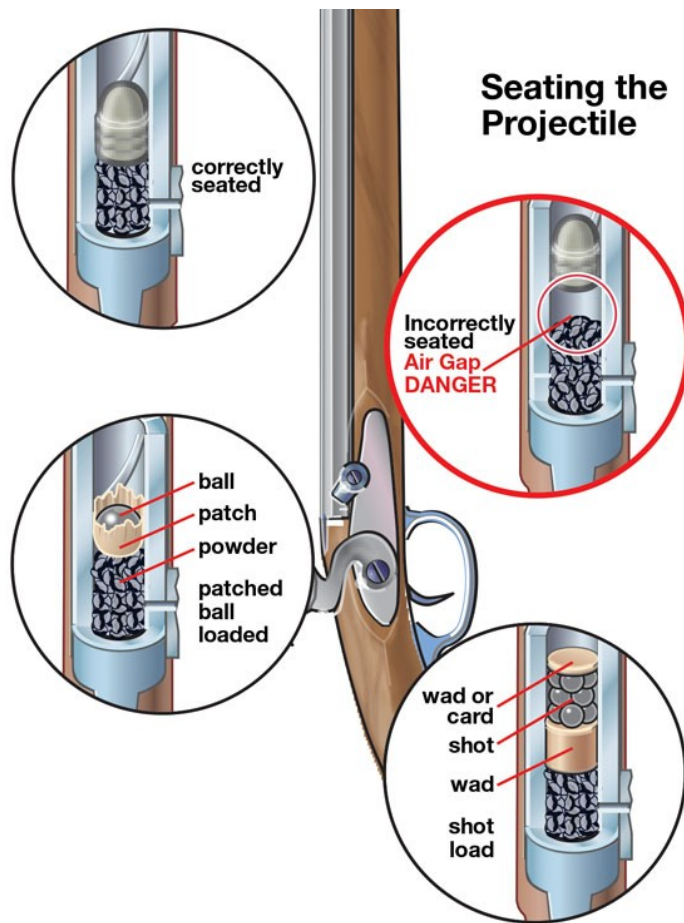
## EFFECT OF BORE ON FLIGHT OF PROJECTILE



### III. Loading

- I. Start with an unloaded and clean gun
- II. Measure and pour powder
  - I. Rule of thumb for max charge for ball: Twice the caliber in grains. Example: .50 cal max charge is 100 grains. .54 cal max charge is 108 grains
  - II. Rule of thumb for charge for shot: Equal volumes of powder and shot.
- III. Start ball and ram home (avoid air gap)
- IV. Prime with powder (flintlock) or cap (caplock)





#### IV. Muzzleloader Safety

- I. Four Rules of Firearms Safety
  - I. Always Keep Firearm Pointed in a Safe direction
  - II. Treat All Guns as Though They are Loaded
  - III. Keep Your Finger Off the Trigger until You are Ready to Shoot
  - IV. Always Be Sure of Your Target and What's Beyond It
- II. Muzzleloaders are considered loaded when they are primed
- III. Unload ball by firing or using a ball puller tool
- IV. Verify if ball is loaded by marks on ramrod

#### V. Live Fire Demonstration

- I. Range Rules:
  - I. Safety glasses and hearing protection required
  - II. Do not touch a firearm unless directed by an adult
  - III. Stay behind the firing line at all times

#### VI. Cleaning

- I. Black powder residue must be cleaned within 24h or rust and damage will occur
- II. Clean with hot water and soap or black powder cleaner (Ballistol, Moose Milk)
- III. Dry and oil