

Supplement: Firearms in the Known World

Gunpowder Weapons were in use in China in the early 1200s, in Europe in the late 1200s. While personal firearms were not standard and ubiquitous until the mid-1500s in Europe, the use of cannon was near-universal by 1400, pre-dating full suits of plate armor. Personal firearms were common on the battlefield by 1450.

While gunpowder weapons first appeared during the Medieval period, it is in the Renaissance period when firearms technology became safe,

effective strategies and tactics utilizing them became perfected, and defenses against them were implemented.

If certain player characters want to stick with bows, let them. Generals and military theorists were still promoting the longbow as late as the 1590s since they knew its advantages. Player characters, especially Fighters, are highly skilled iconoclasts completely outside of the military hierarchy who engage in small-scale skirmishes. Thus, why should they not continue to use bows if they see the advantages?

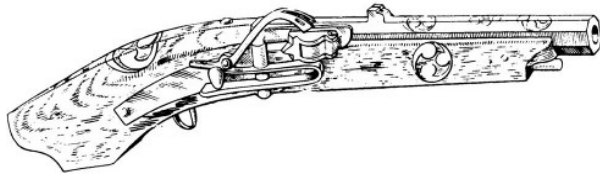
Yet firearms of the day are neither standardized in form nor miraculous in effect. For simplicity's sake, these rules will cover three forms of firearms: Pistols, Arquebuses, and Muskets, and two firing mechanisms: Matchlocks and Wheellocks.

FIREARM	COST		DAMAGE	RANGE		
	CITY	RURAL		SHORT	MEDIUM*	LONG*
Pistol	250 gp	500 gp	1d10	< 25'	< 50'	< 100'
Arquebus	500 gp	1000 gp	1d12	< 50'	< 90'	< 400'
Musket	750 gp	1500 gp	2d8	< 50'	< 100'	< 600'

*Targets at Medium range are -2 to hit, -4 to hit at Long range. 5c: Advantage at Short range, Disadvantage at Long range.

MISC. EQUIPMENT	COST		NOTES
	CITY	RURAL	
12 Apostles	5 gp	8 gp	Bandolier with 12 shots worth of powder in pre-measured containers
<i>Artillery</i>	250 gp*	-	* Per size category.
Fire Bomb	5 gp	7 gp	1d4 damage, ignites flammables; misfire blows up
Gunpowder	3 gp	5 gp	One shot of powder
<i>Gunpowder, Barrel</i>	150 gp	-	2500 shots of powder
Match cord	1 gp	1 gp	Per meter of cord; cord burns 10 cm/turn
Powder Horn	1 gp	1 gp	Holds 50 shots of powder
Scattershot	1 gp	1 gp	Ranges halved, no armor cancellation, Cone area affect doing 1 d6 damage, save verses Breath Weapon for half damage
Shot Bag	2 gp	2 gp	Bag of 100 round shots

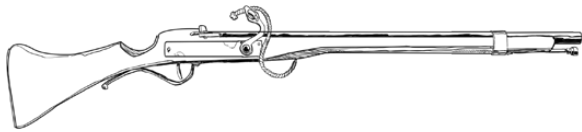
FIREARMS IN THE KNOWN WORLD



Pistols

Pistols are about the size of a man's forearm. One pistol counts as an item for encumbrance purposes, but two pistols, called a brace, only counts as one item for encumbrance purposes. A pistol requires one hand to fire. Pistols never use the matchlock firing mechanism.

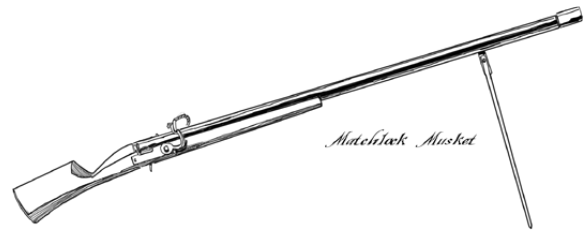
A pistol can be used as a *mêlée* weapon, inflicting 1d4 points of damage.



Arquebus

Period firearms terminology defied strict definition, but for our purposes here, the arquebus is a handheld long gun which does not require a fork rest in order to fire properly. An arquebus requires two hands to use.

An arquebus can be used as a *mêlée* weapon. This requires two hands and inflicts 1d6 points of damage.



Musket

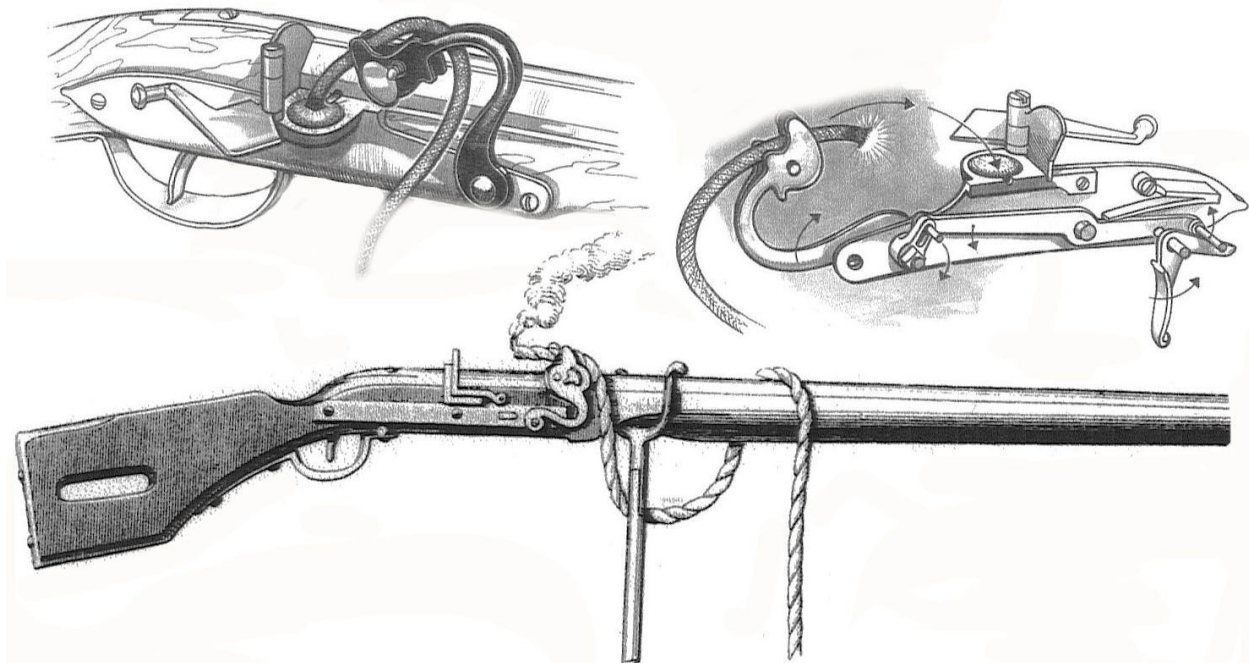
For our purposes, the musket is a large handheld long gun which requires a fork rest in order to fire; not having the rest levies a -2 penalty to hit. Muskets count as oversized items for encumbrance purposes. Muskets require two hands to use.

A musket can be used as a *mêlée* weapon. This requires two hands and inflicts 1d6 points of damage.

Matchlocks

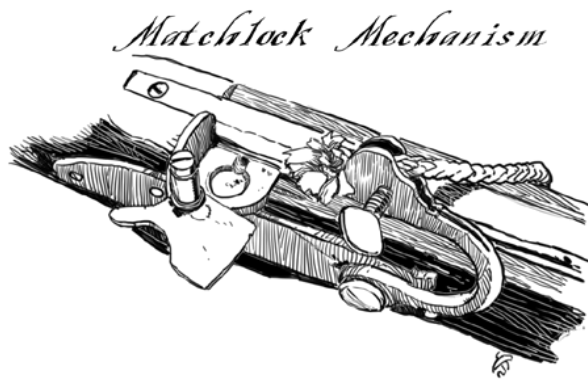
Matchlocks are considered the default gun type in the Known World. Other firearm types are considered modifications and upgrades of the matchlock for rules purposes.

The matchlock firing mechanism is a lit match (a long match cord is standard, often lit at both ends) secured in a clamp. When the trigger is pulled, the clamp drops the match into the priming pan, which is filled with a small amount of fine gunpowder. The ignition of this powder travels through a small hole ("touch hole") to ignite the coarser powder in the base of the barrel, firing the gun.



All firearms of this period are muzzle-loaders, which means that the gun is reloaded by jamming the bullet (a round ball), powder, and wadding to secure it all, down the barrel. A ramrod is very often included in the stock below the barrel to aid in this. The powder in the priming pan must also be replaced, which means the match (hopefully still lit!) must be removed from the firing mechanism. Coordinating all of this in an orderly manner which keeps the lit matchcord away from the gunpowder is a 28 step process and takes a great deal of time and attention.

Because the match must be lit before the gun can be fired, matchlock firearms are often only useful when combat is anticipated. A lit match burns 10 cm per turn (from each end it burns!), and the light and smell that the burning match gives off makes stealth impossible

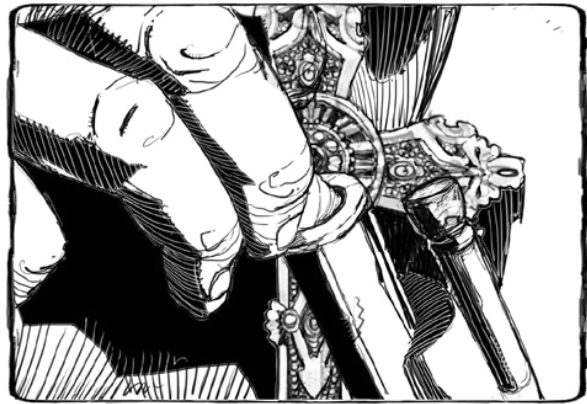


Matchlocks use the following rules:

- They take 3 rounds to reload. Any round in which the character moves or defends himself (using his regular Armor class when attacked) does not count towards the reload time.*
- They suffer from range penalties at Medium and Long range (so -2 and -4 to hit, respectively). Dexterity to-hit modifiers do not apply for Medium or Long range targets. (5e: Advantage at Short, Disadvantage at Long).
- They have a 2 in 10 chance of misfiring (meaning that the powder discharges, but the bullet does not fire). A misfire will require three rounds to clear before attempting to fire again.**
- Damp conditions (most dungeons count as being damp) double the chances of misfiring (which in this case means the powder is too wet

to ignite).

- Wet conditions (rain, etc.) quadruples the chances of misfiring (powder too wet to ignite).
- Wet cord or powder cannot be used until it dries.
- They ignore 5 points of Armor at short range (at all ranges for muskets).***
- The discharge of a firearm causes an immediate Morale check for all enemy characters and creatures with a Morale of 7 or less.

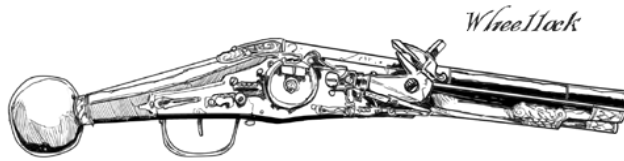


* Given how combats in *Dungeons & Dragons* are usually small-scale skirmishes, it is probably easier to just say firearms have a rate of fire of once per combat. Early Modern drills were all about making the reloading process as safe and organized as possible within large units in open field warfare, and that is where the rate of fire becomes relevant.

** Note that this misfire roll adds a complication to combat. An easy way to handle it when a player character is targeted by someone wielding a matchlock is to declare that the player controlling the target must roll the misfire die at the time that the attack roll is made. If the player forgets, then there is no chance to misfire, but everyone will have an interest in remembering to make the misfire roll without the attacker needing to worry about it.

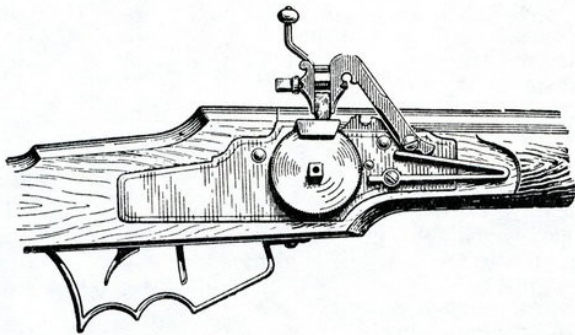
*** "Armor" for this purpose is any external protection. Armor bonuses due to Dexterity are not affected. Referees should apply common sense when deciding if a non-human creature's Armor Class is due to speed or the toughness of its hide.

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Wheellock

Wheellocks were invented in the real world around 1500. They use an internal mechanism which allows the gun to be ready to fire with no outside source of ignition while also protecting the firing mechanism and priming pan from the elements. Reloading is safer with wheellocks than with matchlocks because the match's flame, necessary to ignite the powder and so discharge the gun, is not present. It is no less complicated because the wheellock's moving parts still need to be reset. Each wheellock mechanism must be handcrafted by a skilled gunsmith, making the cost of equipping rank-and-file troops with this superior technology prohibitive.



Wheellock modification to the firearms rules:

- Have no additional misfire chances due to environmental conditions.
- Increase the base cost of a gun sevenfold.
- Have a 1 in 4 chance of having the firing mechanism break if used as a club.

About Firearms in the Known World

Firearms are becoming more and more widespread as pirates and merchants spread them throughout the Known World. An obscure cleric from the Heldannic Order, Brother Berthold Schwartz of Freiburg (now deceased), claimed to be the inventor of gunpowder. That cannot be proved since it appeared in various areas almost at the same time. The Cynidiceans were among the first to develop

gunpowder in the Known World. However, they had only used it for fireworks, and this mixture wasn't suited for damp climates. A usable variety suited for humid climates was found to be in use on the Island of Ochalea.

Brother Berthold seems to have been the first to weaponize black powder. Of course, this is reason enough for the kindly Heldannic bunch to feel that all the other nations have no right to use this holy weapon sent by Vanya! It would seem that the weaponization of gunpowder is a by-product of the War between Thyatis and Alphatia in 959 AC. The first use of gunpowder in the Known World was large, crude bombards.

In 988 AC, the gnome inventor Kolter created the first functional matchlock arquebus prototype. By 990 AC, Kolter's first commercially available matchlock arquebus goes on sale in Ierendi. Kolter had perfected his designs for a pistol and musket by the following year, becoming commercially available throughout the Known World. Five years later, Kolter had reverse-engineered a wheellock mechanism he had seen from the Savage Coast.

However, the presence of magic has restrained the interest, use, and further development of firearms. They are common at sea, being used by pirates and navies. On land, you will find them occasionally used by adventurers, bandits, and the occasional humanoid. Armies have been slow to adopt them. Many armies have at least one regiment of arquebusiers. The Heldannic Order seems to be the only army to adopt them wholesale.

It wasn't until 1300 AC that firearms finally overtook archers in most armies. The flintlock wasn't developed until 1507 AC. This stagnation of technological development is best explained by an anonymous wizard from Glantri, "Peh! There isn't enough of this evil powder in all of Heldann to rival our Glantrian fireballs!"

The average 0-level enemy is likely to use a gun, no matter what the player characters do. They will also tend to be unarmored while player characters may still tend to be old-fashioned and thus, all armored up. The gun will counteract the armor, giving these low-level NPCs a small degree of parity in combat that traditionally they have never had, and since they are unarmored, will probably have an easier time fleeing from the player characters as well.

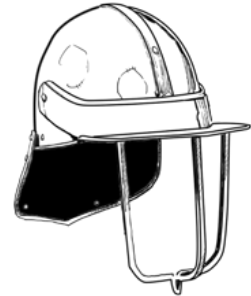
ARMOR

While armor was on the way out by the end of our time period due to the continued improvement of firearms, and mobility became more important than absorbing punishment, it was still very common throughout the period. Medieval armor had fallen out of style; campaigns which use these firearms rules should increase the cost of all armor and shields in the basic equipment lists by 50%.

However, there are four styles of armor specifically used in the Early Modern time period:

COST

ARMOR	CITY	RURAL	ARMOR CLASS	NOTES
Buff Coat	15 gp	30 gp	1	
<i>Pikeman's Armor</i>	50 gp	100 gp	14	
Tassets	25 gp	50 gp	1	
<i>Full Armor</i>	1500 gp	-	18	
Halm, Lobster Tail Pot	25 gp	50 gp	1	+2 to physical damage saving throws
Morion	15 gp	30 gp	1	+1 to physical damage saving throws
Secrete	5 gp	10 gp	-	+1 to physical damage saving throws



HELMETS

Musketeers, artillerists, and similar troops were not intended to engage in close combat with the enemy, and armor (cheap enough to be mass-produced, anyway) was acknowledged as increasingly futile against gunfire, so it became more and more common for these troops to not wear any armor at all.

Regardless, helmets were effective in protecting against shrapnel and other battlefield dangers, resulting in their use long after body armor was abandoned. Often heavily identified with real world conquistadors, although they were common throughout Europe, the morion helmet was most common in the 1500s. In the 1600s a cavalry helmet with neckguard and facemask, known as a capeline or lobster-tail pot, became widely used, as did a steel

skullcap which could be worn unseen under a hat (a "secrete").

Lobster tail pots and morions give a +1 bonus to Armor Class, and each kind of helm gives a different bonus to saving throws involving physical damage. Secrete helms are non-encumbering, and other kinds of helms count as one item for encumbrance purposes.

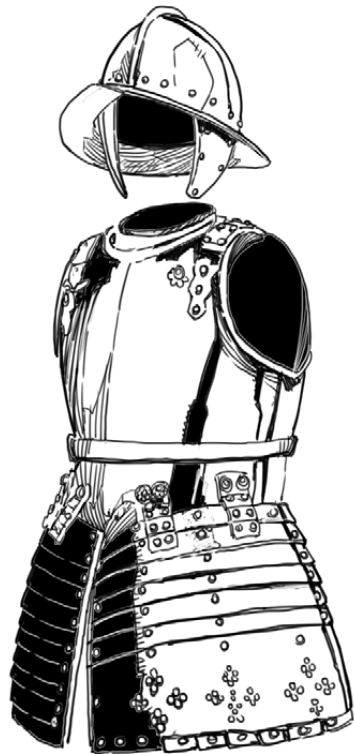


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PIKEMAN'S ARMOR

Heavy infantry (which in the Renaissance era was composed mostly of pikemen) and lighter cavalry were still in need of armor that could protect in hand-to-hand combat as well as long-range missile fire. The most common heavy armor of the day consisted of a breast plate, a helmet with some sort of face guard, a gorget to protect the neck, and tassets, pieces of plate that protected the upper leg. As time went on, fewer and fewer pieces of this armor were worn. By the end of the period it was quite common for soldiers who bothered to wear armor to only wear the breast plate.

Pikeman's armor (just the breast and back plates) gives a base Armor Class of 14, +1 if the tassets are used (the gorget gives no additional bonuses when used with Pikeman's armor or Full Armor, but gives a +1 Armor Class bonus on its own). Pikeman's armor counts as an oversized item for encumbrance purposes, and the tassets count as an additional normal item.



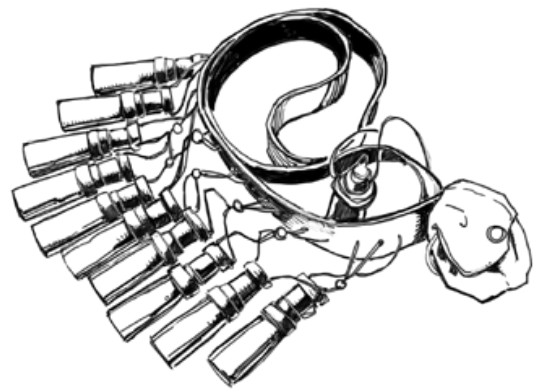
Pikeman's Armor

FULL ARMOR

Noblemen, generals, and certain cavalry units (cuirassiers) still wore full plate armor, often finely decorated and including a helm, covering them head to toe. Full Armor cannot be combined with any other armor type listed here (although those feeling like an antiquarian may use a shield).

Full Armor gives a base Armor Class of 18, and counts as two oversized items for encumbrance purposes.

Miscellaneous Equipment



Apostles

Using an "apostle" reduces the time needed to load a firearm by one round. If a character wearing the apostles is hit by a fire attack, he must make a saving throw versus Breath Weapon for each unused apostle; for each failure he takes 1 point of damage as the powder explodes and fragments of the container act as shrapnel.

Artillery

Artillery includes cannon and mortars. It is a field weapon that requires special consideration in transportation and use. Each "size category" of artillery costs 250sp, counts as 25 points for encumbrance purposes (so a horse attempting to pull a cannon is severely encumbered), and takes one barrel of powder to fire. Firing artillery at individual targets is folly, requiring both a natural 20 to hit and even after that, the target is allowed a saving throw versus Breath Weapon to avoid being hit. Fortifications and other large stationary targets merely require a normal

to-hit roll. If artillery hits, it does 1d6 Ship Hit Points (or 1d6 × 10 regular Hit Points) of damage per size category. Artillery can only be fired once per turn per size category of the piece.

Fire Bombs

A fire bomb is a form of projectile used instead of normal shot. It does not penetrate when it hits the target, but rather causes a small fireball to explode upon impact. If a character is carrying this sort of ammunition and is hit by a fire-based attack, he must make a saving throw versus Breath Weapon for each round; for each failure he takes damage as if struck by a fire bomb.

Gunpowder Barrel

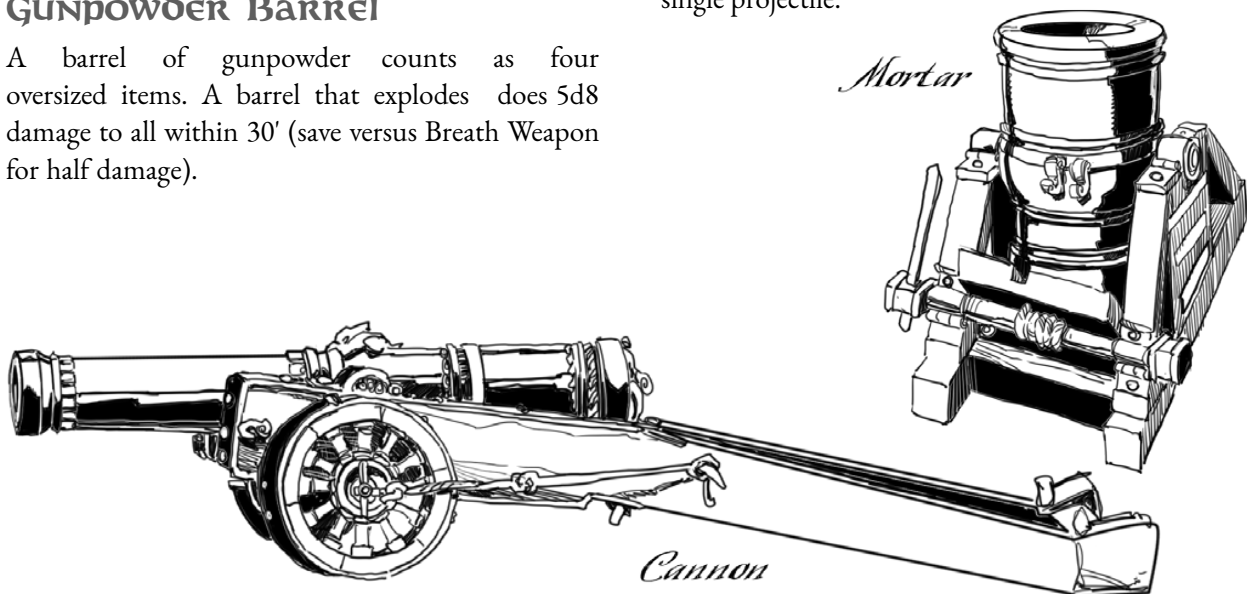
A barrel of gunpowder counts as four oversized items. A barrel that explodes does 5d8 damage to all within 30' (save versus Breath Weapon for half damage).

Powder Horn

A character needs two types of powder in order to load a firearm; one type of powder goes down the muzzle with the wadding and shot, the other is used in the priming pan. If a character with a powder horn is hit by a fire-based attack, he must make a saving throw versus Breath Weapon or take 1d3 damage for every 10 shots (round up) worth of powder remaining in the horn.

Scattershot Ammunition

This is an informal term for using small pellets or rocks or other ammunition that will not fire as a single projectile.



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