# RENAISSANCE FIREARMS

This supplement is intended for DMs and players who want to include early firearms in their games. It includes new mechanics, weapons and weapon properties as well as relevant tools and equipment. This supplement also contains historical information on the development of firearms to help DMs decide how to integrate these weapons into their campaign settings.

The firearms discussed in this supplement are, with a few exceptions, intended to represent those developed and utilized during the period roughly corresponding to the European Renaissance and Thirty Years War (approximately 1453-1648). This 200 year evolution in military technology saw the end of the medieval period that serves as the root for the traditional D&D high fantasy setting. During this time, steel and powder coexisted. Armored knights wielding greatswords could be found on the same field as musketeers.

The goal of this supplement is to give DMs and players a new option that can radically change the world of their campaign while still preserving all of the traditional fantasy elements.

## History

*"As change in warfare is almost always ongoing, any choice of dates must be somewhat arbitrary."*

*- Stephen Turnbull*

The earliest firearms were developed under China's Song dynasty. They were made possible by the invention of gunpowder, originally a mixture of charcoal, sulfur, and saltpeter. Although the formula changed and was refined over the next several centuries the basic process remained the same. Applying a spark to the powder creates an explosion, and in this lays the root of all firearms.

The earliest firearms suffered from a number of drawbacks that limited their effectiveness. Their short range and poor accuracy meant that traditional weapons were often more useful. And early gunpowder formulas lacked the power to penetrate strong armor further limiting the viability of these weapons.

### Early Firearms

Gunpowder was first discovered in the 9th century and was initially used to make primitive bombs. Paper bombs tied to flaming arrows were a common application, as were bombs with slow-burning matches. These early bombs were filled with shrapnel - shards of metal, porcelain, and clay - that would be dispersed when the powder exploded, dealing injury to those nearby. The first recognizable firearm was

the Song *huǒqiāng* (fire-lance), the earliest evidence of which dates to the 10th century. All versions of this weapon consisted of a bamboo tube (an eruptor) attached to a spear. The tube was filled with gunpowder, which was ignited with a match inserted through a hole in the chute (a touch-hole). Simple versions functioned somewhat like a flamethrower while later and more common variants saw the chute filled with shrapnel that would be expelled by the powder, functioning like a shotgun. Some *huǒqiāng* had three or more chutes attacked, allowing them to be fired multiple times.

By the 12th century a new variant firearm appeared in Song based on the *huǒqiāng.* Called the *huǒchòng* (literally "fire tube") and later *shǒuchòng* (gonne or hand cannon), this weapon featured an independent eruptor no longer attached to a spear and generally made of metal. It still utilized the same touch-hole firing mechanism as the *huǒqiāng.* Initially shrapnel was the preferred ordinance but eventually stone and iron balls of an appropriate size became common. The *shǒuchòng* soon developed into larger artillery models though the hand-held version remained a common weapon for several centuries. The earliest extant firearm is a *shǒuchòng* found in Heilongjian, China and manufactured no later than 1288.

Firearms spread from China to the Middle East, mostly in the form of the gonne. The exact method of this spread is disputed. It is often held that the Mongolian warriors obtained these weapons during their conquests in China and brought them to the Middle East during subsequent invasions but this is not a position that is universally accepted. Regardless, firearms arrived in the Middle East in the late 13th or early 14th century. They were adopted by the Burji dynasty of the so-called Mamluk sultanate, based in Egypt.

These early firearms were of limited practical use. Their range and accuracy were poor so their effectiveness was highly situational. The gonne in particular was an unwieldy weapon. Due to its size it often required two people for effective use - one to hold and aim the weapon, another to insert the match and fire it. Although the artillery variants found use against city walls these personal firearms were not always effective.

## Renaissance Firearms

Beginning in the 15th century advancements in firearms technology resulted in weapons that were much more effective. Better recipes and techniques for making gunpowder resulted in an explosive powerful enough to penetrate armor and advanced firing mechanisms made firearms more useful as personal weapons, as did new techniques for their use.

The critical invention that propelled the next phase of firearms evolution was the matchlock firing mechanism. This mechanism first appeared among the Janissaries of the early Turkish Ottoman Empire. The lock held a burning wick or match, and

depressing a trigger touched the ignition to the powder in the flash pan, firing the weapon. This replaced the earlier touch-hole technology of the gonne. This created a weapon that was much easier to use than the gonne.

The invention of the matchlock led to a new type of firearm. Initially made famous by the elite Ottoman janissaries, this weapon was called the *tüfek*. It became known in Europe as the arquebus, harquebus, hackbut, and other regional names generally meaning "hook gun". These firearms were usually issued with a forked rod or staff that provided the shooter with a stable firing platform, greatly increasing accuracy. This easier trigger mechanism combined with the firing platform made the arquebus substantially more effective than the gonne, which it replaced entirely.

A larger version of the arquebus, called the musket, appeared at the same time. The musket was capable of penetrating even heavy armor. As gunpowder continued to improve and even smaller firearms gained the ability to penetrate armor the distinction between the musket and variations of the arquebus disappeared. In time the term musket became applied to all long guns of this type.

Like the earlier gonne these muskets and arquebuses were loaded by inserting the ordinance into the barrel. These weapons no longer used shrapnel but instead relied on small circular balls, usually made of lead. These early bullets became the standard ordinance for most firearms.

The majority of subsequent developments in firearms took place in Europe, primarily in Germany, Austria, and the Netherlands. Near constant warfare between the various local powers of Europe combined with frequent war against the Ottomans spurred rapid advancement in these technologies. These new firearms were eventually exported back to the near and far east.

The next major evolution in firearms technology was the wheellock firing mechanism at the start of the 16th century. Much like a modern lighter, pulling the trigger spun a wheel, creating a spark and igniting the



powder. This allowed for the creation of the first self-igniting firearm and of one-handed pistols. These pistols were frequently used by various types of cavalry soldiers as well as civilians.

Wheellock weapons were significantly more reliable than matchlock firearms, especially in damp conditions. Unfortunately these weapons were difficult to make and costly to procure. As a result simpler methods were pursued by gunsmiths. These included the snaphance, miquelet, and doglock mechanisms. All were variations on the same concept: pulling the trigger struck a piece of flint against steel, creating a spark to ignite the powder and fire the bullet. These weapons were cheaper than wheellocks and easier to make.

Many new types of firearms emerged during the 16th and 17th centuries in response to the specific needs of the era. Arquebuses became smaller and easier to handle, rendering their eponymous hooks obsolete. Refinements in gunpowder meant that they retained their penetrating power despite their smaller size and the term musket came to be a general term for all such weapons.

Because muskets could penetrate even heavy armor, the traditional equipment of the heavy shock cavalry who dominated medieval battlefields was rendered largely obsolete. Their armor no longer

protected them and they could not get close enough to use their lances. Many horsemen forsook their armor and adopted firearms that could be used from horseback. These included pistols and shortened muskets called carbines.

A class of scatterguns also emerged, in many ways direct evolutions of the old gonne. These had flared barrels and were filled with shrapnel or shot (numerous small bullets) and were extremely effective at close range, especially against unarmored targets. Variants included the one-handed dragon, the musketoon, and the blunderbuss. These weapons were particularly common among horsemen and those who fought in tight quarters such as sailors and pirates.

The prevalence of firearms was soon reflected in civilian society. Short swords and rapiers were often replaced by pistols as a favored sidearm. These so-called dueling pistols were generally smaller than those used by horsemen. Especially small variants, sometimes called coat pistols, were carried as concealed weapons for self-defense or assassination.

The early 17th century saw another evolution of the musket. It was discovered that carving spirals inside the barrel of a musket (rifling) would make the bullet spin, dramatically increasing its range and accuracy. The tactics of the era favored massed volleys by muskets, so these rifles did not immediately become standard weapons. However they found some use as hunting weapons and by professional marksmen.

The final advancement of this period was the creation of the flintlock mechanism, which emerged as the most efficient method of ignition for firearms. The first “true flintlock” was presented to the French king Louis XIII by gunsmith Marin le Bourgeoys in 1610. Over the course of the century this mechanism supplanted all others and became standard across the world.

## Firearms & Your World

The world of your campaign is not under any obligation to follow the course of real-world history. All of the preceding information is intended to help you understand the context in which these weapons existed and how they might change your world.

It is important to understand that the evolution of firearms was a continuous process. Many of these changes were happening simultaneously and competitively. History is not a linear progression, and your world doesn’t need to be either.

The armies of China’s Ming dynasty continued to use the gonne for centuries after it fell out of fashion in the Middle East and Europe. The *sānyǎnchòng* (three eye gun), a three-barreled gonne, was a common weapon until the end of the dynasty in the mid 17th century. Although musket technology rendered heavy armor obsolete in many cases, the famous hussars of Poland continued to fight with heavy armor, lances and sabers in addition to carbines, and pistols. In the Americas, the bows of the

local populace proved deadly to the European armies, who had largely dispensed with the armor that would have protected them due to its ineffectiveness against firearms.

# Operating A Firearm

*"...by eleven o'clock on that Friday morning, the Imperial arquebusiers had finally made it plain that no force of armoured chivalry could any longer be effective against the power of the bullet."*

*- Ewart Oakeshott*

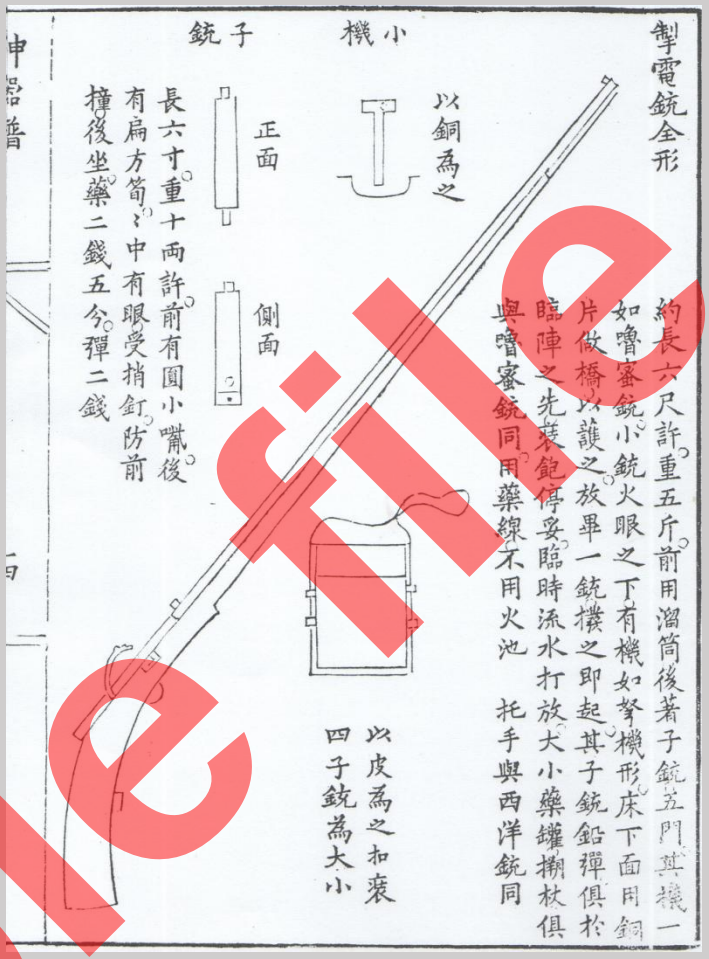
Different firearms are best understood by examining three facets: how the weapon was loaded, how it was fired, and how often it could be fired. It is also valuable to understand the drawbacks common to all early firearms.

## Loading the Weapon

All of the firearms discussed above are single-shot weapons. Each holds a single bullet, which is expelled when the weapon is fired. They must be fully reloaded in order to be used again. There are variations that allow for multiple shots to be fired, discussed under **action** below.

Most firearms of the Renaissance era were called muzzleloaders; they were loaded through the barrel of the gun. First an amount of power was poured down the barrel. This was followed by shot or shrapnel (for a gonne, dragon, musketoon, or blunderbuss) or the bullet (for pistols, muskets, carbines, and rifles). Shrapnel was generally easy to load due to the shape of such weapons. Bullets fit more tightly and were inserted with the aid of a ramrod. An experienced soldier could load a musket in 15-20 seconds. Reloading a rifle took longer due to the spiraling within the barrel and the tighter fit of the ball.

Paper cartridges have been used since at least the late 16th century. These were a premeasured amount of gunpowder along with a bullet wrapped in waxed




paper. The entire cartridge could be inserted into the weapon, making reloading faster.

The 16th century also saw the creation of breechloading firearms, often used in conjunction with cartridges. A portion of the barrel could be opened up to insert the cartridge, which resulted in a substantially faster reload time. One common example was the Ming *chèdiànchòng* (lightning gun). However breechloading firearms had noteworthy drawbacks. Because the barrel was not airtight it leaked gas, reducing the power of the weapon. These barrels could break or even explode from extended use. As a result, muzzleloaders remained more popular than breechloaders until substantial technological advancements were made.

Options for breechloaders are presented under the **variants** section.

## Firing Mechanism

The firing mechanism is one of the facets that most defines firearms of different eras, as has been discussed at length above. The earliest firearms used a touch-hole, where a match was applied directly to the powder through a small hole in the barrel. This was an inefficient and dangerous mechanism, and firearms did not reach widespread use until better methods were created.

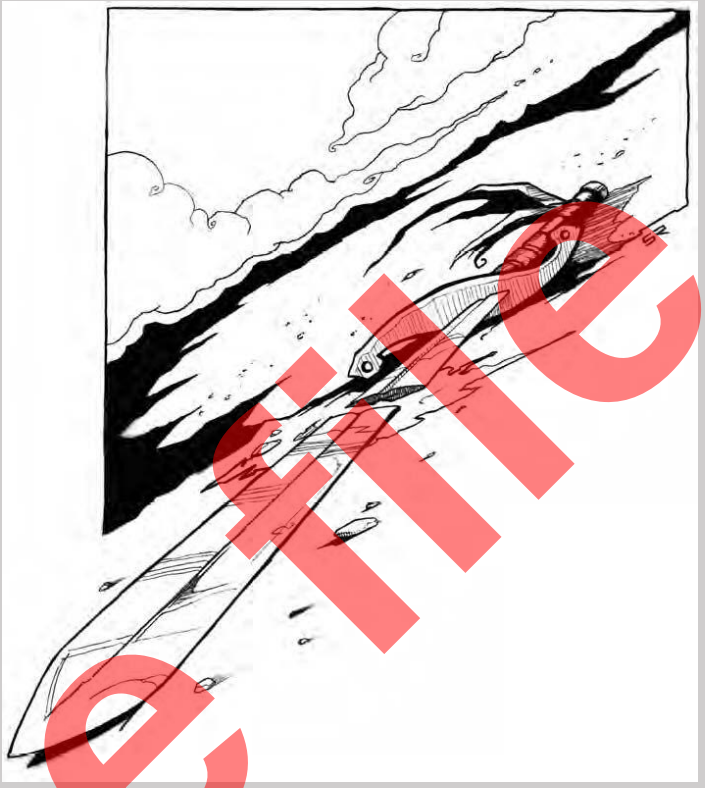
The matchlock mechanism was the first truly viable method of ignition. This involved a lock that held a burning match or wick, which was touched to the powder when a trigger was depressed. This was followed by various firing mechanisms that did not require a match or wick. These relied on using tension (such as that caused by a spring) to strike flint and steel, creating a spark to ignite the powder. Variants of this included the snaplock, snaphance, doglock, and miquelet. The wheellock was probably the most reliable of these methods, but due to the difficulty in producing these weapons and the cost of obtaining them, simpler methods were more common. Eventually the flintlock mechanism established itself as the most efficient method of operation.

For gameplay purposes, the mechanism a firearm uses does not alter the weapon's statistics. While the difference in methodology was historically significant it does not have an impact on how these weapons function in game.

## Action

A weapon's action refers to what the trigger does. This is closely related to the previous two concepts. Traditional firearms are single-action, meaning that the weapon only does one thing when the trigger is pulled. In the case of these firearms, that action is the ignition.

Not all Renaissance firearms were single-shot affairs. Some had multiple barrels (like the *sānyǎnchòng* gonne) and some utilized revolving technology. These revolvers either rotated multiple



barrels around a central firing chamber, or they rotated multiple firing chambers around a central barrel.

Revolvers allowed for an individual to fire more often and more quickly but they featured several significant drawbacks. Because neither the barrel or chamber was airtight they were prone to the same gas leaks as breechloaders, decreasing power and reliability. They were also mechanically complex, requiring a great deal of expertise to produce and making them very expensive. They were also much more prone to mechanical failure. For these reasons the simpler single-shot weapons remained the dominant tool of warfare.

Nevertheless these weapons did exist and might be suitable for your D&D campaign. Weapons with more than three barrels were generally considered impractical due to the weight of such a weapon. Weapons with a rotating firing chamber were more common and often held up to six shots.

For game play purposes, firearms are considered to be the standard single-shot. Revolvers are discussed under the **variants** section.

## Drawbacks

There were some drawbacks common to all firearms, regardless of loading, ignition, or action. Some of these drawbacks are disregarded in the interest of satisfying game play, though clarity of purpose requires discussion.

Early firearms lacked accuracy over a substantial distance. Even shooting at a stationary target under ideal conditions a 16th century musket was only reliable up to around 300 feet, approximately 1/3rd of a longbow's maximum range. Battlefield conditions were far from ideal, further limiting an individual's effective range to perhaps half of that. The ranges assigned to the weapons in this supplement do not represent the absolute maximum range under which a firearm was accurate under controlled conditions. Instead they represent the range at which a skilled user could still be expected to be accurate in a combat situation.

Single-shot firearms took a significant amount of time to reload. An experienced soldier could reload a musket in 15-20 seconds. It was a common tactic to arrange soldiers in ranks of 3, with the soldiers at the rear reloading muskets while those in the front fired, allowing for a sustained volley.

This, however, is not feasible in the context of D&D. A reload time of approximately 18 seconds is equivalent to 3 full rounds of combat. Instead, the *loading* property is used to simulate the slow rate of fire on such weapons.

Early firearms were prone to misfires. After extended use, powder fouled the barrel and could cause the bullet to jam. This is represented by a new misfire mechanic, presented below. Nonstandard models such as breechloaders, revolvers, and spinguns (discussed under **variants**) were more prone to misfires.

# FIREARMS

*"For among other evils which being unarmed brings you, it causes you to be despised… Because there is nothing proportionate between the armed and the unarmed."*

*- Niccolò Machiavelli*

A firearm refers to any weapon that uses an explosive powder to eject a projectile with deadly speed. The weapons listed below are generic types intended to represent a broad selection of similar weapons rather than one specific example.

All firearms are ranged weapons (though see **combine weapons** below). Most are classified as simple weapons, meaning that characters of most classes will be proficient with them. This reflects the fact that early firearms were relatively simple to use, though proper maintenance was more difficult.

### Attacks With *Firearms*

When you attack with a firearm, your target must succeed on a Dexterity saving throw. The DC for this saving throw is equal to 8 + your Dexterity modifier + your proficiency bonus. On a success the target takes no damage.

If the target rolls a natural 1 on its saving throw, you score a critical hit and inflict double damage.

If a feature or circumstance would normally give you advantage on a ranged attack roll, your target