

Blackpowder Firearms

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- 1) Standard ammunition for these stats is a round ball fired from a smooth or mildly-rifled (very slow twist) barrel.
- 2) A standard ammunition "case" for blackpowder rounds consists of enough balls and powder for 50 shots of ammunition.
- 3) "Cases" of balls and shot weight 2 kg per "case: One measure of powder weighs 0.02 kg, and one ball weighs 0.02 kg. Magnum powder loads take 2 loads of powder per shot. A Minie Ball weighs 0.05 kg per shot. A rifled ball weighs 0.03 kg per shot.
- 4) Use base range, and increase rifled weapons' range by 1.5 times; however, increase loading times by two steps (so 1/6 would become 1/8). This is for rifled balls only, and simulates the difficulty in ramming the ball down the barrel. Such a weapon can also fire standard balls; in this case, the increase in damage and range does not apply.
- 5) This increase in loading time does not apply to inline firearms or rifles firing Minie Ball or similar types of rounds. If something like a Minie Ball or inline rifle is used, double range (ranges for inlines will already be doubled in the stats below).
- 6) If a blackpowder weapon has a rifled barrel and is designed for rifled balls, increase cost by 1.5 times. If designed for something like a Minie Ball, increase costs by 1.9 times. (Inlines double costs, but this is already figured in the stats below.)
- 7) If a blackpowder weapon is designed to fire rifled balls, increase range by 1.5 times.
- 8) If the weapon is an inline or designed to fire Minie Ball-type rounds, double range.
- 9) Some rifles are stressed for magnum loads, and are given in the stats below, If a magnum load is loaded into a non-magnum firearm (standard loads are designed to take a man down), increase damage by one point and go the next level of penetration, but the weapon is 5% likely (cumulative) to be damaged per shot.
- 10) Buck-and-ball shots give two extra 1d6-damage rounds per shot and the extra balls otherwise act like a shotguns and use shotgun rules, but range is reduced to 0.75 times normal.
- 11) Weapons given in their description as "rifles" will have their range adjusted in the stats, unless stated otherwise in the description.
- 12) Revolvers are a special case; they will have two reloading times under ROF. The first is to fire the revolver; the second is to reload all the chambers.

These rules are preliminary, especially the weight figures for powder and balls.

Blackpowder Handguns

Adams Percussion Revolver

Notes: Made in London, England, the Adams revolver was sold to both the Union and Confederate sides during the Civil War. (It bears a distinct resemblance to the Webley RIC.) It is a big revolver, 12 inches long with a barrel of 6 inches. All metal parts are blued, while the grips are walnut. Though a British-made revolver, the Adams was designed to appeal to the US market as well as the British market. It was, however, hand-made, which made it much more expensive than Colt revolvers, the main competition. This is why only about 3000 were made between 1857-1866. It was adopted by the East India Company cavalry, and bought by many British officers and used in the Crimean War. After the Indian Mutiny of 1857, it became the standard British revolver until revolvers firing metallic cartridges were made. It should be noted that the Adams was unusual for its time in being a double-action revolver; in fact, it cannot be fired in single-action, as the hammer cannot be cocked manually. This meant that the Adams could be fired much faster than the Colt revolvers of the time, but also that the Adams had a long trigger pull that made it less accurate than the Colt revolvers.. It lacked a recoil shield behind the cylinder, which made the firer susceptible to powder burns when the blackpowder went off. The .44 caliber was the one used by the US and Confederate militaries; the .36 caliber was used by some British officers using this revolver.

Weapon	Ammunition	Weight	Magazines	Price
Adams Percussion Revolver	.36 Blackpowder	1.02 kg	5 Cylinder	\$49
Adams Percussion Revolver	.44 Blackpowder	1.15 kg	5 Cylinder	\$62

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Adams Percussion Revolver (.36)	DAR (1/10)	1	Nil	1	3	Nil	6
Adams Percussion Revolver (.44)	DAR (1/10)	2	1- Nil	1	3	Nil	6

AN IX De Gendarmerie 1805-1819

Notes: Known simply as the An IX Gendarmerie; this pistol was originally designed for use by police forces. The official model number is S.331. Lengthwise, it is sort of mid-length between a derringer and a full-sized pistol; when wartime use ensued, it was used in braces by cavalymen and in pairs by infantry officers. Some 32000 were produced; with a 6-inch barrel finished with nickel plating and in fine walnut. It is of flintlock operation. and is short at 250 total millimeters,

Weapon	Ammunition	Weight	Magazines	Price
An IX Gendarmerie	0.58 Blackpowder	0.71 kg	1 Internal	\$45

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
An IX Gendarmerie	1/6	3	1- Nil	2	9	Nil	2

Boutet 1er Empire

Notes: Napoleon's favorite firearm, the 1er Empire was designed by one of Europe's premier firearms designers in the Napoleonic Era, Nicolas-Noel Boutet. The pistol has a full dark walnut stock with the stock high on the barrel and a browned barrel. The grip looks clumsy, being a simple curved grip with an endcap, but rides well in the hand and gives a good hold on the weapon. The butt has a metal plate. The ramrod has a horn tip.

Weapon	Ammunition	Weight	Magazines	Price
1er Empire	0.45 Blackpowder	1.4 kg	1 Internal	\$82

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
1er Empire	1/6	2	1- Nil	3	3	Nil	6

Colt Model 1851 Navy

Notes: Originally known as the Ranger Revolver, Colt sold almost half a million of these handguns. It was produced at the behest Colt Walker and Dragoon revolver users, who felt that their Walkers and Dragoons were too heavy, and they asked Colt for something lighter. Like most revolvers of this time, they used a paper cartridge tipped by a lead ball, with percussion caps to the rear of every cylinder. They were significantly lighter than the Walkers and Dragoons, but we all know what this means -- more felt recoil and barrel climb. One of the reasons for this is the much-smaller caliber of the ball, which is also quite anemic in terms of damage. The cocking lever was shorter on this revolver, and metal parts were of blued steel. Barrel length is 7.5 inches, and is rifled. Ignition is by percussion cap.

On the Second Model, The frame and cylinder are case-hardened. It has a barrel-length cocking lever, and has some other minor mechanical and cosmetic changes. It is otherwise identical to the First Model for game purposes. The third model had bright steel for the metalwork. Like the second model, it has primarily cosmetic and minor mechanical changes, but is identical to the First Model for game purposes. The Fourth Model is the same as the First Model in game terms, also.

A very small amount of the Navy's Model 1851 were in .34 Caliber instead of .36. Replicas today often have the caliber incorrectly at .44 caliber; these have stats, too, in case the players encounter one of these incorrect-caliber replicas.

The Manhattan Navy Revolver was for most purposes the same as the Model 1851 Navy in .36 caliber. It blends the Model 1849 Pocket (not here due to a lack of sufficient information) and the Model 1851 Navy. It has an octagonal barrel instead of a round one, and they were 4, 5, 6, and 6.5 inches (later Manhattan revolvers omitted the 6-inch barrel, and added a 4.5-inch barrel). About 70,000 were built in all barrel lengths.

The Metropolitan Navy Revolver is an almost exact copy of the Model 1851 Navy 3rd Model, except for its octagonal barrel and using combustible paper cartridges.

Weapon	Ammunition	Weight	Magazines	Price
Colt Model 1851 Navy	.36 Blackpowder	1.19 kg	5 Cylinder	\$64
Colt Model 1851 Navy	.34 Blackpowder	1.16 kg	5 Cylinder	\$61
Colt Model 1851 Navy	.44 Blackpowder	1.33 kg	5 Cylinder	\$120
Manhattan Navy (4" Barrel)	.36 Blackpowder	1.05 kg	5 Cylinder	\$58
Manhattan Navy (4.5" Barrel)	.36 Blackpowder	1.07 kg	5 Cylinder	\$63
Manhattan Navy (5" Barrel)	.36 Blackpowder	1.09 kg	5 Cylinder	\$66
Manhattan Navy (6" Barrel)	.36 Blackpowder	1.13 kg	5 Cylinder	\$74
Manhattan Navy (6.5" Barrel)	.36 Blackpowder	1.15 kg	5 Cylinder	\$77
Metropolitan Navy	.36 Combustible Cartridge	1.2 kg	5 Cylinder	\$87

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Colt Model 1851 Navy (.36)	SAR (1/10)	1	Nil	1	2	Nil	11
Colt Model 1851 Navy (.34)	SAR (1/10)	1	Nil	1	2	Nil	10
Colt Model 1851 Navy (.44)	SAR (1/10)	1	1- Nil	1	3	Nil	12
Manhattan Navy (4" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	6
Manhattan Navy (4.5" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	7
Manhattan Navy (5" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	7

Manhattan Navy (6" Barrel)	SAR (1/10)	1	Nil	1	2	Nil	9
Manhattan Navy (6.5" Barrel)	SAR (1/10)	1	Nil	1	2	Nil	10
Metropolitan Navy	SAR (1/10)	1	Nil	1	2	Nil	11

Colt Model 1855 Sidehammer

Notes: known as a sidehammer revolver because the hammer is right of center, the Model 1855 was sort of the most concealable weapon of the time (after derringers) in its shorter-barrel iterations. The Model 1855 is also known as the Root Revolver after it's chief designer, Elisha K Root. It has a standard design for a Colt revolver of the time: flared walnut grip, cocking lever under the barrel, and a smooth cylinder with percussion cap nipples at the rear of it. Part of the reason it is so small is what also makes a bit anemic -- the small round it fires. There are several iterations, but the ones of note are below;

The 1st Model has a 3.14-inch barrel; the 2nd Model has a 3.5-inch barrel. Both have cylinders engraved with various scenes, or on the 3rd Model a fluted cylinder. Other than these, they are identical for game purposes. On the Model 1855 .31 Caliber, some types have a 4.5-inch barrel, and the rest have 3.5-inch barrels.

Some 32,000 of these revolvers were made, all told.

Weapon	Ammunition	Weight	Magazines	Price
Colt Model 1855 Sidehammer First Model	.28 Blackpowder	0.48 kg	5 Cylinder	\$39
Colt Model 1855 Sidehammer Second Model	.28 Blackpowder	0.49 kg	5 Cylinder	\$42
Colt Model 1855 Sidehammer Third Model (3.5" Barrel)	.31 Blackpowder	0.51 kg	5 Cylinder	\$46
Colt Model 1855 Sidehammer Third Model (4.5" Barrel)	.31 Blackpowder	0.54 kg	5 Cylinder	\$53

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Colt Model 1855 Sidehammer First Model	SAR (1/10)	1	Nil	1	4	Nil	4
Colt Model 1855 Sidehammer Second Model	SAR (1/10)	1	Nil	1	4	Nil	4
Colt Model 1855 Sidehammer (3.5" Barrel)	SAR (1/10)	1	Nil	1	4	Nil	5
Colt Model 1855 Sidehammer (4.5" Barrel)	SAR (1/10)	1	Nil	1	4	Nil	6

Colt Model 1860 Army

Notes: The Model 1860 was the most used revolver of the Civil War, used by the Union, Confederacy, and even some Native American tribes who generally got them on what we would call today the black market. Built on the Model 1851 frame, the Model 1860 also has a similar action to the Model 1851, including the hammer split into a V-Notch, allowing it to serve as a rear sight. Something that is not so apparent at first glance is the shorter forcing cone for the barrel; this allows for a longer cylinder and the Model 1860 is also stressed for Magnum loads because of this. The cylinder is rebated, smaller at the rear than the front, making it easier to load with black powder. The 8-inch barrel was smoothed into the frame; at first glance, it looks like a half-octagonal barrel, but it is not. For the time and design, it is relatively light, though it is a large revolver. It can use both loose powder and ball and combustible-case paper charges. Some First Models were also available with a 7.5-inch barrel. (This is often called the Texas Model, because their order came to Texas shortly after the secession.) Cylinders may be fluted or round; and round cylinders are generally engraved with Western scenes. The metalwork is mostly iron, though they had a steel barrel and brass trigger guards. Some are slotted for use with a removable stock; these are often called Martial Models in a mistaken belief that they were sold only to the military. With a full recoil shield, they are often called Civilian Models, in the same sort of mistaken belief. A rare version, with only 65 built, is the Navy Revolver; this differs primarily in the size of the grips, and is identical to the Army revolver for game purposes.

Second Model versions all had 8-inch barrels. They also had longer grips, done because of suggestions from First Model users. They have black walnut instead of regular walnut grips.

The Third Models all have round cylinders. They all had 8-inch barrels. The versions that take a stock have the lower part of the recoil shield milled away, which helps it sit right in the hand when used with the stock attached. Versions designed for a stock also have a two-leaf folding sight.

The Fourth Model was built until 1872, when more modern revolvers became popular. Construction began in 1863; virtually all of them went to Northern civilians or military forces, until 1866, when sales to Southern units and civilians became popular. Versions with stocks had the milled-away lower recoil shield of the Third Model, as well as the mistaken Martial Model/Civilian Model name. All had 8-inch barrels. Those with stocks lacked the leaf sights of the Third Model.

The three later models are all identical for game purposes to the First Model with 8-inch barrels, except for differences noted.

Some 200,000 of these revolvers were built, with the Fourth Model being the most popular.

Though designed for naval personnel, the Model 1861 Navy was also used by many cavalry personnel, as the lighter recoil was

more manageable when horsed. Though it suffered over its Army counterpart with damage, its 7.5-inch barrel gave it decent range. Like the Army, the Navy was fed with either loose blackpowder or a combustible-case paper cartridge with a ball glued onto the end. (It was recommended to users by Colt that the combustible cases be used if at all possible, to avoid excess fouling due to paper residue). When shooting blackpowder, use the ROF figures for the Model 1860 Army. It is very similar to the Army, though smaller due to the smaller caliber. The first 100 examples had a fluted cylinder; the rest had a round cylinder with engraving showing the Mexican Navy fighting with the Texan Navy. Another 100, later on, were slotted for a detachable stock; these also had the lower part of the recoil shield milled away. The backstrap was usually silver-plated, but this usually wore away under hard use in the Civil War. The Model 1862 Pocket Navy was more often used by civilians; it is basically a standard Model 1861 Navy, but with shorter 4.5, 5.5, or 6.5-inch barrels. The Model 1862 had a 6.5-inch barrel only and was lighter, but otherwise for game purposes is identical to the Pocket Navy. The barrel on these two models was octagonal.

Weapon	Ammunition	Weight	Magazines	Price
Model 1860 Army (7.5" Barrel, Pistol Configuration)	.44 Combustible Cartridge or Blackpowder	1.22 kg	6 Cylinder	\$104
Model 1860 Army (8" Barrel, Pistol Configuration)	.44 Combustible Cartridge or Blackpowder	1.24 kg	6 Cylinder	\$120
Model 1860 Army (7.5" Barrel, Carbine Configuration)	.44 Combustible Cartridge or Blackpowder	1.96 kg	6 Cylinder	\$108
Model 1860 Army (8" Barrel, Carbine Configuration)	.44 Combustible Cartridge or Blackpowder	1.99 kg	6 Cylinder	\$120
Model 1861 Navy (Pistol Configuration)	.36 Combustible Cartridge or Blackpowder	1.19 kg	6 Cylinder	\$85
Model 1861 Navy (Carbine Configuration)	.36 Combustible Cartridge or Blackpowder	1.93 kg	6 Cylinder	\$96
Model 1862 Pocket Navy (4.5" Barrel)	.36 Combustible Cartridge or Blackpowder	0.79 kg	5 Cylinder	\$63
Model 1862 Pocket Navy (5.5" Barrel)	.36 Combustible Cartridge or Blackpowder	0.82 kg	5 Cylinder	\$69
Model 1862 Pocket Navy (6.5" Barrel)	.36 Combustible Cartridge or Blackpowder	0.85 kg	5 Cylinder	\$77
Model 1862 Police	.36 Combustible Cartridge or Blackpowder	0.74 kg	5 Cylinder	\$77

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1860 Army (7.5" Barrel, Blackpowder)	SAR (1/12)	2	1- Nil	1	3	Nil	12
Model 1860 Army (7.5" Barrel, Combustible Cartridge)	SAR (1/5)	2	1- Nil	1	3	Nil	12
Model 1860 Army (7.5" Barrel, Blackpowder, Carbine Configuration)	SAR (1/12)	2	1- Nil	3	2	Nil	21
Model 1860 Army (7.5" Barrel, Combustible Cartridge, Carbine Configuration)	SAR (1/5)	2	1- Nil	3	2	Nil	21
Model 1860 Army (8" Barrel, Blackpowder)	SAR (1/12)	2	1- Nil	1	3	Nil	12
Model 1860 Army (8" Barrel, Combustible Cartridge)	SAR (1/5)	2	1- Nil	1	3	Nil	12
Model 1860 Army (8" Barrel, Blackpowder, Carbine Configuration)	SAR (1/12)	2	1- Nil	3	2	Nil	22
Model 1860 Army (8" Barrel, Combustible Cartridge, Carbine Configuration)	SAR (1/5)	2	1- Nil	3	2	Nil	22
Model 1861 Navy (Pistol Configuration)	SAR (1/10)	1	Nil	1	2	Nil	11
Model 1861 Navy (Carbine Configuration)	SAR (1/10)	1	Nil	3	1	Nil	19
Model 1862 Pocket Navy (4.5" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	7
Model 1862 Pocket Navy (5.5" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	8
Model 1862 Pocket Navy (6.5" Barrel)	SAR (1/10)	1	Nil	1	3	Nil	9
Model 1862 Police	SAR (1/10)	1	Nil	1	4	Nil	9

Colt Walker Model

Notes: There were several variations of this revolver; most differ only in markings or metalwork finish, and minor construction and sometimes mechanical details. The original was the Colt Walker Whitneyville, which was designed in a cooperation between Texas Ranger Samuel Walker and Samuel Colt. It was meant to be a handgun which was powerful at short range, and not meant for long ranges. Even so, there are records of rather long range shots for a handgun; one killed a Mexican soldier at a range of about 100 meters, though it was probably a very lucky shot, probably with a stock attached. The cylinders are loaded one at a time, with a paper

cartridge and ball, and with percussion caps for each cylinder. The Republic of Texas had been a major customer of the Walker's predecessor, the Colt Paterson, and eagerly purchased the new revolver. The year the revolver named for him entered service with the Texas Rangers (1847), Walker was killed in the Mexican-American War while serving with the US Mounted Rifles. This US Mounted Rifles use was the first time a revolver had been adopted by the US military. The Walker revolver used a half-octagonal 9-inch rifled barrel; most were finished in bright iron. The Walker had no barrel catch, but it was a popular retrofit.

The Whitneyville-Hartford is for the most part the same as the Whitneyville, but uses a 7.5-inch barrel.

The Model 1848 Dragoon (also known as the Walker Dragoon) First Model was very similar to the Whitneyville-Hartford, differing primarily in fit and finish, though some were slotted to accept a stock. The Second Model was also quite similar. Both are identical to the Whitneyville-Hartford for game purposes, except when using a stock. The Third Model barrels were available in 7.5 or 8 inches, and the hammer had a V-notch to act as the rear sight. It is otherwise the same for game purposes as the First and Second Models. The Baby Dragoon was also similar, but in a smaller caliber and with barrels of 3, 4, 5, or 6 inches, and with primarily brass construction. The Pocket model is identical to the Baby for game purposes; it was probably the most produced of the Walker-type revolvers, with 340,000 being built.

Samuel Colt had so many orders for these revolvers that he had to build a new factory at Hartford just for these orders.

Weapon	Ammunition	Weight	Magazines	Price
Colt Walker Whitneyville	.44 Blackpowder	2.07 kg	5 Cylinder	\$117
Colt Walker Whitneyville-Hartford	.44 Blackpowder	1.87 kg	5 Cylinder	\$106
Model 1848 Dragoon (Pistol Configuration)	.44 Blackpowder	1.87 kg	5 Cylinder	\$106
Model 1848 Dragoon (Carbine Configuration)	.44 Blackpowder	2.61 kg	5 Cylinder	\$117
Model 1848 Dragoon Third Model (Pistol Configuration, 8" Barrel)	.44 Blackpowder	1.01 kg	5 Cylinder	\$110
Model 1848 Dragoon Third Model (Carbine Configuration, 8" Barrel)	.44 Blackpowder	1.75 kg	5 Cylinder	\$121
Baby Dragoon (3" Barrel)	.31 Blackpowder	0.74 kg	5 Cylinder	\$97
Baby Dragoon (4" Barrel)	.31 Blackpowder	0.76 kg	5 Cylinder	\$103
Baby Dragoon (5" Barrel)	.31 Blackpowder	0.78 kg	5 Cylinder	\$112
Baby Dragoon (6" Barrel)	.31 Blackpowder	0.8 kg	5 Cylinder	\$120

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Colt Walker Whitneyville	SAR (1/10)	2	1- Nil	2	2	Nil	14
Colt Walker Whitneyville-Hartford	SAR (1/10)	2	1- Nil	2	2	Nil	12
Colt 1848 Dragoon (Pistol Configuration)	SAR (1/10)	2	1- Nil	2	2	Nil	12
Colt 1848 Dragoon (Carbine Configuration)	SAR (1/10)	3	2- Nil	4	3	Nil	17
Model 1848 Dragoon Third Model (Pistol Configuration, 8" Barrel)	SAR (1/10)	2	1- Nil	2	4	Nil	13
Model 1848 Dragoon Third Model (Carbine Configuration, 8" Barrel)	SAR (1/10)	2	1- Nil	3	2	Nil	21
Baby Dragoon (3" Barrel)	SAR (1/10)	2	Nil	1	5	Nil	1
Baby Dragoon (4" Barrel)	SAR (1/10)	2	1- Nil	1	5	Nil	1
Baby Dragoon (5" Barrel)	SAR (1/10)	2	1- Nil	1	5	Nil	2
Baby Dragoon (6" Barrel)	SAR (1/10)	2	1- Nil	1	5	Nil	2

LeMat

Notes: Invented by Jean Alexandre LeMat of New Orleans; the LeMat's manufacture was backed PGT Beauregard, who later became a General in the Confederate Army. Manufacture actually took place in Liege, Belgium and Paris, France; they were smuggled to the Confederacy via Bermuda -- before then, they went through Birmingham, England, who at first supported the Confederacy and actually sent advisors. About 100, however, were made in Pennsylvania, including the first 25, which were prototypes. A few Union soldiers obtained LeMats out of these first 100, as well as a few Northern civilians. Confederate officers went nuts for the LeMat, and it became the trademark of Confederate cavalry officers in particular and also most of the command echelon (and it is rumored, Jefferson Davis himself). Some 2900 were eventually produced; they were built from 1861-65, with manufacture stopping almost in tandem with the Confederate surrender. Due to their shotgun barrel, they were often called the Grapeshot Revolver. It goes without saying that the LeMat is a big revolver, though not unduly heavy.

The LeMat design was unique in that it employed eight cylinders, something that would not be seen until about the mid-1900s, and for the barrel under the primary barrel. This barrel fired a shotgun charge, and though there have been revolvers that fired shotgun

shells since then, none of them employed a separate barrel to do it. The shotgun barrel was independent of the cylinder, and loaded separately. Firing the shotgun barrel is primarily defensive, due to the short range. The action was single action, and a lever at the end of the hammer was used to change between firing the bullet cylinders and firing the shotgun barrel. The shotgun barrel could be loaded with any mix of shot that the shooter wanted (or could get a hold of); the stats below are some of the common loadings. Most metalwork is blued or bright finished; the bullet barrel was 6.75 inches and the shotgun barrel length 4 inches. A ramrod was nested between these barrels, and used to load both the cylinders and the shotgun barrel. At first, the LeMat had a .42-caliber rifled bullet barrel and a smoothbore .63-caliber shotgun barrel (approximately 16 gauge, which is used for the stats below). The bullet barrel used a non-standard caliber, and this could sometimes make getting balls for loading the cylinders problematic. Later, a lighter .35-caliber barrel was used, but this was still a non-standard caliber. This version was also fitted with a .55-caliber shotgun barrel (28 gauge). The bulk of LeMats therefore had .36 or .44-caliber bullet barrels, which were the two most common caliber of revolver balls at the time. A very few of the last bunch, about 100, were slotted for stocks.

The Transitional Model was, as the name suggests, built as the First Model, but with some features of the Second Model. The Second Model was the bulk of the LeMats, and numbered about 2000 built.

Weapon	Ammunition	Weight	Magazines	Price
LeMat First Model	.42 Blackpowder/16 Gauge 2.5" Blackpowder	1.41 kg	8 Cylinder/1 Shotgun	\$137
LeMat Transitional Model	.35 Blackpowder/28 Gauge 2.5" Blackpowder	1.29 kg	8 Cylinder/1 Shotgun	\$96
LeMat Second Model	.36 Blackpowder/28 Gauge 2.5" Blackpowder	1.29 kg	8 Cylinder/1 Shotgun	\$139
LeMat Second Model	.44 Blackpowder/28 Gauge 2.5" Blackpowder	1.41 kg	8 Cylinder/1 Shotgun	\$202
LeMat Second Model (Carbine Configuration)	.36 Blackpowder/28 Gauge 2.5" Blackpowder	2.03 kg	8 Cylinder/1 Shotgun	\$201
LeMat Second Model (Carbine Configuration)	.44 Blackpowder/28 Gauge 2.5" Blackpowder	2.15 kg	8 Cylinder/1 Shotgun	\$289

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
LeMat First Model (Bullet Barrels)	SAR (1/16)	2	Nil	1	2	Nil	10
LeMat First Model (Shotgun Barrel)	SAR (1/16)	3/1d6x16 or 2d6x4	2- Nil/Nil or 1- Nil	1	7	Nil	2
LeMat Transitional Model (Bullet Barrels)	SAR (1/16)	1	Nil	1	2	Nil	6
LeMat Transitional Model (Shotgun Barrel)	SAR (1/16)	2/1d6x8	1- Nil/Nil	1	6	Nil	1
LeMat Second Model (Bullet Barrels, .36)	SAR (1/16)	1	Nil	1	2	Nil	9
LeMat Second Model (Shotgun Barrel, 28 Gauge)	SAR (1/16)	2/1d6x8	1- Nil/Nil	1	5	Nil	1
LeMat Second Model (Bullet Barrels, Carbine Configuration, .36)	SAR (1/16)	1	Nil	3	1	Nil	16
LeMat Second Model (Shotgun Barrel, Carbine Configuration, 28 Gauge)	SAR (1/16)	2/1d6x8	1- Nil/Nil	3	4	Nil	2
LeMat Second Model (Bullet Barrels, .44)	SAR (1/16)	2	1- Nil	1	3	Nil	11
LeMat Second Model (Bullet Barrels, Carbine Configuration, .44)	SAR (1/16)	2	1- Nil	3	2	Nil	19

Marston Pocket Model

Notes: This revolver was made in seven versions, most of which differ from each other only in markings or finish or minor mechanical details. These differences are, for the most part, the same in game terms. They have 4-inch octagonal barrels, and the finish for all the metalwork is blued; the cylinder is browned. The grips are of smooth walnut. All of these revolvers were designed to use combustible cases and using straight blackpowder tends to foul the barrels more quickly.

Some 13,000 or these revolvers were built. They were marketed to civilians as the Union (named for the company that actually built the Pocket Model -- Marston was the designer of the revolver), the Phenix (no, that is not a misspelling), and the Western. The Type 4 uses a fluted cylinder instead of round cylinder, but this was changed back with the 6th and 7th Models. The VI and VII models also are six-shooters; the rest of the models were five-shooters.

The Pocket Model is a smaller version of the Navy Model, which had an 8-inch octagonal model for most of its development. Model III had a round barrel. Both of these revolvers (the Pocket and Navy Model) are based on the Whitney Navy Revolver design.

Weapon	Ammunition	Weight	Magazines	Price
Pocket Model	.31 Combustible Case	0.91 kg	5 Cylinder	\$50
Pocket Model (VI-VII Models)	.31 Combustible Case	0.91 kg	6 Cylinder	\$51
Navy Model (I and II Models)	.36 Combustible Case	1.28 kg	6 Cylinder	\$90

Navy Model (III Model)	.36 Combustible Case	1.27 kg	6 Cylinder	\$89
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Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Pocket Model	SAR (1/10)	1	Nil	1	2	Nil	5
Navy Model	SAR (1/10)	1	Nil	1	2	Nil	11

Perrin Model 1860

Notes: The Perrin was one of the first crop of metallic cartridge handguns. Basic features of the Perrin include an open-top frame, a spurless hammer, a cylinder pin that doubles as an ejector rod. The loading gate was on First Models was hinged at the bottom and swung out and up; the Second Model's loading gate was hinged at the top and swung out and up. Another version of the Second Model used a loading gate that was hinged at the top and swung back. The Third Model had a loading gate that was hinged at the bottom and swung down. For game purposes, all three are identical, except that the Perrin came in 5.5 and 6-inch barrels.

The Union used the First and Second Models. There may have been Confederate use, but details are sketchy.

Weapon	Ammunition	Weight	Magazines	Price
Perrin Model 1860 (5.5" Barrel)	12x42mm RF	1.98 kg	6 Cylinder	\$332
Perrin Model 1860 (6" Barrel)	12x42mm RF	1.99 kg	6 Cylinder	\$337

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Perrin Model 1860 (5.5" Barrel)	DAR (1/12)	3	1- Nil	2	4	Nil	11
Perrin Model 1860 (6" Barrel)	DAR (1/12)	3	1- Nil	2	4	Nil	12

Remington-Beals Navy

Notes: This is another large family of revolvers. It started when Fordyce Beals patented his revolver design, then allowed Remington to build the revolver for use by the Union Navy and Marines. It was Remington's first military firearm. It used an octagonal 7.5-inch barrel in a frame and cylinder that was finished blued. It could be thumb-cocked or using an "ear" on the cylinder. The cylinder latch post is dovetailed into the barrel in early models, the rest are screwed in. The grip part of the hammer is a hand-cut diamond pattern; the hammer is high, too high for some people, with smaller hands. On early models, the frame screws are made from silver; later versions use brass screws. The grip is oil-finished walnut. Only 175 of these Type I revolvers were built. Type II, III, and IV have minor mechanical differences; they are identical in game terms. Some 14,500 were built.

The Army model used an 8-inch barrel, but is otherwise the same as the Type IV Navy. Only 1850 of these were build due to a bureaucratic foul-ups at the War Department.

The Remington Elliot Navy Revolver is also known as the Model 1861 Navy or the Old Model Navy. It is mostly the same as the Remington-Beals Navy for game purposes, but has a 7.375-inch barrel. Approximately 4500 were built. The Army version had an 8-inch barrel., but is otherwise the same as the Navy Model for game purposes.

The Remington Model 1863 Navy had a hammer spur not as high as on the Remington-Beals Navy. Otherwise, it is identical to the Remington Elliot Navy for game purposes. It had an 8-inch octagonal barrel; early versions used silver front sights. Most Model 1862 Navy revolvers used a brass front sight which was a pinched cylindrical front sight. It used a 7.375-inch barrel. The Remington Model 1863 Army is the same as the Remington Model 1863 Navy for game purposes, except for its 8-inch barrel. The New Model Police is also the same for game purposes, except for using 3.5, 4.5, 5.5, and 6.5-inch barrel. The New Model Belt version is also the same for game purposes, except that it used only the 6.5-inch barrel.

The Remington-Rider Pocket is mostly identical for game purposes, except for the smaller caliber. It too used a 6.5-inch barrel. For game purposes, the Remington-Rider New Model Belt is identical to New Model Belt above.

All told, almost 200,000 of these revolvers were built. They were one of the most numerous firearms in the Civil War.

Weapon	Ammunition	Weight	Magazines	Price
Remington-Beals Navy	.36 Blackpowder	1.19 kg	6 Cylinder	\$87
Remington-Beals Army	.44 Blackpowder	1.3 kg	6 Cylinder	\$110
Remington Elliot Navy	.36 Blackpowder	1.19 kg	6 Cylinder	\$86
Remington Elliot Army	.44 Blackpowder	1.3 kg	6 Cylinder	\$110
Remington New Model Police (3.5" Barrel)	.36 Blackpowder	0.68 kg	6 Cylinder	\$55
Remington New Model Police (4.5" Barrel)	.36 Blackpowder	0.71 kg	6 Cylinder	\$63
Remington New Model Police (5.5" Barrel)	.36 Blackpowder	0.74 kg	6 Cylinder	\$71
Remington New Model Police (6.5" Barrel)	.36 Blackpowder	0.77 kg	6 Cylinder	\$78
Remington New Model Belt	.36 Blackpowder	0.96 kg	6 Cylinder	\$78
Remington-Rider Pocket	.31 Blackpowder	1.02 kg	6 Cylinder	\$70

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Remington-Beals Navy	SAR (1/12)	1	Nil	1	2	Nil	11
Remington-Beals Army	SAR (1/12)	2	1- Nil	2	3	Nil	13
Remington Elliot Navy	SAR (1/12)	1	Nil	1	2	Nil	11
Remington Elliot Army	SAR (1/12)	2	1- Nil	2	3	Nil	13
Remington New Model Police (3.5" Barrel)	SAR (1/12)	1	Nil	1	4	Nil	5
Remington New Model Police (4.5" Barrel)	SAR (1/12)	1	Nil	1	4	Nil	7
Remington New Model Police (5.5" Barrel)	SAR (1/12)	1	Nil	1	4	Nil	8
Remington New Model Police (6.5" Barrel)	SAR (1/12)	1	Nil	1	3	Nil	9
Remington New Model Belt	SAR (1/12)	1	Nil	1	3	Nil	9
Remington-Rider Pocket	SAR (1/12)	1	Nil	1	2	Nil	8

Savage Model 1861 Navy

Notes: One of the first you notice about the Model 1861 Navy is the big enlarged trigger guard, extending from the frame and meeting the grip near the bottom. This Though 20,000 were built, only 10,800 were bought by the War Department; the rest were bought by civilians or the Confederacy (though the numbers of 1861 Navy Revolvers used by the Confederacy was small). The Model 1861 Navy was offered for sale to veterans of the Civil War, but only 17 veterans did so. It has a flat recoil shield behind the cylinders. The Union Navy actually bought only 800 of these revolvers, and some 10,000 went to the Army. The standard Model 1861 Navy had 7.125-inch barrel, but some rare specimens had a 23-inch barrel and a shoulder stock. (Imagine what it would be like to shoot this version without the stock! I try to do this below, though it probably does not capture the actual experience.) The barrel was finished blued, and the rest of the metalwork was case-hardened.

Weapon	Ammunition	Weight	Magazines	Price
Model 1861 Navy (7.125" Barrel)	.36 Combustible Cartridge	1.53 kg	6 Cylinder	\$82
Model 1861 Navy (23" Barrel)	.36 Combustible Cartridge	2.36 kg	6 Cylinder	\$204
Model 1861 Navy (23" Barrel, Carbine Configuration)	.36 Combustible Cartridge	3.1 kg	6 Cylinder	\$215

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1861 Navy (7.125" Barrel)	SAR (1/9)	1	Nil	1	2	Nil	10
Model 1861 Navy (23" Barrel)	SAR (1/9)	1	Nil	4	4	Nil	25
Model 1861 Navy (23" Barrel, Carbine Configuration)	SAR (1/9)	1	Nil	6	1	Nil	39

Smith & Wesson No 2 Army

Notes: The No 2 Army, also called the Model 2 Army and the Old Model Army, was a revolver that combined new features of the time with old features, some of which hadn't been seen in a while. While there were no large government orders of this revolver, it was bought in large numbers by the friend and family of their soldiers on the front or by the soldiers themselves before they went to the front; I do mean large, as 77,155 were built (but they were built until 1873). Though there were no official sales to military on record, several commanders bought them for their troops. It is possible that General Grant himself carried one of these into battle, as well as bought several for his fellow officers. There were also civilian sales (for the civilians themselves) and possibly an abnormal number to various criminals and street gangs. However, since were bought individually and gun records were not what they are now, records on its use are sparse.

The No 2 Army was fed by modern (for the time) metallic rimfire cartridges, but also uses an unshrouded spur triggerlike many older pistols and derringers. The frame and cylinder were of wrought iron instead of the steels which becoming more and more common (though the barrel was steel). However, since the cylinder is removed to reload it, one can carry several loaded cylinders and simply switch them out when needed. This gives a reload time of 1/2 when cylinders are used this way. (This the third ROF below.) It used an easy-to-grip hammer for thumb cocking; it also used an ejector rod that is difficult to get a hold of in combat situations. The No 2 Army breaks open to expose the cylinder; to unload, the rammer pin, which forces out the spent shells, engages them one shell at a time, forcing them out one shall at a time. This makes ROF figures a bit longer than they otherwise might be. Those built with 5 or 6-inch barrels were common; less common were 4, 8, and 10-inch barrels.

Weapon	Ammunition	Weight	Magazines	Price
No 2 Army (4" Barrel)	.32 Smith & Wesson Long	0.54 kg	6 Cylinder	\$107

No 2 Army (5" Barrel)	(Blackpowder) .32 Smith & Wesson Long	0.56 kg	6 Cylinder	\$117
No 2 Army (6" Barrel)	(Blackpowder) .32 Smith & Wesson Long	0.58 kg	6 Cylinder	\$128
No 2 Army (8" Barrel)	(Blackpowder) .32 Smith & Wesson Long	0.62 kg	6 Cylinder	\$148
No 2 Army (10" Barrel)	(Blackpowder) .32 Smith & Wesson Long	0.66 kg	6 Cylinder	\$168

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
No 2 Army (4" Barrel)	SAR (1/3)	1	Nil	1	5	Nil	7
No 2 Army (5" Barrel)	(1/2) SAR	1	Nil	1	4	Nil	10
No 2 Army (6" Barrel)	(1/3) (1/2) SAR	1	Nil	1	4	Nil	12
No 2 Army (8" Barrel)	(1/3) (1/2) SAR	2	Nil	2	5	Nil	16
No 2 Army (10" Barrel)	(1/3) (1/2) SAR	2	1- Nil	2	5	Nil	21

Starr Model 1858 Revolver

Notes: This a set of three revolvers. The first two, the Navy and Army, are separated only by their caliber and a large weight difference. The Army revolver was made much lighter to be handier to troops on the ground, especially those on horseback. Most other differences are minor details and not important for game purposes; most of these differences the heavier caliber of the Army Model.

The Model 1863 Army is similar from a design standpoint, though is quite different mechanically, being single-action and able to be thumb-cocked. This made it preferable to the Union Army, and it the third most numerous revolver in the Civil War. Most Union generals carried one, and many high-ranking officers and some mid-level ones. All three are fed by combustible nitrated paper cartridges; these have ball of the appropriate size glued onto the front of the paper cartridge, just inside of the paper. Like most combustible case rounds, the paper and powder are ignited by a percussion cap.

The barrel of the first two is 6 inches and round (8 inches on the Model 1863). Finish of the metal is mostly blued. One thing that strikes me is how...ordinary...the Starr looks -- it looks most modern revolvers. Except for aging, you might at first glance mistake it for any number of modern reproductions.

Three places you may have seen the Starr in the past few years include the movie *Unforgiven*, where Clint Eastwood's character uses one to see if he has retained his skill with a revolver, by the Kevin Costner character of young Wyatt Earp in the movie of the same name, and in *Rambo, First Blood*, where it is seen in a display case.

Weapon	Ammunition	Weight	Magazines	Price
Model 1858 Navy	.36 Combustible Cartridge	1.59 kg	6 Cylinder	\$74
Model 1858 Army	.44 Combustible Cartridge	1.3 kg	6 Cylinder	\$93
Model 1863 Army	.44 Combustible Cartridge	1.36 kg	6 Cylinder	\$108

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1858 Navy	DAR (1/6)	1	Nil	1	2	Nil	9
Model 1858 Army	DAR (1/6)	2	Nil	1	3	Nil	10
Model 1863 Army	SAR (1/6)	2	1- Nil	2	3	Nil	12

US Model 1836 Percussion

Notes: This handgun was originally a flintlock handgun; in the 1850s, the design was changed to use a percussion ignition combustible cartridge. The breech section was removed, replaced with a mechanism allowing a combustible cartridge/ball round; the handgun is muzzleloaded. The Model 1836 had a short cleaning rod under the barrel and going into the fore-end. The barrel was fairly long for a handgun at 8.5 inches, but this allowed decent range for the Model 1836's type of handgun.

The US Model 1836 Percussion spawned a number of identical versions except for cosmetic and mechanism changes. They are all identical to the Model 1836 for game purposes. The US Navy Model 1842 Boxlock was also used by the US Cutter Service; it differed from the Model 1836 by having a 6-inch barrel. This design also had a number of contracts to build it, and these are identical for game purposes. They have a fixed rear V-notch sight and a front bead; these versions had a rifled barrel, where earlier versions had a smoothbore barrel. Many have engraved scenes on the cylinders -- wildlife, Indian fighting, Civil War, cavalry, and from the

Mexican-American War. There are especially prevalent on Walkers used by US or Texan military officers who bought their Walker privately and on Texas Rangers' weapons.

Some 80,000 of all these versions were manufactured, and most of these were used by the Union military in the Civil War and in the Mexican-American War.

Weapon	Ammunition	Weight	Magazines	Price
US Model 1836 Percussion	.54 Combustible Cartridge	1.25 kg	1 Internal	\$55
US Navy Model 1842 Boxlock	.54 Combustible Cartridge	0.91 kg	1 Internal	\$84

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
US Model 1836 Percussion	1/3	2	1- Nil	1	5	Nil	10
US Navy Model 1842 Boxlock	1/3	2	1- Nil	1	6	Nil	11

US Model 1855 Pistol-Carbine

Notes: This is similar in appearance to the Model 1836, as well as being similar is its functioning. However, the rear of the grip has an adapter for use with a removable stock, turning it into a short-barreled carbine. It also uses a combustible cartridge, a round ball, and is muzzleloaded. The barrel is 12 inches long and is brass, as is almost all of the metalwork (and is finished bright). The rear sight is a two-leaf design, and the front sight is a small bead. A short ramrod is under the barrel, as is a pommel ring on the bottom of the grip. It has two sling swivels for use when the stock is being used (as one of the swivels is on the stock).

The US Model 1855 Fayetteville is virtually identical for game purposes; it is noted for being assembled in North Carolina for use by the Confederacy from parts captured at the Harpers Ferry Arsenal in Virginia in 1861. The lock plate was not milled, allowing it to use the Maynard Tape Priming System.

Weapon	Ammunition	Weight	Magazines	Price
US Model 1855 Pistol-Carbine (Pistol Configuration)	.58 Combustible Cartridge	1.73 kg	1 Internal	\$113
US Model 1855 Pistol-Carbine (Carbine Configuration)	.58 Combustible Cartridge	2.47 kg	1 Internal	\$123
US Model 1855 Fayetteville Pistol-Carbine (Pistol Configuration)	.58 Combustible Cartridge	1.73 kg	1 Internal	\$113
US Model 1855 Fayetteville Pistol-Carbine (Carbine Configuration)	.58 Combustible Cartridge	2.47 kg	1 Internal	\$123

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
US Model 1855 Pistol-Carbine (Pistol Configuration)	1/3//1/10	2	1- Nil	2	4	Nil	21
US Model 1855 Pistol-Carbine (Carbine Configuration)	1/3//1/10	3	1- Nil	4	3	Nil	26
US Model 1855 Fayetteville Pistol-Carbine (Pistol Configuration)	1/2//1/10	2	1- Nil	2	4	Nil	21
US Model 1855 Fayetteville Pistol-Carbine (Carbine Configuration)	1/2//1/10	3	1- Nil	4	3	Nil	26

Whitney Navy Revolver

This revolver comes in two primary models and several submodels of each of the two models. For game purposes, they are all virtually identical; most differences are in markings and minor technical details. Some changes, such as the hammer trigger guard, were in what metal they were made, and some were done to make the revolver less expensive. The 2nd Model was also more ergonomic than the 1st Model. Only about 1500 1st Model Whitneys were built; the Union government requested some changes and a cut in price, so some iron parts were replaced with brass. Some 34,000 2nd Models were built, making it one of the most common revolvers of the Civil War. The designer was Fordyce Beals, the man who designed the Remington-Beals revolvers; he co-designed the Whitney Navy Revolver with Eli Whitney. All of these revolvers were built from the late 1850s until the end of the Civil War. Though most Whitney Navy Revolvers went to the Union Navy, but some equipped the New Jersey regiment of the Civil War; a very small amount were sold to what would be the Confederacy before the Civil War began (the Confederates used the 1st Model, as the 2nd Model was not available until the Civil War had already started).

The Whitney Naval revolver used combustible paper cases for the powder, ignited by a percussion cap. A ball round was glued into the top of the case. The standard barrel was a 7.5-inch octagonal barrel (with a few examples made with 4, 5, 6, and 8 inches), and was of steel, while most of the rest of the revolver was wrought iron. the 2nd Model was available only in a 7.5-inch barrel version. On the 2nd Model, the trigger guard, hammer, and screws holding the revolver together were made of brass; on the 1st Model, these were made of iron. The Whitney Navy Revolver had a manual safety catch, a rarity at the time. The Whitney had a solid frame; several designers and manufacturers were trying to use a solid frame, but the Whitney was the first successful attempt. The

Whitney Navy Revolver used a post front sight, and the hammer as a rear sight.

Weapon	Ammunition	Weight	Magazines	Price
Whitney Navy Revolver (4" Barrel)	.36 Combustible Case	1 kg	6 Cylinder	\$60
Whitney Navy Revolver (5" Barrel)	.36 Combustible Case	1.04 kg	6 Cylinder	\$67
Whitney Navy Revolver (6" Barrel)	.36 Combustible Case	1.08 kg	6 Cylinder	\$75
Whitney Navy Revolver (7.5" Barrel)	.36 Combustible Case	1.13 kg	6 Cylinder	\$87
Whitney Navy Revolver (8" Barrel)	.36 Combustible Case	1.16 kg	6 Cylinder	\$90

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Whitney Navy Revolver (4" Barrel)	SAR (1/9)	1	Nil	1	3	Nil	6
Whitney Navy Revolver (5" Barrel)	SAR (1/9)	1	Nil	1	3	Nil	7
Whitney Navy Revolver (6" Barrel)	SAR (1/9)	1	Nil	1	2	Nil	9
Whitney Navy Revolver (7.5" Barrel)	SAR (1/9)	1	Nil	1	2	Nil	11
Whitney Navy Revolver (8" Barrel)	SAR (1/9)	1	Nil	1	2	Nil	12

- 1) Standard ammunition for these stats is a round ball fired from a smooth or mildly-rifled (very slow twist) barrel.
- 2) A standard ammunition "case" for blackpowder rounds consists of enough balls and powder for 50 shots of ammunition.
- 3) "Cases" of balls and shot weight 2 kg per "case: One measure of powder weighs 0.02 kg, and one ball weighs 0.02 kg. Magnum powder loads take 2 loads of powder per shot. A Minie Ball weighs 0.05 kg per shot. A rifled ball weighs 0.03 kg per shot.
- 4) Use base range, and increase rifled weapons' range by 1.5 times; however, increase loading times by two steps (so 1/6 would become 1/8). This is for rifled balls only, and simulates the difficulty in ramming the ball down the barrel. Such a weapon can also fire standard balls; in this case, the increase in damage and range does not apply.
- 5) This increase in loading time does not apply to inline firearms or rifles firing Minie Ball or similar types of rounds. If something like a Minie Ball or inline rifle is used, double range (ranges for inlines will already be doubled in the stats below).
- 6) If a blackpowder weapon has a rifled barrel and is designed for rifled balls, increase cost by 1.5 times. If designed for something like a Minie Ball, increase costs by 1.9 times. (Inlines double costs, but this is already figured in the stats below.)
- 7) If a blackpowder weapon is designed to fire rifled balls, increase range by 1.5 times.
- 8) If the weapon is an inline or designed to fire Minie Ball-type rounds, double range.
- 9) Some rifles are stressed for magnum loads, and are given in the stats below, If a magnum load is loaded into a non-magnum firearm (standard loads are designed to take a man down), increase damage by one point and go the next level of penetration, but the weapon is 5% likely (cumulative) to be damaged per shot.
- 10) Buck-and-ball shots give two extra 1d6-damage rounds per shot and the extra balls otherwise act like a shotguns and use shotgun rules, but range is reduced to 0.75 times normal.
- 11) Weapons given in their description as "rifles" will have their range adjusted in the stats, unless stated otherwise in the description.

These rules are preliminary, especially the weight figures for powder and balls.

1763/1766/1777 Charleville Musket

Notes: This Musket is a modern reproduction of Charleville Musket produced for several decades in the 1700s. Today, it is sold through Cabela's, Dixie Gun Works, and Navy Arms. It comes in several barrel lengths, but is unwieldy in any form. The stock is a straight-wristed stock, with a modicum of room to shoulder the weapon and furnished with a flintlock mechanism. Furniture is of hardwood and metal parts are of polished steel. Sights consist of brass studs above the barrel and action, but these are low and not very precision sights.

Weapon	Ammunition	Weight	Magazines	Price
Charleville Musket (44" Barrel)	.69 Blackpowder	3.7 kg	1 Internal	\$278
Charleville Musket (44.5" Barrel)	.69 Blackpowder	3.96 kg	1 Internal	\$387
Charleville Musket (44.75" Barrel)	.69 Blackpowder	3.97 kg	1 Internal	\$388

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Charleville Musket (44")	1/12	2	1- Nil	9	3	Nil	36
Charleville Musket (44.5")	1/12	5	2-3- Nil	10	5	Nil	46
Charleville Musket (44.75")	1/12	5	2-3- Nil	10	4	Nil	48

1803 Harper's Ferry Rifle

Notes: this is a modern reproduction of the old Harper's Ferry Rifle, and is sold today through a number of outlets such as Dixie Gun Works and Navy Arms. The Harper's Ferry Rifle is a faithful reproduction of the old version, with an old stock design of walnut and a holder at the bottom of the barrel in the fore-end for the ramrod. Ignition is by flintlock, and the stock widens into a half-stock ahead somewhere between a quarter and a third of the way down the barrel. Metalwork (except for the barrel) is largely of brass, though the lock and trigger are of color case-hardened steel, and the ramrod of steel. The barrel is semi-heavy; it starts as a heavy octagonal barrel, but tapers to a round barrel towards the muzzle. Sights essentially consist of a raised nib above the muzzle. Barrels can be had in either 35 inches or 35.5 inches. The Harper's Ferry Rifle is designed to fire rifled balls (this is in the stats below).

Weapon	Ammunition	Weight	Magazines	Price
Harper's Ferry Rifle (35" Barrel)	.54 Blackpowder	3.86 kg	1 Internal	\$612
Harper's Ferry Rifle (35.5" Barrel)	.54 Blackpowder	4.31 kg	1 Internal	\$620

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Harper's Ferry Rifle (35")	1/8	3	2- Nil	8	3	Nil	74
Harper's Ferry Rifle (35.5")	1/8	3	2- Nil	8	3	Nil	75

1855 British Pattern Sharps

Notes: In the mid-19th Century, Great Britain was basically the major arms dealer of the time. Also known as the "Yankee Sharps," the 1855 British Pattern Sharps was tested extensively by the US military; 12 rifles were basically shot to death, after which the War Department deemed them fit for its troops and a major order was made. Large amounts of these rifles served on both sides of the Civil War, though they were in the process of being replaced by the Union. The .577 round was the British service cartridge of the time, and that was what the 1855 British Pattern Sharps was chambered in. Ignition was by the Maynard tape system; this used a roll of nipple primers that were advanced along by the shooter to prime each round. Though it sounds innovative, the fact was that the tape got soggy in the elements and soldiers often found themselves priming the rifle normally, one nipple at a time, like any other rifle. The soggy tapes were also a good way to lose primers, by having them drop off due to the wetness of the tape. No one knows why the War Department was willing to go along with the Maynard tape system, but probably since they had made such a large investment, they felt obligated to use the rifle and its deficient tape system.

Early 1855 Sharps rifles were easy to load, due to exacting tolerances. These were manufactured primarily by the British, with some US license production. Later construction became a bit sloppy, and they became harder to load cleanly, because the paper part of the cartridge would wad up unevenly. There were three barrel lengths to the 1855 Sharps -- a short 19.15 inches, a longer 21.25 inches, and a long 39 inches, all round barrels. The first two resulted from the War Department order, while the third and longest was primarily used by civilian hunters and to a small extent, sharpshooters. Stocks are of walnut; both British and American walnut can be found. Sights are a ladder-type rear and a small, round blade front. Metalwork is blued.

Weapon	Ammunition	Weight	Magazines	Price
1855 Sharps (19.15" Barrel)	.577 Blackpowder	3.35 kg	1 Internal	\$363
1855 Sharps (21.25" Barrel)	.577 Blackpowder	3.43 kg	1 Internal	\$395
1855 Sharps (39" Barrel)	.577 Blackpowder	4.02 kg	1 Internal	\$893

Weapon	ROF*	Damage	Pen	Bulk	SS	Burst	Range
1855 Sharps (19.15" Barrel)	1/5	4	2- Nil	5	4	Nil	58
1855 Sharps (21.25" Barrel)	1/5	4	2- Nil	6	4	Nil	64
1855 Sharps (39" Barrel)	1/5	4	2- Nil	9	4	Nil	111

*This is when the Maynard Tape System is working. If it isn't (or the shooter is simply using individual nipples), ROF is 1/6.

1859 Sharps

Notes: This is a modern reproduction of a pre-Civil War rifled musket designed to fire Minie Ball-type projectiles; the stats below reflect this. These modern reproductions are sold by Dixie Gun Works, Navy Arms, and Taylor's. Construction is largely of steel (better-quality steel than was available in 1859) and the gun has a silver blade front sight and a flip-up rear sight. The barrel has a blued finish and most of the rest of the external metalwork has a color case-hardened finish. The fore-end has three military-type bands (except on the carbine, which has one). Though not standard, a double set trigger is available. This reproduction of the 1859 Sharps is available, like the original in two forms: a rifle version, with a 30-inch barrel, and a carbine version, with a 22-inch barrel. Lockwork and ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
1859 Sharps Rifle	.54 Blackpowder Minie Ball	4.2 kg	1 Internal	\$644
1859 Sharps Carbine	.54 Blackpowder Minie Ball	3.63 kg	1 Internal	\$608

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
1859 Sharps Rifle	1/6	3	2- Nil	7	3	Nil	67
1859 Sharps Carbine	1/6	3	2- Nil	6	3	Nil	89

1861 Springfield

Notes: This is a faithful reproduction of the rifle that armed so many sharpshooter Union troops at the beginning of the Civil War. These reproductions are sold by Dixie Gun Works, Pedersoli, Navy Arms, and Taylor's. As such, the furniture is walnut; however, in a bow to modern manufacturing methods, the steel used in this reproduction's manufacture is of better quality than that used so long ago. The barrel is of natural metal finish, as is most of the metalwork. This rifle has sling swivels, and a very long rifled 40-inch barrel (which is reflected in the stats below, so no adjustments are necessary). This reproduction is designed for Minie Ball-type projectiles (or modern equivalents of them). The 1861 Springfield reproduction is drilled and tapped for a scope; however, the type of scope the drilling and tapping is designed for is a reproduction of scopes of the period, and a modern scope (or any other optics) will not fit in this drilling and tapping. Reproduction scopes vary in capabilities, but a standard sort of scope for the period is as long as much of the length of the barrel and gives a magnification of about 3x. Ignition is by percussion. The iron sights are a steel blade in the front, and a 2-leaf rear for use at two different spreads of ranges.

Weapon	Ammunition	Weight	Magazines	Price
1861 Springfield	.58 Blackpowder Minie Ball	3.97 kg	1 Internal	\$1011
1861 Springfield (with Scope)	.58 Blackpowder Minie Ball	4.65 kg	1 Internal	\$1211

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
1861 Springfield	1/6	4	2- Nil	9	4	Nil	51

1863 Remington Zouave

Notes: Another reproduction of a common Civil War weapon, this weapon is a musket and does not have a rifled barrel. Like many other such reproductions, it is sold by Dixie Gun Works, Navy Arms, and Taylor's. It has walnut furniture, a brass plate on either side of the buttstock, a blued 33-inch barrel, and a color case-hardened hammer, trigger, and lock. The sights consist of a leaf rear and a blade front. Ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
Remington Zouave	.58 Blackpowder	4.31 kg	1 Internal	\$287

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Remington Zouave	1/6	4	2- Nil	9	4	Nil	34

1863 Sharps

Notes: This is a reproduction of another common late-Civil War weapon, today sold by EMF, IAR, and Taylor's. The 1863 Sharps came in several sizes from carbine to long rifle size. The 1863 Sharps was sort of an intermediate step between cartridge firearms and muzzleloading weapons – the 1863 Sharps was loaded by stuffing the Minie Ball, powder, and wadding into the breech of the weapon instead of into the muzzle and cramming it down, though ignition is by percussion. This made it very easy to make the 1863 Sharps a rifled weapon, which is taken into account in the figures below and no conversions are necessary. In addition, this reduced the loading time of the 1863 Sharps. Features of the reproduction version are walnut furniture, a blade front sight, and a rear notch sight which is dovetailed in and therefore allows for limited windage adjustments. Regardless of barrel length (which may be 22, 28, 30, or 32 inches), the barrel is an octagonal heavy barrel. The reproduction also has a set trigger, which some versions of the original 1863 Sharps had.

Weapon	Ammunition	Weight	Magazines	Price
1863 Sharps (22" Barrel)	.50 Blackpowder Minie Ball	3.74 kg	1 Internal	\$521
1863 Sharps (22" Barrel)	.54 Blackpowder Minie Ball	3.85 kg	1 Internal	\$529
1863 Sharps (28" Barrel)	.50 Blackpowder Minie Ball	3.98 kg	1 Internal	\$644
1863 Sharps (28" Barrel)	.54 Blackpowder Minie Ball	4.1 kg	1 Internal	\$650
1863 Sharps (30" Barrel)	.50 Blackpowder Minie Ball	4.06 kg	1 Internal	\$684
1863 Sharps (30" Barrel)	.54 Blackpowder Minie Ball	4.18 kg	1 Internal	\$692
1863 Sharps (32" Barrel)	.50 Blackpowder Minie Ball	4.13 kg	1 Internal	\$725
1863 Sharps (32" Barrel)	.54 Blackpowder Minie Ball	4.25 kg	1 Internal	\$733

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
1863 Sharps (22" Barrel, .50)	1/5	3	1- Nil	6	3	Nil	80
1863 Sharps (22" Barrel, .54)	1/5	3	2- Nil	6	3	Nil	83
1863 Sharps (28" Barrel, .50)	1/5	3	1- Nil	7	2	Nil	101
1863 Sharps (28" Barrel, .54)	1/5	3	2- Nil	7	3	Nil	105

1863 Sharps (30" Barrel, .50)	1/5	3	1- Nil	7	2	Nil	105
1863 Sharps (30" Barrel, .54)	1/5	3	2- Nil	7	3	Nil	111
1863 Sharps (32" Barrel, .50)	1/5	3	1- Nil	7	2	Nil	111
1863 Sharps (32" Barrel, .54)	1/5	3	2- Nil	8	3	Nil	117

3-Band/2-Band Enfield Musket

Notes: This is another modern reproduction of an old weapon, this time an unrifled musket commonly used by British troops during the American Revolution and Napoleonic Wars. Whether the fore-end has two or three retaining bands depends on the barrel length; in general, shorter barrels use two bands, and longer barrels use three. This reproduction faithfully reproduces the stock style and shape, and the stock/furniture is of walnut. Barrels are 31.5", 33", 39", or 40", and are blued and tapered. Most other metalwork is brass. The Enfield Musket has a steel blade front sight and a flip up rear sight is adjustable, though accuracy with an unrifled musket is questionable. Ignition is by percussion. Modern reproductions are made by a variety of companies both in the US and overseas and sold by Dixie Gun Works, Navy Arms, and Taylor's.

Weapon	Ammunition	Weight	Magazines	Price
Enfield Musket (31.5")	.58 Blackpowder	3.76 kg	1 Internal	\$376
Enfield Musket (33")	.58 Blackpowder	3.87 kg	1 Internal	\$391
Enfield Musket (39")	.58 Blackpowder	4.24 kg	1 Internal	\$436
Enfield Musket (40")	.58 Blackpowder	4.3 kg	1 Internal	\$464

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Enfield Musket (31.5")	1/6	4	2- Nil	7	5	Nil	32
Enfield Musket (33")	1/6	4	2- Nil	8	4	Nil	34
Enfield Musket (39")	1/6	4	2- Nil	9	4	Nil	40
Enfield Musket (40")	1/6	4	2- Nil	9	4	Nil	42

AH Waters Contract Musket Model 1842

Made in Milbury, MA, this musket is based on the Springfield Model 1842, but produced in the private Armory of AH Waters, with less than 100 produced for friends and family; later, they were given up to a Massachusetts company just forming. They were produced in roughly 1844 and 1845. The Type I had an iron buttplate, while the Type II had a highly fancy engraved brass buttplate known as a Sea Fencible buttplate. Most of the Type I metalwork was dull iron, while the Type II had all-brass metalwork. The Type I and II were identical for game purposes. In both cases, the steel 42-inch barrel was finished brown.

Weapon	Ammunition	Weight	Magazines	Price
AH Waters Contract Musket	.69 Blackpowder	4.69 kg	1 Internal	\$199

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
AH Waters Contract Musket	1/6	5	2-3- Nil	8	5	Nil	35

Austrian Model 1842 Long Rifle

Notes: Used in the American Civil War early in the conflict by some Union units, the Model 1842 was huge -- .70-caliber musket ball, and over 147 centimeters in length. As sold, the Model 1842 fired using an unrifled bore, but later in the war, they were rifles and changed to firing Minie Balls. There were three models, Infantry, Cadet, and Engineer's. This and the change to a rifled bore made for a total of six models. They original used a flintlock ignition, but this was quickly changed to a percussion ignition. Minie Ball-firing rifled variants make three more, for a total of nine subtypes. The Infantry Models' barrels were an astounding 43.5 inches long. The cadet model had a 40.125-inch barrel; the engineer model had a 36.375-inch barrel.

Weapon	Ammunition	Weight	Magazines	Price
Austrian Model 42 (Infantry Model, Unrifled)	.71 Blackpowder	5.02 kg	1 Internal	\$254
Austrian Model 42 (Cadet Model, Unrifled)	.71 Blackpowder	4.79 kg	1 Internal	\$237

Austrian Model 42 (Engineer Model, Unrifled)	.71 Blackpowder	4.54 kg	1 Internal	\$218
Austrian Model 42 (Infantry Model, Rifled)	.71 Blackpowder	5.02 kg	1 Internal	\$401
Austrian Model 42 (Cadet Model, Rifled)	.71 Blackpowder	4.79 kg	1 Internal	\$381
Austrian Model 42 (Engineer Model, Rifled)	.71 Blackpowder	4.54 kg	1 Internal	\$326
Austrian Model 42 (Infantry Model, Minie Ball)	.71 Blackpowder	5.02 kg	1 Internal	\$483
Austrian Model 42 (Cadet Model, Minie Ball)	.71 Blackpowder	4.79 kg	1 Internal	\$450
Austrian Model 42 (Engineer Model, Minie Ball)	.71 Blackpowder	4.54 kg	1 Internal	\$392

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Austrian Model 42 (Infantry, Unrifled)	1/7	5	2-4- Nil	10	5	Nil	46
Austrian Model 42 (Cadet, Unrifled)	1/7	5	2-4- Nil	9	5	Nil	43
Austrian Model 42 (Engineer, Unrifled)	1/7	5	2-4- Nil	8	5	Nil	39
Austrian Model 42 (Infantry, Rifled)	1/7	5	2-4- Nil	10	5	Nil	69
Austrian Model 42 (Cadet, Rifled)	1/7	5	2-4- Nil	9	5	Nil	64
Austrian Model 42 (Engineer, Rifled)	1/7	5	2-4- Nil	8	5	Nil	59
Austrian Model 42 (Infantry, Minie)	1/7	5	2-4- Nil	10	5	Nil	88
Austrian Model 42 (Cadet, Minie)	1/7	5	2-4- Nil	9	5	Nil	77
Austrian Model 42 (Engineer, Minie)	1/7	5	2-4- Nil	8	5	Nil	70

Austrian Model 1849 Long Rifle

Notes: Though labeled a long rifle, the Model 1849's barrel is relatively short at 36.38 inches. It is a modification of the Model 1842, and fired Minie Balls. The Austrians sold/smuggled thousands to Giuseppe Garibaldi's rebels in Italy; so many that this rifle is often called a Garibaldi Rifle. 26,201 were also sold to the Union forces in the Civil War, where they too were often referred to as Garibaldi Rifles. The barrel is browned and is octagonal, tapering to round. When transferred to the Union, they were fitted with a new breech and bolster, as many were worn out. The rifling was also re-done. There were many more 1849 rifles in the Civil War than Model 1842s. The Minie Ball fired by this rifle is *huge*, and dealt horrible wounds.

Weapon	Ammunition	Weight	Magazines	Price
Model 1849 Long Rifle	.71 Minie Ball	5.59 kg	1 Internal	\$533

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1849 Long Rifle	1/7	5	2-4- Nil	9	5	Nil	110

Austrian Model 1854 Long Rifle

Notes: A smaller-caliber and much lighter version of the Model 1849, these rifles were referred to as Lorenz Rifles after their designer at the Vienna National Armory. The barrel is smaller at 39.375 inches, and this makes the entire rifle smaller. (Of course, the massive damage of a Garibaldi Rifle was lost...) The Lorenz Rifle was used by both sides in the American Civil War, and during the war, it replaced the Garibaldi Rifle on the Union side. The Union side referred to them as Lorenz Rifle-Muskets, and bought at least 250,000 of them; the Confederate side simply called them Lorenz Rifles, and bought 100,000 of them. Metalwork finish is bright iron, with a browned barrel; wood used is European Walnut.

Weapon	Ammunition	Weight	Magazines	Price
Model 1854 Long Rifle	.54 Minie Ball	4.55 kg	1 Internal	\$472

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1849 Long Rifle	1/7	3	2- Nil	9	3	Nil	103

Baker Rifle

Notes: Officially known as the Pattern 1800 Infantry Rifle, the Baker Rifle became one of the official British Infantry weapons. The British Army had seen officers laid low left and right in the American Revolution, and in fighting Europe and India. They had also seen the power of American rifles in the hands of relatively untrained (though disciplined) troops. Development began soon after the American Revolution, and continued until and through 1800 and the Napoleonic Wars. The rifle is named after the first to give a (partially) effective design, Ezekiel Baker.

COL Coote Manningham was hands on from the beginning. Baker's design was based on Prussian rifles, the parts of which required precise and meticulous machining. Manningham suggested the Prussian Jager Rifle as an example, but the result was a rifle that was too heavy for British Infantry standards. The third design was a start-from-scratch; it was essentially a standard Infantry Musket with a rifled barrel. It was .75-caliber and has 8 grooves in its 32-inch bore; this was given the title of Provisional Infantry Rifle and issue started, but Manningham suggested that Baker shorten the barrel by two inches and neck down to .625-caliber.

Operation was by flintlock; the weapon looked good in trial, but in practice, talking a ball, powder and wadding down a deeply-rifled 30-inch barrel could take considerable forcing and gritting of the teeth; at first, troops using the new rifle were issued small mallets, until stronger ramrods were made. (And this only got worse as the grooves got fouled!) The stock had a raised cheekpiece to put the soldier into as natural position as possible. The cock was swan-necked, and a ridiculous bayonet was issued for the Baker Rifle; it was a "sword bayonet" – and a real shortsword, complete with quillons and hilt guard! Like many "new" weapons of that time, it had a compartment for storing oiled patches, cleaning compound, etc.

The major variation was a carbine version with a 24-inch barrel, and one for the Duke of Cumberland's Corps of Sharpshooters with a 33-inch barrel. Other changes are, for game terms, minor or aesthetic.

These are the stats for a real Baker Rifle – I have not been able to discover whether anyone is making reproductions or if there firing examples.

Weapon	Ammunition	Weight	Magazines	Price
Baker Rifle	.625 Blackpowder	4.08 kg	1 Internal	\$536
Baker Carbine	.625 Blackpowder	3.8 kg	1 Internal	\$445
Baker Sharpshooter	.625 Blackpowder	4.15 kg	1 Internal	\$583

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Baker Rifle	1/7	4	2-3- Nil	7	4	Nil	91
Baker Carbine	1/7	4	2-3- Nil	6	4	Nil	74
Baker Sharpshooter	1/7	6	2-4- Nil	8	4	Nil	99

Ball Repeating Carbine

Notes: This was meant to be one of the standard weapons of the Union Army. But before any could be issued, the Civil War was over, and as a result only the first batch of 1002 were taken into issue. Designed by Albert Ball of Worcester, MA, Ball lacked the facilities to manufacture his carbine and they were actually manufactured by Lamson & Company of Windsor, Vermont (which also made Palmer carbines. The operation was odd; the chamber was split into two parts, with the lower version lifting the round into the upper chamber. This worked quite well when new, but accuracy and jamming resulted when the parts became worn. The .56-50 Spencer cartridge was designed for use by the Union Army, as this was one of the new cartridges chosen by the government, but later commercial sales were made, and for this purpose, the Ball Repeating Carbine was chambered in .44 Long Rimfire cartridge. Note that the Spencer is also a rimfire round. The magazine is a tubular under-barrel magazine, and is actuated by a lever which doubles as a trigger guard. The left side of the receiver, attached to the receiver, is either a robust saddle ring or a sliding lug. The carbine had a stock and fore-end are of walnut; the fore-end has a two-thirds length. The drop on the stock is very pronounced. I have not been able to discern whether there are modern replicas of this carbine.

Notes: Though the barrel is relatively very short, today a longarm with a 20.5-inch barrel would be considered a full-size rifle. The barrel has a round profile and is blued. The Ball uses a tubular magazine in the buttstock; the ejection port doubles as a loading port for the magazine. The trigger guard is also used to cock the rifle. The stock is in two pieces, joined by the action and receiver. Metalwork was primarily blued, with the exception of the brass central barrel band and the buttplate.

Weapon	Ammunition	Weight	Magazines	Price
Ball Repeating Carbine	.56-50 Spencer	4.9 kg	7 Tubular	\$498
Ball Repeating Carbine	.44 Henry Rimfire	4.22 kg	7 Tubular	\$333

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Ball Repeating Carbine (.56-50)	LA	3	2- Nil	6	2	Nil	55
Ball Repeating Carbine (.44)	LA	2	1- Nil	6	2	Nil	50

Ballard Cartridge Rifle

Notes: Like many such "variant" rifles which were not actually government issue in the Civil War, the Ballard .44 was a falling block breechloading single-shot rifle fed by metallic-cased cartridges (as in many such early rifles, rimfire). Though troops had been buying such rifles with their own money since they became available (or relatives back home shipped them to the troops), about 18,000 of these rifles were bought by Kentucky to equip one division of troops. They used a blued octagonal 30-inch barrel, with a front sight blade and a rear adjustable leaf.

The remaining versions differ primarily in caliber and minor details such as barrel bands and bayonet socket. In addition, the Type II version of the .46-caliber rifle had a slightly longer, 30.125-inch barrel.

A carbine version of this rifle was also made, but few were actually made. 115 were actually delivered to the Kentucky Militia, and used on the Confederate side during the Civil War. These were built by Dwight & Chapin, who sent bankrupt before they could make any more. Most of the rest were built from 1863 onward, and were built by Ball & Williams. Some were made from parts made by Dwight & Chapin; these carbines have both Dwight & Chapin and Ball & Williams markings, though all the latter did was to assemble the parts. It had only one iron barrel band, and the rear sight was a folding leaf-type, with post front sight. It had a 20.69-inch round barrel.

The Ballard Carbine, US Contract Type I was one of the first metallic cartridge rifles deliberately the result of a request from the War Department, though only 1500 were produced. Most were produced for use by Kentucky units in March-August of 1864. It has a half-octagonal barrel 20.31 inches long, which is blued (along with almost all of the metalwork. The rear sight is a pierced leaf, and the front sight a dovetailed blade.

The Ballard Carbine, US Contract, Type II was for the most part similar to the Type I. It has an interesting feature, however; a split breech block with a percussion cap nipple, enabling the firing of metallic cartridges or Minie Ball cartridges. Its barrel is 20.185 inches.

Weapon	Ammunition	Weight	Magazines	Price
Ballard .44 Rifle	.44 Ballard Rimfire (Blackpowder)	3.86 kg	1 Internal	\$386
Ballard .46 Rifle	.46 Ballard Rimfire (Blackpowder)	3.72 kg	1 Internal	\$369
Ballard .46 Rifle (Type II)	.46 Ballard Rimfire (Blackpowder)	3.73 kg	1 Internal	\$370
Ballard .54 Rifle	.54 Ballard Rimfire (Blackpowder)	3.82 kg	1 Internal	\$421
Ballard Carbine	.44 Ballard Rimfire (Blackpowder)	3.18 kg	1 Internal	\$529
Ballard Carbine, US Contract Type I	.44 Ballard Rimfire (Blackpowder)	3.19 kg	1 Internal	\$528
Ballard Carbine, US Contract Type II	.44 Ballard Rimfire (Blackpowder)	3.25 kg	1 Internal	\$527

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Ballard .44 Rifle	SS	3	1- Nil	8	3	Nil	87
Ballard .46 Rifle	SS	2	1- Nil	7	2	Nil	72
Ballard .46 Rifle (Type II)	SS	2	1- Nil	7	2	Nil	73
Ballard .54 Rifle	SS	4	2-3- Nil	8	4	Nil	90
Ballard Carbine	SS	3	1- Nil	5	3	Nil	55
Ballard Carbine, US Contract Type I	SS	3	1- Nil	5	3	Nil	55
Ballard Carbine, US Contract Type II	SS	3	1- Nil	5	3	Nil	54
Ballard Carbine, US Contract Type II (Minie Ball)	1/4	2	1- Nil	5	3	Nil	47

Bavarian Model 1842 Rifled Musket

Notes: It is a mystery just how these rifled muskets got into the hands of Union troops during the Civil War. Their construction was ordered by the Bavarian Foreign Minister in Amberg. There was considerable correspondence between the Foreign Minister and the US Secretary of War. Though Union purchasing agent Marcellus Hartley commented in one of his letters that Bavarian arms were available, no importation or purchase orders have ever been uncovered.

These were originally built as muskets, and later the barrels were rifled with a rather tight rifling pattern. They became the first percussion weapons made in Bavaria. The barrel has three retaining bands; just behind the front one on top is a blade front sight; the front band has a sling swivel on the bottom. The rear sight is normally a simple notch mounted on an iron block, but some with hinged rear leaf sights have been found.

Barrel length is 42.19 inches.

Weapon	Ammunition	Weight	Magazines	Price
Bavarian Model 1842	.70 Blackpowder	5.92 kg	1 Internal	\$399

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Bavarian Model 1842	1/7	3	2- Nil	10	3	Nil	67

Black Powder Products 209

Notes: The Model 209 is a modern take on the blackpowder rifle, an inline, which means that it is breech-loaded. The stock is synthetic; it is normally black, but can be bought with one of several camouflage patterns. The breech plug is stainless steel, and most of the rest of the metalwork is of modern carbon steels. However, the ramrod and cocking spur are of aircraft-quality aluminum. Finish for the external metalwork may be blued or nickel-plated. The standard sights are a fully adjustable rear sight and a front sight that is drift-adjustable, dovetailed in so that it is removable, and has a fiberoptic insert. The rear sight is in the "scout" position, at about the center of mass of the rifle. As this weapon is rifled, the range below takes this into account and do not need to be modified.

Weapon	Ammunition	Weight	Magazines	Price
Model 209 (24" Barrel)	.45 Blackpowder	2.72 kg	1 Internal	\$1142
Model 209 (26" Barrel)	.45 Blackpowder	2.8 kg	1 Internal	\$1220
Model 209 (29" Barrel)	.45 Blackpowder	2.91 kg	1 Internal	\$1344
Model 209 (24" Barrel)	.50 Blackpowder	2.74 kg	1 Internal	\$1158
Model 209 (26" Barrel)	.50 Blackpowder	2.82 kg	1 Internal	\$1238
Model 209 (29" Barrel)	.50 Blackpowder	2.93 kg	1 Internal	\$1292

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 209 (24" Barrel, .45)	1/5	2	1- Nil	6	3	Nil	112
Model 209 (26" Barrel, .45)	1/5	2	1- Nil	6	3	Nil	116
Model 209 (29" Barrel, .45)	1/5	2	1- Nil	7	3	Nil	132
Model 209 (24" Barrel, .50)	1/5	3	1- Nil	6	3	Nil	116
Model 209 (26" Barrel, .50)	1/5	3	1- Nil	6	3	Nil	128
Model 209 (29" Barrel, .50)	1/5	3	1- Nil	7	3	Nil	142

Bridesburg 1861 Rifle Musket

Notes: First, let's get this out of the way – this is a musket and is not rifled; some muskets with long barrels were called rifles. This was one of the primary battle rifles of the Union forces; it was introduced in 1861 and reached a peak of 5000 units per month, enough that a second factory was needed for production. Bridesburg itself was a subcontractor of Springfield Arms. The barrel was an astounding 40 inches long; sights consisted of a rear two-leaf ladder-type sight and a peep sights for when the leaf sights were folded or for close range shots. The firing mechanism uses percussion. Stock and fore-end construction was largely of black walnut and had an enlarged stock and a more natural position for the wrist. The end of the stock is curved to fit the shoulder and is capped by a serrated steel plate. The external metalwork are all in bright natural metal.

When that new factory was opened in 1863, Bridesburg took the opportunity to improve their design. The weapon had three barrel retaining bands which were attached by spring retainers, allowing the shooter to better remove and clean the weapon's barrel. There were also minor improvements to the hammer, rear sight. For game purposes, it is identical to the 1861 model.

Even with the second factory, Bridesburg found it necessary to farm out manufacturing to several other firms. By the end of the Civil War, about 100,000 examples of the Bridesburg Rifle Musket were manufactured.

Weapon	Ammunition	Weight	Magazines	Price
Bridesburg 1861 Rifle Musket	.58 Blackpowder	4.3 kg	1 Internal	\$454

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Bridesburg 1861 Rifle Musket	1/12	4	2- Nil	9	4	Nil	23

British Pattern 1853 Rifle-Musket

Notes: One of the most common rifles on both sides of the Civil War, the Confederates imported about 400,000 of these rifles and the Union about 505,000. It was nominally .577 caliber, but both sides in the Civil War used .58 Minie Balls in them. They were made

in both London, England and Liege, Belgium. It is the best-known imported weapon of the Civil War. These were produced from 1853-1866. There were four types of the Pattern 1853, but the only one imported to the US or Confederates was the third version. It had three barrel bands tightened with screws and a thick, strong ramrod. Barrel was 39 inches.

The Suhl Enfield Rifle-Musket is copy in all respects of the Pattern 1853. Enfield subcontracted to Suhl, but Suhl outsourced the actual manufacturer to private manufacturers.

Weapon	Ammunition	Weight	Magazines	Price
Pattern 1853	.58 Minie Ball	5.99 kg	1 Internal	\$485

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Pattern 1853	1/7	4	2- Nil	9	3	Nil	106

Brown Bess

This is a faithful modern reproduction of the musket that most British troops carried in the American Revolution, as well as numerous colonial wars and part of the Napoleonic War. The stock is designed to look like the original stock, which means that it is elongated and has a high comb. The stock and furniture is of walnut. The barrel is of polished steel, but most metalwork on the Brown Bess is brass. The front sight is a steel stud, but the Brown Bess has no rear sight. The Brown Bess uses flintlock ignition, like the original. Barrels may be 30, 30.5, or 42 inches long, and are not only smoothbore, but have a polished bore. Modern reproductions come from a variety of sources, but are sold by Dixie Gun Works and Navy Arms.

Weapon	Ammunition	Weight	Magazines	Price
Brown Bess (30" Barrel)	.75 Blackpowder	3.4 kg	1 Internal	\$378
Brown Bess (30.5" Barrel)	.75 Blackpowder	3.42 kg	1 Internal	\$383
Brown Bess (42" Barrel)	.75 Blackpowder	3.9 kg	1 Internal	\$500

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Brown Bess (30" Barrel)	1/12	5	2-4- Nil	7	6	Nil	36
Brown Bess (30.5" Barrel)	1/12	5	2-4- Nil	7	6	Nil	36
Brown Bess (42" Barrel)	1/12	5	2-4- Nil	9	6	Nil	48

Burnside Carbine

Notes: Though this carbine was produced from 1857-1865, it is more like a modern inline in function, firing a .54-caliber special cone-shaped cartridge; it is breechloaded, and fired by a percussion cap, and uses blackpowder. The unique cone-shaped bullet sealed the joint between the barrel and the breech, eliminating a vexing problem with breechloading blackpowder firearms, in which the gun vented hot gasses through the gap afore mentioned. Despite winning a War Department rifle competition to be one of the Union Army's standard firearms, the conditions of the competition changed when the Civil War started, and the Burnside Carbine was bumped back to number three in priority, behind the Sharps Carbine and Spencer Carbine. As the war went on, a problem with the Burnside Carbine proved to have a sometimes inopportune problem: the cone-shaped bullet tended to get stuck in the breech after firing. In addition, the Sharps and the Spencer fired from self-contained cartridges, allowing a greater magazine capacity and volume of fire.

A little known story about the Burnside was that 7 Confederate cavalry units were equipped with the Burnside Carbine, sold to them before hostilities started. Many will know Ambrose Burnside as a Union General who really didn't know what he was doing.

The initial version, of which 250 had been made, had a 22-inch barrel, and the bullet was encased in thin copper rather than paper. A tape primer system was pulled through the top of the lockwork. Construction of the stock was of walnut with no buttplate, but there was no fore-end. External metalwork is case-color hardened, except for the blued barrel. This was the 1st Model. The 2nd Model had an improved breechblock which made loading faster and with the lock to open the breech contained inside the trigger guard. Due to the improved breechblock, the barrel was shortened to 21 inches. The 3rd Model brought the long sought after fore-end, a barrel band to fasten the barrel to the fore-end, and an improved hammer. For game purposes and the firing table, the 3rd Model is identical to 2nd Model. The 4th Model features a spring-loaded breech which again simplifies and quickens reloading. This was the definitive version, with 50,000 being built and issued.

Weapon	Ammunition	Weight	Magazines	Price
Burnside Carbine (1st Model)	.54 Blackpowder Conical	4.31 kg	1 Internal	\$627
Burnside Carbine (2 nd Model)	.54 Blackpowder Conical	4.21 kg	1 Internal	\$487
Burnside Carbine (3rd Model)	.54 Blackpowder Conical	4.63 kg	1 Internal	\$490
Burnside Carbine (4th Model)	.54 Blackpowder Conical	4.63 kg	1 Internal	\$499

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Burnside Carbine (1st Model)	1/8	3	1-2- Nil	6	3	Nil	80
Burnside Carbine (2 nd Model/ 3 rd Model)	1/7	3	1-2- Nil	5	3	Nil	77
Burnside Carbine (4th Model)	1/6	3	1-2- Nil	5	3	Nil	77

Cabela's Blue Ridge

Notes: This is another non-specific replica of an early rifle, with anachronistic features such as an adjustable double set trigger and a blade front and V-notch rear sight. The furniture is walnut, highly-polished. The finish of the lock is color-case hardened, the barrel is blued, and the fittings are brass. The barrel is 39 inches, and locks are percussion or flintlock.

Weapon	Ammunition	Weight	Magazines	Price
Cabela's Blue Ridge (Flintlock)	.54 Blackpowder	3.52 kg	1 Internal	\$659
Cabela's Blue Ridge (Percussion Lock)	.54 Blackpowder	3.52 kg	1 Internal	\$689
Cabela's Blue Ridge (Flintlock)	.50 Blackpowder	3.44 kg	1 Internal	\$653
Cabela's Blue Ridge (Percussion Lock)	.50 Blackpowder	3.44 kg	1 Internal	\$683
Cabela's Blue Ridge (Flintlock)	.45 Blackpowder	3.4 kg	1 Internal	\$648
Cabela's Blue Ridge (Percussion Lock)	.45 Blackpowder	3.4 kg	1 Internal	\$678
Cabela's Blue Ridge (Flintlock)	.36 Blackpowder	3.34 kg	1 Internal	\$641
Cabela's Blue Ridge (Percussion Lock)	.36 Blackpowder	3.34 kg	1 Internal	\$671
Cabela's Blue Ridge (Flintlock)	.32 Blackpowder	3.27 kg	1 Internal	\$638
Cabela's Blue Ridge (Percussion Lock)	.32 Blackpowder	3.27 kg	1 Internal	\$668

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cabela's Blue Ridge (Flintlock, .54)	1/12	3	2- Nil	8	3	Nil	108
Cabela's Blue Ridge (Percussion Lock, .54)	1/6	3	2- Nil	8	3	Nil	108
Cabela's Blue Ridge (Flintlock, .50)	1/12	3	1- Nil	8	3	Nil	102
Cabela's Blue Ridge (Percussion Lock, .50)	1/6	3	1- Nil	8	3	Nil	102
Cabela's Blue Ridge (Flintlock, .45)	1/12	2	1- Nil	8	3	Nil	98
Cabela's Blue Ridge (Percussion Lock, .45)	1/6	2	1- Nil	8	3	Nil	98
Cabela's Blue Ridge (Flintlock, .36)	1/12	2	1- Nil	8	1	Nil	86
Cabela's Blue Ridge (Percussion Lock, .36)	1/6	2	1- Nil	8	1	Nil	86
Cabela's Blue Ridge (Flintlock, .32)	1/12	1	Nil	8	1	Nil	81
Cabela's Blue Ridge (Percussion Lock, .32)	1/6	1	Nil	8	1	Nil	81

Cabela's Kentucky Rifle

Notes: Like most of the blackpowder rifles and muskets sold by Cabela's, the Kentucky Rifle is more of a replica than a reproduction, following the general lines of an old-time muzzleloading rifle but having several features that such a rifle would not have and are more advanced than such a rifle. The basic rifle has walnut furniture, with a blade front sight and a V-notch rear sight. The finish is largely blued, with polished brass fittings. The Kentucky Rifle is generally sold with a Starter's Kit, as it is meant to be a

beginner's blackpowder rifle; this includes a basic cleaning kit, a small amount of powder and shot, and spare flints or percussion caps. Flintlock and percussion cap ignition systems are available. The barrel is 37 inches.

Weapon	Ammunition	Weight	Magazines	Price
Cabela's Kentucky Rifle (Flintlock)	.50 Blackpowder	3.18 kg	1 Internal	\$623
Cabela's Kentucky Rifle (Percussion Lock)	.50 Blackpowder	3.18 kg	1 Internal	\$653

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cabela's Kentucky Rifle (Flintlock)	1/12	3	1- Nil	8	3	Nil	98
Cabela's Kentucky Rifle (Percussion Lock)	1/6	3	1- Nil	8	3	Nil	98

Cabela's Kodiak Express Double Rifle

Notes: Like's many of Cabela-sold designs the Kodiak Express Double rifle is essentially a modern replica of a non-specific old-type rifle. The double barrels have double lockwork, though only one trigger. It comes only in percussion cap designs, with European walnut furniture, color-cased hardened lock, blued barrels, and blued fittings. The Kodiak Express Double Rifle has double leaf rear sights and double ramp front sights. Barrels are short for this sort of rifle at 25.25 inches. The .72 Caliber version is often known as the Big Bore.

Weapon	Ammunition	Weight	Magazines	Price
Cabela's Kodiak Express Double Rifle	.72 Blackpowder	4.22 kg	2 Internal	\$1545
Cabela's Kodiak Express Double Rifle	.58 Blackpowder	3.83 kg	2 Internal	\$1484
Cabela's Kodiak Express Double Rifle	.54 Blackpowder	3.74 kg	2 Internal	\$1472
Cabela's Kodiak Express Double Rifle	.50 Blackpowder	3.66 kg	2 Internal	\$1461

Weapon	ROF*	Damage	Pen	Bulk	SS	Burst	Range
Cabela's Kodiak Express Double Rifle (.72)	1/12	5	2-4- Nil	10	6	Nil	145
Cabela's Kodiak Express Double Rifle (.58)	1/12	4	2- Nil	10	4	Nil	128
Cabela's Kodiak Express Double Rifle (.54)	1/12	3	2- Nil	10	3	Nil	124
Cabela's Kodiak Express Double Rifle (.50)	1/12	3	1- Nil	9	3	Nil	118

*Reloading both barrels takes 12 phases. Reload figure for one barrel is 6 phases. Both barrels may be fired at once; in this case double the damage and double the recoil.

Cabela's Traditional Hawken

Notes: This is a modern replica of the traditional Hawken rifle of yore, with walnut furniture and updated with a bladed front sight with an adjustable rear sight, The rifle also has several anachronistic features such as a color-case hardened lock, a blued barrel, though it has a brass trigger guards and fittings. A Sporterized Cabela's Hawken is also available, with a more up-to-date stock configuration and a rubber recoil pad. Ignition is by flintlock or percussion lock. Barrel length is 29 inches regardless of caliber or type.

Weapon	Ammunition	Weight	Magazines	Price
Cabela's Traditional Hawken (Flintlock)	.50 Blackpowder	4.08 kg	1 Internal	\$501
Cabela's Traditional Hawken (Percussion Lock)	.50 Blackpowder	4.08 kg	1 Internal	\$531
Cabela's Traditional Hawken (Flintlock)	.54 Blackpowder	4.18 kg	1 Internal	\$507
Cabela's Traditional Hawken (Percussion Lock)	.54 Blackpowder	4.18 kg	1 Internal	\$537
Cabela's Sporterized Hawken (Flintlock)	.50 Blackpowder	4.13 kg	1 Internal	\$576

Cabela's Sporterized Hawken (Percussion Lock)	.50 Blackpowder	4.13 kg	1 Internal	\$606
Cabela's Sporterized Hawken (Flintlock)	.54 Blackpowder	4.23 kg	1 Internal	\$582
Cabela's Sporterized Hawken (Percussion Lock)	.54 Blackpowder	4.23 kg	1 Internal	\$612

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cabela's Traditional/Sporterized Hawken (Flintlock, .50)	1/12	3	1- Nil	7	3	Nil	78
Cabela's Traditional/Sporterized Hawken (Percussion Lock, .50)	1/6	3	1- Nil	7	3	Nil	78
Cabela's Traditional/Sporterized Hawken (Flintlock, .54)	1/12	3	2- Nil	7	3	Nil	81
Cabela's Traditional/Sporterized Hawken (Percussion Lock, .54)	1/6	3	2- Nil	7	3	Nil	81

Cosmopolitan Rifle

Notes: Fewer than 100 of these rifles were built between 1859-62. It was used in combat in only the early parts of the Civil War, by one company of the 9th Ohio Volunteer Infantry Regiment. The low numbers of production do not mean there was a problem with quality; the Cosmopolitan was high on the quality scale. It was a breechloader, firing a combustible case (ie, nitrated paper) driving a Minie Ball. It used a 31-inch blued barrel, with a single wide barrel band and a retention ring near the muzzle of the rifle. The bayonet was essentially a huge, long spike that fit over the end of the barrel and locked to the front sight.

Weapon	Ammunition	Weight	Magazines	Price
Cosmopolitan Rifle	.52 Combustible Case (Blackpowder)	3.63 kg	1 Internal	\$403

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cosmopolitan Rifle	1/2	3	2- Nil	8	3	Nil	85

CS Richmond

Notes: This is another reproduction of a Civil War musket, and as such has walnut furniture in a shape to conform to the original musket. The 40-inch barrel is polished steel, and most of the rest of the metalwork is brass, including a brass buttplate and fore-end cap, as well as three barrel bands. The CS Richmond is equipped with sling swivels. As with most such muskets, the CS Richmond is a rather large and cumbersome weapon of questionable accuracy. Ignition is by percussion. Current reproductions are sold by Dixie Gun Works, Navy Arms, and Taylor's.

Weapon	Ammunition	Weight	Magazines	Price
CS Richmond	.58 Blackpowder	4.76 kg	1 Internal	\$454

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CS Richmond	1/12	4	2- Nil	10	4	Nil	40

CVA Bobcat

Notes: The Bobcat is a modern take on blackpowder rifles; the ignition is by percussion, but the stock can be of hardwood or synthetic, and is of modern design and form. The Bobcat normally comes with fixed sights, but adjustable rear sights may be had. The front sight is a blade rather than a simple post or bead. Metalwork is finished in blue, and the barrel is a 26" octagonal heavy barrel.

Weapon	Ammunition	Weight	Magazines	Price
CVA Bobcat (Wood Stock)	.50 Blackpowder	2.72 kg	1 Internal	\$317
CVA Bobcat (Synthetic Stock)	.50 Blackpowder	2.5 kg	1 Internal	\$323
CVA Bobcat (Wood Stock)	.54 Blackpowder	2.78 kg	1 Internal	\$316
CVA Bobcat (Synthetic Stock)	.54 Blackpowder	2.56 kg	1 Internal	\$326

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CVA Bobcat (.50)	1/6	3	1- Nil	6	3	Nil	52
CVA Bobcat (.54)	1/6	3	1- Nil	6	4	Nil	54

CVA Model 209

Notes: The Model 209 is essentially a modern bolt-action-type rifle modified into a blackpowder weapon. As such, it has contours that a modern shooter would find familiar, with a stock that has a slightly-raised comb, a checkered pistol grip wrist and fore-end, and modern-type sights (appropriate to the ammunition, of course) with Dura-Bright fiberoptic insets. The stock may be of a natural wood finish, or may be composite with black or Mossy Oak finishes. Metalwork is blued or nickel. Ignition in all cases is by percussion.

The Optima Pro 209 is the base version, with a 29-inch barrel. The Kodiak 209 Magnum is the same caliber, but stressed for heavier powder loads, and has a Stainless 209 breech plug; it has a 28-inch barrel. The Buckhorn 209 Magnum uses heavier calibers as well as being stressed for heavier powder loads; it has a 24-inch barrel. The Firebolt 209 Magnum differs in using inline bolt action and having a recoil pad, as well as adjustable sights; it is also drilled and tapped for a scope. The barrel is 26 inches, and it is stressed for a heavier powder load. The Hunterbolt 209 Magnum is again stressed for a heavier powder load and uses inline bolt action. The sights are adjustable and the barrel is 24 inches. (The Magnum versions use magnum powder loads in the stats below.)

The Eclipse 209 Magnum and Stag Horn are similar, but the Eclipse is stressed for a Magnum load, and the Eclipse comes in black synthetic furniture while the Stag Horn comes only in black furniture. Both have 24-inch barrels. The iron sights have fiberoptic inserts, and the weapons are drilled and tapped for a scope. Metalwork finish is blue in both cases. Both use inline ignition and loading.

Weapon	Ammunition	Weight	Magazines	Price
CVA Optima Pro 209	.45 Blackpowder	3.99 kg	1 Internal	\$671
CVA Optima Pro 209	.50 Blackpowder	3.99 kg	1 Internal	\$679
CVA Kodiak 209 Magnum	.45 Blackpowder	3.4 kg	1 Internal	\$650
CVA Kodiak 209 Magnum	.50 Blackpowder	3.4 kg	1 Internal	\$658
CVA Buckhorn Magnum 209	.50 Blackpowder	3.18 kg	1 Internal	\$577
CVA Buckhorn Magnum 209	.54 Blackpowder	3.18 kg	1 Internal	\$585
CVA Firebolt 209 Magnum	.45 Blackpowder	3.18 kg	1 Internal	\$610
CVA Firebolt 209 Magnum	.50 Blackpowder	3.18 kg	1 Internal	\$618
CVA Hunterbolt Magnum	.45 Blackpowder	2.72 kg	1 Internal	\$427
CVA Hunterbolt Magnum	.50 Blackpowder	2.72 kg	1 Internal	\$433
CVA Eclipse 209 Magnum	.50 Blackpowder	2.72 kg	1 Internal	\$433
CVA Stag Horn 209	.50 Blackpowder	2.72 kg	1 Internal	\$433

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CVA Optima Pro 209 (.45)	1/5	2	1- Nil	6	2	Nil	97
CVA Optima Pro 209 (.50)	1/5	3	1- Nil	6	3	Nil	103
CVA Kodiak 209 Magnum (.45)	1/5	3	1-1- Nil	6	2	Nil	113
CVA Kodiak 209 Magnum (.50)	1/5	3	1-1- Nil	6	3	Nil	100
CVA Buckhorn Magnum 209 (.50)	1/5	3	1-1- Nil	6	3	Nil	104
CVA Buckhorn Magnum 209 (.54)	1/6	3	1-2- Nil	6	3	Nil	109
CVA Firebolt 209 Magnum (.45)	1/5	2	1-1- Nil	6	3	Nil	106
CVA Firebolt 209 Magnum (.50)	1/5	3	1-1- Nil	6	3	Nil	112
CVA Hunterbolt Magnum (.45)	1/5	2	1-1- Nil	6	3	Nil	74
CVA Hunterbolt Magnum (.50)	1/5	3	1-1-	6	3	Nil	78

CVA Eclipse 209 Magnum	1/5	3	Nil 1-1- Nil	6	3	Nil	78
CVA Stag Horn 209	1/5	3	1- Nil	6	3	Nil	78

CVA Mountain Rifle

Notes: The Mountain Rifle is sort of a deluxe version for CVA, as well as being a more traditional version; it has a straight-wrist stock, and the stock is of Hardwood with UltraGrain finish, and it of more traditional profile. Metalwork is blued. The sights consist of a fixed rear notch and a blade front. The barrel is 32 inches, and the ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
CVA Mountain Rifle	.50 Blackpowder	2.95 kg	1 Internal	\$555

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CVA Mountain Rifle	1/12	3	1- Nil	7	3	Nil	85

CVA Plainsman

Notes: This is a more traditional CVA design, with a hardwood old-profile stock with a bead front sight and fixed notch rear sight. The metalwork is mostly color-case hardened, except for the barrels. The barrel is 26 inches, and ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
CVA Plainsman	.50 Blackpowder	4.08 kg	1 Internal	\$309

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CVA Plainsman	1/12	2	1- Nil	8	1	Nil	24

CVA St. Louis Hawken

Notes: This is a more traditional pattern of blackpowder gun, with flintlock or percussion ignition and maple furniture. The iron sights are a brass blade front and a brass peep fixed rear sight. The metalwork is largely blued, but with some brass or black parts. It does, however, have a set trigger. Left-handed versions are available. Barrels are 28 inches or 32 inches.

Weapon	Ammunition	Weight	Magazines	Price
St Louis Hawken (28" Barrel, Flintlock)	.50 Blackpowder	3.63 kg	1 Internal	\$325
St Louis Hawken (32" Barrel, Flintlock)	.50 Blackpowder	3.79 kg	1 Internal	\$208
St Louis Hawken (28" Barrel, Flintlock)	.54 Blackpowder	3.68 kg	1 Internal	\$164
St Louis Hawken (32" Barrel, Flintlock)	.54 Blackpowder	3.84 kg	1 Internal	\$308
St Louis Hawken (28" Barrel, Percussion)	.50 Blackpowder	3.63 kg	1 Internal	\$355
St Louis Hawken (32" Barrel, Percussion)	.50 Blackpowder	3.79 kg	1 Internal	\$238
St Louis Hawken (28" Barrel, Percussion)	.54 Blackpowder	3.68 kg	1 Internal	\$194
St Louis Hawken (32" Barrel, Percussion)	.54 Blackpowder	3.84 kg	1 Internal	\$216

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
St Louis Hawken (28", .50, Flintlock)	1/12	3	1- Nil	7	4	Nil	50
St Louis Hawken (32", .50, Flintlock)	1/12	3	1- Nil	7	3	Nil	56
St Louis Hawken (28", .54, Flintlock)	1/12	3	2- Nil	7	3	Nil	54
St Louis Hawken (32", .54, Flintlock)	1/12	3	2- Nil	7	3	Nil	60
St Louis Hawken (28", .50, Percussion)	1/6	3	1-	7	3	Nil	50

St Louis Hawken (32", .50, Percussion)	1/6	3	Nil 1-	7	3	Nil	56
St Louis Hawken (28", .54, Percussion)	1/6	3	Nil 2-	7	3	Nil	54
St Louis Hawken (32", .54, Percussion)	1/6	3	Nil 2-	7	3	Nil	60

CVA Youth Hunter

Notes: As the name suggests, the Youth Hunter is designed for young teenagers first getting acquainted with blackpowder weapons. The stock is therefore shorter in length of pull and has less of a drop in it, and the pistol grip radius has a smaller diameter. The stock is hardwood and the barrel is a 24" octagonal heavy barrel. Sights are a bead front and a fully adjustable rear peep sight. Finish of the metalwork is matte blue. Ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
CVA Youth Hunter	.50 Blackpowder	3.29 kg	1 Internal	\$296

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
CVA Youth Hunter	1/12	3	1- Nil	6	4	Nil	23

Dimick Plains Rifle

Notes: For most part, Horace Dimicks business consisted of copying (by license) several other blackpowder designs, including muskets, breechloading rifles, and derringers. This includes his Plains Rifle, which was part of a number of plains rifles that were produced at about the same time (1849), and is essentially a Hawken with a slightly longer 32.5-inch barrel. The long barrel is in what we would today call a full octagon pattern, which makes for a rather poorly-balanced firearm that is a bit muzzle-heavy. It was, however, a decently accurate rifle, especially at long range, and more importantly, was a weapon that could be easily bought by settlers before they went out into the Great Plains (being made in St Louis also helped sales). It used the modern (for the time) percussion system, and of course the lockwork and firing system are identical to the Hawken. The rifle is half-stocked, with a fore-end about a third the length of the barrel and ramrod holder.

Very few manufacturers make the Dimick, and they are generally small companies. Other manufacturers make parts, to allow one to build his own Dimick. This means that a Dimick could be of almost any caliber, though a historically accurate one is .58 caliber.

Weapon	Ammunition	Weight	Magazines	Price
Dimick Plains Rifle	.58 Blackpowder	3.63 kg	1 Internal	\$579

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Dimick Plains Rifle	1/6	4	2- Nil	8	4	Nil	96

Dixie Kentuckian

Notes: Made in Italy, the Dixie Kentuckian is an old-style flintlock weapon with a long 35.25-inch smoothbore barrel. (A percussion ignition version is also made.) The stock is of the old type, made of walnut and with a dovetailed front sight and an open V-notch rear fixed sight. The barrel, trigger, and other small metalwork is blued; the lockwork is color-case hardened. The Dixie Kentuckian harkens back to the days of yore and is made in a sort of replica of an old Kentucky rifle (though it is smoothbore).

Weapon	Ammunition	Weight	Magazines	Price
Dixie Kentuckian (Flintlock)	.45 Blackpowder	2.49 kg	1 Internal	\$394
Dixie Kentuckian (Percussion)	.45 Blackpowder	2.49 kg	1 Internal	\$424

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Dixie Kentuckian (Flintlock)	1/12	2	1- Nil	8	3	Nil	30
Dixie Kentuckian (Percussion)	1/6	2	1- Nil	8	3	Nil	30

East India Company Victoria

Notes: First Issued in 1838, the Victoria was issued to most non-British troops of the British Empire. It was also known as the Brunswick Rifle. Two calibers were used, both quite huge – .733 caliber and .704 caliber, with .704 being more common. The Victoria first used a back action percussion system, which was quickly changed to a side-lock system. The first two versions of the Victoria

were muskets, but the 1853 version updated this to a rifled barrel; this rifle was even used by British Troops, and it is what is shown below. The barrel length is 26 inches and the barrel is round.

Weapon	Ammunition	Weight	Magazines	Price
Victoria	.733 Blackpowder	4.03 kg	1 Internal	\$504
Victoria	.704 Blackpowder	3.92 kg	1 Internal	\$495

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Victoria (.733)	1/6	5	2-4- Nil	7	6	Nil	89
Victoria (.704)	1/6	5	2-4- Nil	7	6	Nil	86

Enfield British Pattern 1839 Musket

Notes: Also known as the P-39, the Pattern 1839 was imported from Britain by both sides during the American Civil War, this is an unrifled musket which is almost as long as the Austrian Model 1842. Some 10,000 were produced, mostly for export, and most of these exports went to the North and South during the American Civil War. It was originally designed as a flintlock musket, both sides in the Civil War converted them to percussion ignition. The 41.25-inch barrel is secured to the stock by a single screw. The P-39 was produced with no rear sight, though one will see many with a rear sight these days; they were added later on.

An improved version of the Pattern 1839 was produced, called the Pattern 1842. The hammer and keys were flattened. A notch-type rear sight was added. The Pattern 1842 has no side plates; instead, the lock plate screws are directly in the rifle itself, secured by two locking washers. The P-42 was used by both sides in the Civil War. For game purposes, it is identical to the Pattern 1839.

Weapon	Ammunition	Weight	Magazines	Price
Pattern 1839	.75 Blackpowder	5.06 kg	1 Internal	\$247

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Pattern 1839	1/5	5	2-4- Nil	9	5	Nil	45

Navy Contract Musket

Notes: These were old even by Civil War standards, being produced by AH Waters, and of unknown production numbers, though they produced many for the Massachusetts units. At first, they took the form of standard muskets of the period -- later modifications, done from 1842-51, These were performed in several arsenals to bring them more up to date. Modifications included Belgian cone percussion, with a nipple directly on the breech, as well a heavy brass, curved buttplate that was narrowed from the original specifications. This is often called the "Massachusetts Militia" modifications. The barrel was 43.25 inches.

Weapon	Ammunition	Weight	Magazines	Price
Navy Contract Musket	.69 Blackpowder	4.51 kg	1 Internal	\$251

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Navy Contract Musket	1/6	5	2-3- Nil	9	4	Nil	45

French Model 1816 Rifled Musket

Notes: Like many such rifles, this was originally a smoothbore flintlock. It was later converted to a rifled musket, percussion-fired weapon. The Union side acquired them in a roundabout way; the French retired these firearms as muskets, and the German state of Wurzenburg bought them at cut-rate prices. They then did the conversion work. They first converted the then-muskets to percussion, then rifled the bores. They added long-range sights. Union purchasing agent Marcellus Hartley bought 2000 of these rifled muskets for the Union side, but bought them in Liege, Belgium. The barrel is a long 43.6 inches, a legacy of once being a musket.

Weapon	Ammunition	Weight	Magazines	Price
French Model 1816	.71 Blackpowder	6.01 kg	1 Internal	\$410

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
French Model 1816	1/7	3	1- Nil	10	3	Nil	69

French Model 1857 Rifle-Musket

Notes: Though designed in Impale, France, the manufacturing work was split between France and Liege, Belgium. Most of the lockwork was done in France, and the rest in Belgium. These rifles were literally covered in proof marks, French and Belgian, then of the country it was imported to. The Model 1857 was the first longarm that the French officially adopted for the French Army. The

Model 1857 draws much from the Model 1842; in some cases (particularly the furniture), parts from the Model 1842 were used on the Model 1857. The Model 1857 fired huge Minie Balls. The US Ordnance Department rated the Model 1857 as a 2nd Class weapon, but it was used by some state militias so more modern weapons could be given to frontline troops. The barrel is 40.75 inches.

The Model 1863 is a copy of the Model 1857, basically the same weapon except for the smaller caliber. The US Ordnance Department rated it as a 1st-Class weapon, suitable for issue to frontline troops.

Weapon	Ammunition	Weight	Magazines	Price
Model 1857 Rifle-Musket	.70 Minie Ball	5.88 kg	1 Internal	\$565
Model 1863 Rifle-Musket	.58 Minie Ball	5.22 kg	1 Internal	\$502

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1857 Rifle-Musket	1/7	5	2-4- Nil	10	5	Nil	124
Model 1863 Rifle-Musket	1/7	4	2- Nil	10	4	Nil	110

St Etienne Model 1822 Musket

Notes: This musket's design was by St Etienne, but it was produced at several arsenals, including Tulle, Charleville, and Mutzig. This musket was employed early in the Civil War by the Union side, though they were quickly replaced. The Type I version was designed for Infantry, and the shorter Type II was carried by Voltiguers (Light Infantry). Despite which model is used, it is a huge weapon, with the Type I having a 43.5-inch barrel, and the Type II having a 41.85-inch barrel. They were original flintlock muskets, but were later converted to percussion ignition. Many were also rifled and used as sniper's weapons.

The Model 1842 Musket is a later update of the Model 1822, with the Type I having a 43.69-inch barrel and the Type II having a 42-inch barrel. This was the first percussion firearm that the French Army adopted. It was also adopted by Union side of the Civil War. Later, the Model 1842s received rifled barrels. Some 147,000 were bought by the Union side in the Civil War.

Weapon	Ammunition	Weight	Magazines	Price
Model 1822 Type I (Unrifled)	.71 Blackpowder	5.02 kg	1 Internal	\$258
Model 1822 Type II (Unrifled)	.71 Blackpowder	4.91 kg	1 Internal	\$246
Model 1842 Type I (Rifled)	.71 Blackpowder	5.02 kg	1 Internal	\$381
Model 1842 Type II (Rifled)	.71 Blackpowder	4.92 kg	1 Internal	\$371

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1822 Type I (Unrifled)	1/6	5	2-4- Nil	10	5	Nil	46
Model 1822 Type II (Unrifled)	1/6	5	2-4- Nil	9	5	Nil	44
Model 1842 Type I (Rifled)	1/7	5	2-4- Nil	10	5	Nil	69
Model 1842 Type II (Rifled)	1/7	5	2-4- Nil	9	5	Nil	68

Gallagher Carbine

Notes: The Gallagher Carbine, Standard Production was originally designed to be a breechloading rifle using a combustible paper and foil cartridge or a special copper-cased metallic cartridge, with ignition by a percussion cap. Some 17000 were built and issued to some Union volunteer regiments, such as 2nd, 4th, and 6th Ohio, 13th Tennessee, and 3rd West Virginia. The paper and foil cartridge was dropped early in production and never issued. Barrel length was 22 inches and virtually all metalwork was blued. Reloading was done by pivoting barrel. After the Civil War, some were converted to other calibers or into shotguns.

The Final Model was similar in many ways to the Standard Production, but designed for use only with brass cartridges. Some 5000 were built. These were delivered to the War Department in May 1860, too late for the Civil War; half of them were sold to France in 1870.

Weapon	Ammunition	Weight	Magazines	Price
Standard Production	.50 Copper Case (Blackpowder)	3.4 kg	1 Internal	\$282
Final Model	.56-52 Spencer	3.4 kg	1 Internal	\$285

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Standard Production	1/2	3	2-	6	3	Nil	60

Final Model	SS	3	Nil 2- Nil	6	3	Nil	60
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Gibbs African Hunter

Notes: This is a hunting version of the old Gibbs Hunting Rifle, designed for hunting big game (in a day where metallic cartridges were not yet available). The rifle has ghost ring sights, adjustable for elevation and windage. It is also surprisingly useful in low-light situations. Stocks are dark walnut, while the external is dark blued. The barrel is 29 inches with anti-reflection checkering on top. Operation is percussion and the barrel is rifled. Standard load is a magnum load.

Weapon	Ammunition	Weight	Magazines	Price
African Hunter	.72 Blackpowder	4.2 kg	1 Internal	\$364

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
African Hunter	1/6	5	1-2- Nil	7	4	Nil	92

Greene Rifle

Notes: Designed and patented by LTC James Durrell Greene, the Greene Rifle was the first bolt-action firearm to enter US service in 1857. However, the largest users of the Greene Rifle was the Russians, who bought 3000 of them in 1859. The Union bought 900 of them, but their only documented use was at the Battle of Antietam. Operation was an adaptation of the Dreyse Needle Gun; it had an underhammer bolt, and the percussion cap nipple is in front of the trigger guard. The barrel was 35 inches, with three barrel bands; each band was over half an inch wide. The stock was oiled walnut, and behind the brass buttplate was a compartment for cleaning supplies.

A shorter and handier carbine version of this rifle was also designed. It was also much more rare, with only 300 produced and sent to the War Department. They do not appear to have seen any combat use in the Civil War, despite having been available, and that Greene was more than willing to make thousands of them for the Union. The 21-inch barrel was round and blued, and took a cartridge made of rolled, nitrated paper tipped with a Minie Ball. The front sight was a blade and the rear sight was designed for shooting at long ranges, like that of the Greene Rifle. A variant designed for the British Army was also made by Greene; this was the British Pattern Greene Carbine. This is basically the same rifle, but with a short 18-inch barrel.

Weapon	Ammunition	Weight	Magazines	Price
Greene Rifle	.54 Minie Ball (Combustible Cartridge)	4.48 kg	1 Internal	\$806
Greene Carbine	.54 Minie Ball (Combustible Cartridge)	3.52 kg	1 Internal	\$274
British Pattern Greene Carbine	.54 Minie Ball (Combustible Cartridge)	3.4 kg	1 Internal	\$244

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Greene Rifle	SS	3	2- Nil	8	3	Nil	106
Greene Carbine	SS	3	2- Nil	5	3	Nil	55
British Pattern Greene Carbine	SS	3	2- Nil	5	3	Nil	46

Hall Breechloading Rifle Model 1819

Notes: an old rifle at the time of the Civil War, the Hall was used primarily by the Confederates, and was made at the Harpers Ferry Arsenal starting in 1819 and continuing until 1838. Some 10,229 were on hand on the Confederate side; the Union used 677, made at the Washington Federal Arsenal. It was a curious combination of obsolete and ahead of its time, using flintlock ignition, loading by opening the breech, and the use of a combustible paper cartridge. The 35-inch barrel fired round-ball shot and had a single mid-barrel band and an iron end-cap. Finish for the metalwork was blued, while the stock was black walnut with a considerable drop in the stock. There was a front bead sight and a notch rear side, with the notch on the right side to aim around the flintlock mechanism.

Weapon	Ammunition	Weight	Magazines	Price
Hall Model 1819	.52 Combustible Cartridge	4.65 kg	1 Internal	\$310

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Hall Model 1819	SS	2	1- Nil	8	2	Nil	47

Hall-North Carbine Model 1833

This carbine was one of the first breechloading weapons adopted anywhere; it entered US service in 1834, with 7163 put into service. They were used in the Civil War and the Mexican War. Loading was by a hinged receiver that opened upon actuating a spur latch at the rear of the fore-end. The barrel was smoothbore and 26.1875 inches, and the combustible paper cartridge had a ball-type round attached to the front. In the stock was a box containing tools appropriate for the carbine. The barrel and most of the metalwork were iron finished with brown lacquer, except for the action, which was case-hardened iron. Ignition was by percussion cap; the nipple was mounted directly onto the receiver. To the rear of the lock plate, on the left side, was a sling ring. A relic of the past, a ramrod was included, and the carbine could actually be muzzleloaded if necessary or desired; the breech was closed and kept closed during muzzleloading. There were two types of this carbine: a .58-caliber version, built from 1834-1836; these 1028 were issued primarily to the 1st US Dragoons in the Arkansas Territory, and ended up on the Confederate side in the Civil War. The second model was in .52 caliber and the 6135 were issued to the 2nd US Dragoons in Florida, and also were used by the Confederates in the Civil War. A special run of 100 were issued to the militia unit in Mobile, Alabama and also used on the Confederate side in the Civil War.

The Hall Carbine Model 1836 was also nearly identical to the Model 1833, and the 2020 built were also issued to the 2nd US Dragoons in Florida. It too was a smoothbore carbine, with a round barrel 23 inches in length. The sling ring was actually an eyebolt. on the left side of the wrist of the stock, There were no barrel bands; the barrel was secured by pins. The Type I did not have an implement box in the stock, while the Type II, built from 1839-40, had it. They are identical for game purposes.

The Hall-North Model 1840 is similar to the Hall Model 1836 and the Model 1833, except that it came only in .52 caliber and had a shorter 21-inch barrel. Virtually none had the implement box in the stock. The spur-latch was changed in favor of two types of levers: an L-shaped lever, and a fishhook-shaped lever. 6501 were built.

The Hall Model 1842 is identical to the Model 1840 for game purposes. 1001 were built, all of which went to the 1st US Dragoons.

The Hall-North Model 1843 is identical to the Model 1840 for game purposes. Differences include a thumb lever for operating the breech, a case-hardened breech, and a nipple mounted directly on the receiver.

The Hall North Model 1843 Rifle is basically a Model 1843 with a rifled, heavier-caliber bore. It has an interesting history: The entire production run of 5000 were not accepted by the War Department. In 1861, General John Fremont bought the entire lot at a cut-rate price for his troops, and they served throughout the Civil War. The US government started a corruption investigation after that deal, and it led to Fremont being removed from his command. But his former unit kept the rifles.

Weapon	Ammunition	Weight	Magazines	Price
Hall-North Carbine Model 1833 (First Model)	.58 Combustible Cartridge (Ball)	3.71 kg	1 Internal	\$158
Hall-North Carbine Model 1833 (Second Model)	.52 Combustible Cartridge (Ball)	3.62 kg	1 Internal	\$154
Hall Carbine Model 1836	.64 Combustible Cartridge (Ball)	3.52 kg	1 Internal	\$145
Hall-North Carbine Model 1840	.52 Combustible Cartridge (Ball)	3.52 kg	1 Internal	\$128
Hall-North Rifle Model 1843	.52 Combustible Cartridge (Ball)	3.74 kg	1 Internal	\$196

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Hall-North Carbine Model 1833 (First Model, Breechloaded)	1/2	3	1- Nil	6	3	Nil	26
Hall-North Carbine Model 1833 (First Model, Muzzleloaded)	1/5	3	1- Nil	6	3	Nil	26
Hall-North Carbine Model 1833 (Second Model, Breechloaded)	1/2	2	1- Nil	6	2	Nil	36
Hall-North Carbine Model 1833 (Second Model, Muzzleloaded)	1/5	2	1- Nil	6	2	Nil	36
Hall Carbine Model 1836 (Breechloaded)	1/2	2	1- Nil	6	3	Nil	36
Hall Carbine Model 1836 (Muzzleloaded)	1/5	2	1- Nil	6	3	Nil	36
Hall-North Carbine Model 1840 (Breechloaded)	1/2	2	1- Nil	5	2	Nil	20
Hall-North Carbine Model 1840 (Muzzleloaded)	1/5	2	1- Nil	5	2	Nil	20
Hall Rifle Model 1843 (Breechloaded)	1/2	3	1- Nil	5	3	Nil	32
Hall Rifle Model 1843 (Muzzleloaded)	1/6	3	1- Nil	5	3	Nil	32

Hanseatic League Model 1840 Rifled Musket

Notes: These rifled musket was imported from Hertburg, Germany to the Ohio Regiment of the Union forces. Though it was originally designed as a musket, most were rifled in the 1850s. Most metalwork was finished in bright metal while the barrel was browned. Stocks were European Walnut. Ignition is by percussion.

Weapon	Ammunition	Weight	Magazines	Price
Model 1840 Rifled Musket	.70 Blackpowder	5.88 kg	1 Internal	\$394

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1840 Rifled Musket	1/6	3	2- Nil	10	3	Nil	66

Hawken Rifle

Notes: This is a reproduction of the rifle that saw the passage from the long and heavy Pennsylvania rifles, to a group of rifles known as "Plains Rifles," and the Hawken also marked the abandonment of the old flintlock ignition system for the more modern percussion method. As such, it began the process of evolution of the rifle to what would come with the Civil War. Several versions were available, from the original Rock Mountain Hawken available in about 1840, and the Missouri River Hawken, which generally used smaller calibers of ball. The barrels included a 28", 28.75", 30", 31", and 32", and they are heavy octagonal barrels with low blade front sights and adjustable notch rear sights. Though the original Hawken had double set triggers, these are an option and not standard on most reproductions. The barrel is blued, and the Hawken reproduction has a brass butt plate, patch box, wedge side plates, and nose cap. Stocks are of walnut or maple. This weapon is already a rifle; no range adjustment for using a rifled version is necessary; though rifled balls are used instead of Minie-type balls. Details may vary between manufacturers; current manufacturers or distributors include Black Powder Products, Dixie Gun Works, TC Arms, and Traditions.

Note that this Hawken reproduction is not related to the CVA St Louis Hawken except in generalized form.

Weapon	Ammunition	Weight	Magazines	Price
Hawken (28" Barrel)	.45 Blackpowder	2.95 kg	1 Internal	\$639
Hawken (28.75" Barrel)	.45 Blackpowder	3.1 kg	1 Internal	\$645
Hawken (30" Barrel)	.45 Blackpowder	3.13 kg	1 Internal	\$662
Hawken (31" Barrel)	.45 Blackpowder	3.19 kg	1 Internal	\$684
Hawken (32" Barrel)	.45 Blackpowder	3.25 kg	1 Internal	\$707
Hawken (28" Barrel)	.50 Blackpowder	3.12 kg	1 Internal	\$646
Hawken (28.75" Barrel)	.50 Blackpowder	3.29 kg	1 Internal	\$652
Hawken (30" Barrel)	.50 Blackpowder	3.32 kg	1 Internal	\$683
Hawken (31" Barrel)	.50 Blackpowder	3.38 kg	1 Internal	\$690
Hawken (32" Barrel)	.50 Blackpowder	3.44 kg	1 Internal	\$806
Hawken (28" Barrel)	.54 Blackpowder	3.28 kg	1 Internal	\$637
Hawken (28.75" Barrel)	.54 Blackpowder	3.46 kg	1 Internal	\$652
Hawken (30" Barrel)	.54 Blackpowder	3.49 kg	1 Internal	\$677
Hawken (31" Barrel)	.54 Blackpowder	3.55 kg	1 Internal	\$696
Hawken (32" Barrel)	.54 Blackpowder	3.61 kg	1 Internal	\$714

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Hawken (28" Barrel, .45)	1/8	2	1- Nil	7	3	Nil	62
Hawken (28.75" Barrel, .45)	1/8	2	1- Nil	7	3	Nil	65
Hawken (30" Barrel, .45)	1/8	2	1- Nil	7	3	Nil	66
Hawken (31" Barrel, .45)	1/8	2	1- Nil	7	3	Nil	67
Hawken (32" Barrel, .45)	1/8	2	1- Nil	7	3	Nil	70
Hawken (28" Barrel, .50)	1/8	3	1- Nil	7	3	Nil	65
Hawken (28.75" Barrel, .50)	1/8	3	1- Nil	7	3	Nil	66
Hawken (30" Barrel, .50)	1/8	3	1- Nil	7	3	Nil	70
Hawken (31" Barrel, .50)	1/8	3	1- Nil	7	3	Nil	71
Hawken (32" Barrel, .50)	1/8	3	1- Nil	7	3	Nil	73

Hawken (28" Barrel, .54)	1/8	3	Nil 2-	7	3	Nil	68
Hawken (28.75" Barrel, .54)	1/8	3	Nil 2-	7	3	Nil	70
Hawken (30" Barrel, .54)	1/8	3	Nil 2-	7	3	Nil	72
Hawken (31" Barrel, .54)	1/8	3	Nil 2-	7	3	Nil	75
Hawken (32" Barrel, .54)	1/8	3	Nil 2-	7	3	Nil	77

Harpers Ferry/Springfield Model 1842 Musket

Notes: The Harpers Ferry 1842 Musket and the Springfield 1842 Musket are essentially the same weapon, just built by different armories. For the most part, they are different only in the markings on the musket; even the parts are interchangeable. However, some 1200 were made at Harpers Ferry with shortened, 33-inch barrels which were rifled. They had long-range sights and were made specifically for John Charles Fremont in 1847 for an expedition into South America.

The Springfield-built versions were used in large numbers in the Mexican War, and black walnut stocks with bright metal finish on the metalwork. These too had many that were made into rifles; the US designation for both was US Model 1942 Rifled Musket. Most of these Rifled Muskets were made around 1855. The normal muskets had no rear sights. Their barrels were 42 inches.

These were all percussion weapons. The Confederate-produced B Flagg & Company Model 1842 Musket was a Confederate copy of the Harpers Ferry and Springfield models, though technically they were at a level below the Union models. The Palmetto Armory made the same copy of the Union rifle.

Weapon	Ammunition	Weight	Magazines	Price
Model 1842 Musket	.69 Blackpowder	4.2 kg	1 Internal	\$245
Model 1842 Rifled Musket	.69 Blackpowder	3.67 kg	1 Internal	\$734

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1842 Musket	1/6	5	2-3- Nil	9	4	Nil	44
Model 1842 Rifled Musket	1/7	5	2-3- Nil	8	5	Nil	55

Harpers Ferry/Springfield Model 1855 Rifle-Musket

Notes: These two rifles were essentially the same, even able to interchange parts. They were manufactured in Massachusetts and in Harpers Ferry, VA (shortly to become West VA). 12,158 were built. The Type I was the standard rifled musket; the Type II had long-range sights. On the Type III, the muzzle was iron instead of steel, and the brass backplate had an iron compartment in it to store upkeep supplies. Barrel is 42 inches. Ignition is by percussion.

The Whitney 1855 Rifled Musket is also essentially the same except markings, but it was built by Eli Whitney in Connecticut. However, the barrel has seven rifling grooves instead of three. The Cadet Rifle Model 1858 is also very similar, but had a 39.75-inch barrel. It is otherwise similar to the Type I.

Weapon	Ammunition	Weight	Magazines	Price
Model 1855	.58 Blackpowder	4.2 kg	1 Internal	\$344
Cadet Rifle Model 1858	.58 Blackpowder	3.68 kg	1 Internal	\$300

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1855	1/8	3	1- Nil	9	2	Nil	60
Cadet Rifle Model 1858	1/8	3	1- Nil	9	3	Nil	55

Henry Repeating Rifle

Notes: The Henry was one of the first repeating rifles to be invented; it saw considerable use by the Union side and lesser use by the Confederate side (as Henrys were captured). It was the most sophisticated small arm of the Civil War. The Henry was available in 1860, but the Union did not buy them, citing wasteful use of ammunition. However, an increasing number of troops used their own pay to buy the Henry and its ammunition, at first primarily by cavalymen, then by infantrymen. Some were also bought by families back home and sent to their loved ones on the front lines. The Henry was a lever-action rifle, fed by an underbarrel tubular magazine - a magazine-fed rifle was another innovation. Operation was via a sliding breech block actuated by the lever/trigger guard, setting the pattern for lever-action rifles for a long time. The action and receiver was brass. The sights were in what would later be called the scout position, with the rear adjustable leaf forward of the barrel attachment assembly and a front blade sight. The barrel was a blued

octagonal 24-inch barrel, the stock was of oil-finished black walnut. Some 4000 Henry rifles made it to combat in the later stages of the Civil War, but large numbers of Henrys did to make it to combat until about mid-1863.

Weapon	Ammunition	Weight	Magazines	Price
Henry Repeating Rifle	.44 Henry Rimfire (Blackpowder)	4.2 kg	15 Tubular	\$748

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Henry Repeating Rifle	LA	2	1- Nil	6	2	Nil	62

Indian Trade Musket

Notes: This is a modern reproduction of muskets produced by Pedersoli, Pennsylvania Longrifles, and some British companies. The original Indian Trade Muskets were traded or given to friendly or allied Native Americans in colonial times or during the early days of the US government. As such, this reproduction matches the design of the times; it has a full length stock of hardwood and a long, narrow stock. Most metal fittings are of brass, with an oversized trigger guard. The front sight is a simple blade; the rear sight has a limited amount of adjustability (primarily for drift). Being a musket, the 35.25-inch barrel is smoothbore, and has a browned exterior finish. Firing is by flintlock percussion. The example presented here is a model sold by Cabela's.

Weapon	Ammunition	Weight	Magazines	Price
Indian Trade Musket	.62 Blackpowder	3.13 kg	1 Internal	\$411

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Indian Trade Musket	1/12	4	2-3- Nil	8	5	Nil	23

Jenks Breechloading Rifle

Notes: the Jenks Rifle was produced for the US Navy by NP Ames; all were delivered by 1844. It is a rather primitive sort of breechloading weapon; it appears to have used the simplest breechloading mechanism possible. One moves the breech-lever up, then slides it back, opening the breech. One then put a measure of powder in the breech and a ball ahead of it, then closed the breech again. Fit was tight enough to be the equivalent of ramming powder and ball with a ramrod like a muzzle loader. On then cocked the hammer and put a percussion cap on the nipple. This sped up loading time, but only just. The barrel was 30 inches and browned. The stock was black walnut.

The Jenks Carbine was based on the Jenks Rifle, but featured a number of improvements that turned it into what almost led me to make it a separate entry. Approximately 4250 were built. The Carbine had a sliding breechblock, which opened the chamber for loading. At this point, one could pour loose powder and a ball into the chamber, and when the breechblock was closed again, the entire round was tightly pressed forward. A percussion cap was then loaded onto a nipple. One could also put a packet of nitrated paper and powder, and put a ball ahead of this, and then close the breechblock again, with a percussion cap mounted on the nipple. Though this only just increased loading times, it was still an improvement, as was breech loading in general. The 24.5-inch barrel was browned and rifled. Most had no rear sights, just a bead front sight. Later improvements gave the Jenks Carbine a v-notch rear sight and a blade rear sight.

The Janks-Remington Carbine was produced in numbers of about 1000. They saw service in the Mexican War, but it is unclear how many or even if they saw Civil War service, and if so, on which side. For game purposes, it is identical to the Jenks Carbine, but uses only the combustible paper powder packet and ball.

Weapon	Ammunition	Weight	Magazines	Price
Jenks Rifle	.54 Blackpowder (Breechloading)	3.06 kg	1 Internal	\$407
Jenks Carbine	.54 Blackpowder (Breechloading)	2.72 kg	1 Internal	\$292

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Jenks Rifle	1/5	2	1- Nil	7	3	Nil	46
Jenks Carbine (Loose Powder and Ball)	1/5	2	1- Nil	6	3	Nil	35
Jenks Carbine (Combustible Case Powder)	1/3	2	1- Nil	6	3	Nil	35

JF Brown Target/Sniper Rifle

Notes: This Minie ball-firing rifle was one of the first purpose-built sniper rifles designed. Though designed in Massachusetts, it was used by both the Union and Confederate sides. Perhaps the most striking feature of the rifle was its Amadon 3x scope which,

due to the technological limitations of the time, was longer than the barrel itself. Controls for the scope are at the rear, near the shooter's eye. The firing system was by percussion and was a unitary, contained system – when disassembled for cleaning, the firing system came out in one piece. The barrel was what would later be known as a bull barrel. The rifle has no conventional sights, but there were conventional sights atop the scope. There is no fore-end, simply the bulk of the rifle's barrel along with a cooling sleeve; the stock had a curved butt covered with serrated brass. At the top of this buttplate was a compartment for various cleaning supplies. The barrel is 32.48 inches long, as said earlier, fires a modified Minie Ball through a hexagonal bore.

Weapon	Ammunition	Weight	Magazines	Price
JF Brown Target/Sniper Rifle	.45 Blackpowder Minie Ball	13.6 kg	1 Internal	\$1091

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
JF Brown Target/Sniper Rifle	1/6	2	1- Nil	8	1	Nil	60

JH Krider Rifle-Musket

Notes: These was a limited-edition rifle that fired an enormous Minie Ball .69 caliber. It was issued only to certain Pennsylvanian militia troops who had extremely short terms of service and were unlikely to be called to frontline service, and only near the beginning of the Civil War. It looks like a Springfield 1861, but has a larger, browned barrel instead of the smaller .58 caliber barrel. Metalwork was largely an alloy of iron and brass, except for the bayonet and barrel. Near the buttstock was a two piece patch box. The lockwork was color-case hardened.

Weapon	Ammunition	Weight	Magazines	Price
JH Krider Rifle-Musket	.69 Minie Ball	7.19 kg	1 Internal	\$551

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
JH Krider Rifle-Musket	1/7	5	2-3- Nil	10	3	Nil	121

Joslyn Carbine

Notes: The Joslyn Carbine was a rifle that went through three iterations, each improving the rifle. The first version, the Model 1855, fired a Minie Ball which was loaded into the receiver attached to a nitrided paper powder envelope. It used an unusual breech mechanism; one pulls the hammer back to half-cock position and slides a ring to the front of the receiver cover, at which point the cartridge is loaded into the breech, the receiver closed, a percussion cap placed, and the hammer pulled back to full cock. The Model 1855 had a 21-inch blued barrel, brass metalwork except for the blued saddle swivel and its bar, and a case-hardened breech, breech lever, and lock.

The next version was the Model 1862, which fired a metallic cartridge. It had a pivoting breechblock and a firing pin extension that allowed the hammer direct contact. The 22-inch barrel is round and blued, with a front blade sight and a rear sight consisting of two leaf sights. All of the metalwork was brass, with the lock plate being case-hardened.

The third version was the Model 1864; it was surprising in its numbers, with 12,500 being built and issued to Union troops. The brass metalwork was case-hardened, but otherwise, it is for game purposes identical to the Model 1862. After the Civil War, in private hands, some were modified to fire different calibers and cartridges; at least two other chamberings are known to collectors. .52-56 Sharps was the military cartridge (though also used by civilians after the Civil War).

Weapon	Ammunition	Weight	Magazines	Price
Model 1855	.54 Minie Ball (Combustible Case)	3.29 kg	1 Internal	\$256
Model 1862	.52-56 Sharps	3.01 kg	1 Internal	\$285
Model 1864	.52-56 Sharps	3.01 kg	1 Internal	\$285
Model 1864	.44 Henry	3.01 kg	1 Internal	\$268
Model 1864	.58 Springfield	3.01 kg	1 Internal	\$297

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1855	1/2	2	1- Nil	5	3	Nil	38
Model 1862	SS	3	2- Nil	6	3	Nil	60
Model 1864 (.52-56)	SS	3	2- Nil	6	3	Nil	60
Model 1864 (.44)	SS	2	1- Nil	6	3	Nil	54
Model 1864 (.58)	SS	4	2-3-	6	5	Nil	62

JP Murray Carbine

Notes: The original JP Murray carbines were built by Murray's facility; much of Murray's output of these carbines were sold on the sly to the American Confederacy. Some were, in fact, built under license in the Confederacy by Zoli; however, not many were built by the Confederates, as they suffered from a poor manufacturing base. Most that were built in the Confederacy were built in Columbus, Georgia. A large number were also built in England, but assembled in the Confederacy; this allowed for parts to be separately delivered by small blockade running ships and boats. The JP Murray Carbine has been said to be heavily based on the US Model 1841 Rifle, though there is the chopped barrel and other small differences. The JP Murray Carbine was well thought of by Confederate troops due to its relatively small size, though it a bit muzzle-heavy, and heavy in general for such a short weapon. The JP Murray Carbine fires Minie Balls (through a rifled barrel, of course), though it used a percussion system that required a piece of flintlock in the hammer (though it is not actually a flintlock).

Modern reproductions have hardwood or walnut stocks, with for-ends that go all the way to the end of the barrel. The Modern JP Murray Carbine primarily sticks to the original plans, with a brass blade front sight, a rear sight which is dovetailed in (and therefore somewhat adjustable for drift), a blued barrel, a color-case hardened action, and otherwise with brass furniture (including one barrel band and a combined fitting for a ramrod and a bayonet). The barrel is a short 23.5 inches. Dixie Gun works and Navy Arms are some of the manufacturers of modern JP Murray Carbines.

Weapon	Ammunition	Weight	Magazines	Price
JP Murray Carbine	.58 Blackpowder Minie Ball	3.63 kg	1 Internal	\$544

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
JP Murray Carbine	1/8	4	2- Nil	7	4	Nil	94

Keen, Walker & Co Carbine

I decided to include this weapon, even though only 300 were made, because it is one of the few "modern" weapons to be made specifically for Confederate forces. It fires a .54 caliber Minie Ball attached at the tail to a combustible paper cartridge, through the breech. Quality and construction varied wildly, but the standard was an iron barrel which is either blued or browned, 23.275 inches long. It employs a tilting breech to open the chamber; it tilts upwards only a small amount, just enough to slip a round in. Ignition is by percussion cap, placed on a cone-shaped nipple. The breech is opened via a scroll-shaped lever which forms a part of the trigger guard. On the left side is a ring on a bar; this allowed the weapon to be carried on a loose sling or attached to a saddle ring. Unusually, the metalwork of some of these carbines is of bronze instead of brass or iron.

Weapon	Ammunition	Weight	Magazines	Price
Keen, Walker & Co Carbine	.54 Minie Ball (Combustible Cartridge)	3.23 kg	1 Internal	\$474

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
JP Murray Carbine	SS	2	1- Nil	6	3	Nil	44

Kentucky Rifle

Notes: I don't know of any history major, history buff, or military weapon buff who hasn't heard of the Kentucky Rifle. Also known as the Kentucky Long Rifle (it is rather long, especially in iterations that have longer barrels). It is an All-American rifle, developed in what was then the American frontier (Western Pennsylvania) in about the 1740s; however, it is generally acknowledged that the design developed from weapons used by German immigrants. The Kentucky Rifle is known for its accuracy and simply for being a rifle (using a rifled ball) at a time when most longarms were unrifled muskets. Some Kentucky Rifles were made rather ornate by their owners, though most retained their utilitarian form and were used for hunting and self defense. Irregulars armed with Kentucky Rifles quickly became the bane of British Troops during the Revolutionary War – their owners were generally crafty woodsmen who would fire a well-aimed shot, with the accent on picking off officers, and then melt into the woods again, leaving no trace. Kentucky Rifle-armed marksmen again acquitted themselves well during the War of 1812, particularly in the Battle of New Orleans. Backwoods people were known to make regular use of the Kentucky Rifle well into the 19th century, and reports of its use into the early 20th century abound. The Hawken Rifle was essentially a shorter-barreled, shorter-stocked version of the Kentucky Rifle.

Modern reproductions follow the original design as much as possible. An authentic stock is made of curly maple, but most modern reproductions use walnut in the stock. The stock is long, relatively narrow, has a pronounced drop in it, and a sharply-curved butt that is designed to help stabilization on the shooter's shoulder. The smaller calibers available reflect the fact that users of the Kentucky Rifles often chose smaller bores, both to make a lighter weapon and to conserve lead, which a short commodity at the time. The barrels, of course, are quite long. Modern reproductions often are somewhat or even highly decorated, particularly on the stock. Sights are rudimentary, with a simple notch rear and blade front (a long way to the front of the rear sight); some modern reproductions are equipped with better sights. Most metalwork is brass, but the barrel is heavy and of an octagonal cross-section; it is generally

blued in modern reproductions. Depending on the time period simulated, the Kentucky Rifle can have flintlock or percussion ignition; the percussion versions are identical, but take only half the time to reload. Modern manufacturers of the Kentucky Rifle include Dixie gun Works, Taylor's, and traditions.

Weapon	Ammunition	Weight	Magazines	Price
Kentucky Rifle (33.5" Barrel)	.36 Blackpowder	2.75 kg	1 Internal	\$570
Kentucky Rifle (35" Barrel)	.36 Blackpowder	2.82 kg	1 Internal	\$593
Kentucky Rifle (35.25" Barrel)	.36 Blackpowder	2.83 kg	1 Internal	\$625
Kentucky Rifle (38" Barrel)	.36 Blackpowder	2.97 kg	1 Internal	\$640
Kentucky Rifle (42" Barrel)	.36 Blackpowder	3.17 kg	1 Internal	\$702
Kentucky Rifle (44" Barrel)	.36 Blackpowder	3.27 kg	1 Internal	\$734
Kentucky Rifle (46" Barrel)	.36 Blackpowder	3.37 kg	1 Internal	\$765
Kentucky Rifle (48" Barrel)	.36 Blackpowder	3.47 kg	1 Internal	\$796
Kentucky Rifle (33.5" Barrel)	.40 Blackpowder	2.83 kg	1 Internal	\$572
Kentucky Rifle (35" Barrel)	.40 Blackpowder	2.9 kg	1 Internal	\$600
Kentucky Rifle (35.25" Barrel)	.40 Blackpowder	2.91 kg	1 Internal	\$639
Kentucky Rifle (38" Barrel)	.40 Blackpowder	3.05 kg	1 Internal	\$643
Kentucky Rifle (42" Barrel)	.40 Blackpowder	3.26 kg	1 Internal	\$705
Kentucky Rifle (44" Barrel)	.40 Blackpowder	3.36 kg	1 Internal	\$737
Kentucky Rifle (46" Barrel)	.40 Blackpowder	3.46 kg	1 Internal	\$768
Kentucky Rifle (48" Barrel)	.40 Blackpowder	3.56 kg	1 Internal	\$799
Kentucky Rifle (33.5" Barrel)	.45 Blackpowder	2.95 kg	1 Internal	\$577
Kentucky Rifle (35" Barrel)	.45 Blackpowder	3.03 kg	1 Internal	\$601
Kentucky Rifle (35.25" Barrel)	.45 Blackpowder	3.04 kg	1 Internal	\$604
Kentucky Rifle (38" Barrel)	.45 Blackpowder	3.19 kg	1 Internal	\$647
Kentucky Rifle (42" Barrel)	.45 Blackpowder	3.4 kg	1 Internal	\$710
Kentucky Rifle (44" Barrel)	.45 Blackpowder	3.51 kg	1 Internal	\$741
Kentucky Rifle (46" Barrel)	.45 Blackpowder	3.62 kg	1 Internal	\$772
Kentucky Rifle (48" Barrel)	.45 Blackpowder	3.73 kg	1 Internal	\$804
Kentucky Rifle (33.5" Barrel)	.50 Blackpowder	3.1 kg	1 Internal	\$583
Kentucky Rifle (35" Barrel)	.50 Blackpowder	3.18 kg	1 Internal	\$606
Kentucky Rifle (35.25" Barrel)	.50 Blackpowder	3.19 kg	1 Internal	\$610
Kentucky Rifle (38" Barrel)	.50 Blackpowder	3.35 kg	1 Internal	\$653

Kentucky Rifle (42" Barrel)	.50 Blackpowder	3.57 kg	1 Internal	\$715
Kentucky Rifle (44" Barrel)	.50 Blackpowder	3.69 kg	1 Internal	\$747
Kentucky Rifle (46" Barrel)	.50 Blackpowder	3.81 kg	1 Internal	\$778
Kentucky Rifle (48" Barrel)	.50 Blackpowder	3.93 kg	1 Internal	\$810
Kentucky Rifle (33.5" Barrel)	.54 Blackpowder	3.25 kg	1 Internal	\$588
Kentucky Rifle (35" Barrel)	.54 Blackpowder	3.33 kg	1 Internal	\$612
Kentucky Rifle (35.25" Barrel)	.54 Blackpowder	3.34 kg	1 Internal	\$616
Kentucky Rifle (38" Barrel)	.54 Blackpowder	3.51 kg	1 Internal	\$659
Kentucky Rifle (42" Barrel)	.54 Blackpowder	3.74 kg	1 Internal	\$721
Kentucky Rifle (44" Barrel)	.54 Blackpowder	3.87 kg	1 Internal	\$752
Kentucky Rifle (46" Barrel)	.54 Blackpowder	4 kg	1 Internal	\$783
Kentucky Rifle (48" Barrel)	.54 Blackpowder	4.13 kg	1 Internal	\$815

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Kentucky Rifle (33.5" Barrel, .36)	1/12	2	1- Nil	7	1	Nil	76
Kentucky Rifle (35" Barrel, .36)	1/12	2	1- Nil	8	1	Nil	79
Kentucky Rifle (35.25" Barrel, .36)	1/12	2	1- Nil	8	1	Nil	80
Kentucky Rifle (38" Barrel, .36)	1/12	2	1- Nil	8	1	Nil	86
Kentucky Rifle (42" Barrel, .36)	1/12	2	1- Nil	9	1	Nil	94
Kentucky Rifle (44" Barrel, .36)	1/12	2	1- Nil	9	1	Nil	99
Kentucky Rifle (46" Barrel, .36)	1/12	2	1- Nil	10	1	Nil	104
Kentucky Rifle (48" Barrel, .36)	1/12	2	1- Nil	10	1	Nil	107
Kentucky Rifle (33.5" Barrel, .40)	1/12	2	1- Nil	7	2	Nil	80
Kentucky Rifle (35" Barrel, .40)	1/12	2	1- Nil	8	2	Nil	84
Kentucky Rifle (35.25" Barrel, .40)	1/12	2	1- Nil	8	2	Nil	84
Kentucky Rifle (38" Barrel, .40)	1/12	2	1- Nil	8	2	Nil	91
Kentucky Rifle (42" Barrel, .40)	1/12	2	1- Nil	9	1	Nil	100
Kentucky Rifle (44" Barrel, .40)	1/12	2	1- Nil	9	1	Nil	104
Kentucky Rifle (46" Barrel, .40)	1/12	2	1- Nil	10	1	Nil	109
Kentucky Rifle (48" Barrel, .40)	1/12	2	1- Nil	10	1	Nil	114
Kentucky Rifle (33.5" Barrel, .45)	1/12	2	1- Nil	8	3	Nil	86

Kentucky Rifle (35" Barrel, .45)	1/12	2	1- Nil	8	3	Nil	89
Kentucky Rifle (35.25" Barrel, .45)	1/12	2	1- Nil	8	3	Nil	90
Kentucky Rifle (38" Barrel, .45)	1/12	2	1- Nil	8	3	Nil	97
Kentucky Rifle (42" Barrel, .45)	1/12	2	1- Nil	9	3	Nil	106
Kentucky Rifle (44" Barrel, .45)	1/12	2	1- Nil	9	3	Nil	111
Kentucky Rifle (46" Barrel, .45)	1/12	2	1- Nil	10	3	Nil	116
Kentucky Rifle (48" Barrel, .45)	1/12	2	1- Nil	10	3	Nil	121
Kentucky Rifle (33.5" Barrel, .50)	1/12	3	1- Nil	8	3	Nil	91
Kentucky Rifle (35" Barrel, .50)	1/12	3	1- Nil	8	3	Nil	95
Kentucky Rifle (35.25" Barrel, .50)	1/12	3	1- Nil	8	3	Nil	95
Kentucky Rifle (38" Barrel, .50)	1/12	3	1- Nil	8	3	Nil	102
Kentucky Rifle (42" Barrel, .50)	1/12	3	1- Nil	9	3	Nil	113
Kentucky Rifle (44" Barrel, .50)	1/12	3	1- Nil	9	3	Nil	118
Kentucky Rifle (46" Barrel, .50)	1/12	3	1- Nil	10	3	Nil	123
Kentucky Rifle (48" Barrel, .50)	1/12	3	1- Nil	10	3	Nil	128
Kentucky Rifle (33.5" Barrel, .54)	1/12	3	2- Nil	8	3	Nil	95
Kentucky Rifle (35" Barrel, .54)	1/12	3	2- Nil	8	3	Nil	99
Kentucky Rifle (35.25" Barrel, .54)	1/12	3	2- Nil	8	3	Nil	100
Kentucky Rifle (38" Barrel, .54)	1/12	3	2- Nil	8	3	Nil	107
Kentucky Rifle (42" Barrel, .54)	1/12	3	2- Nil	9	3	Nil	118
Kentucky Rifle (44" Barrel, .54)	1/12	3	2- Nil	9	3	Nil	123
Kentucky Rifle (46" Barrel, .54)	1/12	3	2- Nil	10	3	Nil	129
Kentucky Rifle (48" Barrel, .54)	1/12	3	2- Nil	10	3	Nil	134

Knight Elite Disc Rifle

I'll fully admit I don't understand what the name of this weapon signifies; as with the Revolution, it is essentially a modern take on a blackpowder weapon, and uses inline ignition. The stock style and synthetic construction are all modern, however. The pistol grip wrist and fore-end are checkered. The Elite Disc rifle uses a fully adjustable open rear sight and a blackened front bead. In addition, the Elite Disc Rifle is drilled and tapped for a scope mount. There is a Master Model, which has a two-tone walnut laminated stock, and a Disc Extreme which uses a full plastic jacket primer holder. For game purposes, they are identical to the standard Model.

Weapon	Ammunition	Weight	Magazines	Price
Elite Disc Rifle (24" Barrel)	.50 Blackpowder	3.32 kg	1 Internal	\$577
Elite Disc Rifle (26" Barrel)	.50 Blackpowder	3.41 kg	1 Internal	\$618

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
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Elite Disc Rifle (24" Barrel)	1/5	3	1- Nil	6	3	Nil	87
Elite Disc Rifle (26" Barrel)	1/5	3	1- Nil	6	3	Nil	93

Knight Revolution

Notes: This is essentially a modern blackpowder weapon, using inline ignition and having a synthetic stock of modern design (and finished in black, Mossy Oak, or Realtree), though a laminated walnut stock is also available. The rear sight is an adjustable open sight; the front sight is a ramp with fiberoptic inserts. Metalwork finish can be blued or stainless steel. The breech pivots and drops for loading. As stated, this is a modern-form rifle; the only thing that separates it from modern rifles is the use of blackpowder. Barrel length is 27 inches.

Weapon	Ammunition	Weight	Magazines	Price
Revolution	.50 Blackpowder	2.92 kg	1 Internal	\$638

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Revolution	1/5	3	1- Nil	6	3	Nil	97

Knight Wolverine

Notes: This is another blackpowder weapon, almost a blackpowder carbine with its short 22" barrel. The Wolverine is an inline design. The stock is synthetic with the pistol grip wrist and fore-end synthetic; finishes for the stock are black or camo of various sorts, and the stock has a recoil pad on the butt. The stock normally uses a pistol grip wrist, but a thumbhole wrist is also available. The rear sights are fully adjustable and the front sight is a blade; both use fiberoptic inserts. The Wolverine is also drilled and tapped for a scope mount.

The American Knight is similar, but the stock has sling swivel studs and does not have a recoil pad. The front sight is a bead instead of a blade, but still has a fiberoptic insert. The American Knight is also considerably lighter than the Wolverine.

Weapon	Ammunition	Weight	Magazines	Price
Wolverine	.50 Blackpowder	3.23 kg	1 Internal	\$687
American Knight	.50 Blackpowder	2.81 kg	1 Internal	\$537

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Wolverine	1/5	3	1- Nil	5	3	Nil	80
American Knight	1/5	3	1- Nil	5	3	Nil	80

Lindner Carbine

Notes: There are two basic variants of the Lindner Carbine; both fired combustible paper cartridges with a Minie Ball up front. The Type I numbered only 501 built. It used a unique method of opening the breech: a locking collar was rotated, allowing the spring-loaded, hinged breechblock to open. The 22-inch barrel was round and, like the rest of the metalwork, finished in bright iron. As on many carbines, the Lindner had a bar on the left side with a ring, allowing it to be carried on a loose sling or clipped to the saddle ring of a cavalryman. Deliveries to Union forces began in 1862.

The Type II varied primarily in the markings on the carbine, the shape of the lock plate, the shape of the stock, and rear sight moved to the front of the breechblock. The Type II is, for game purposes, identical to the Type I. The War Department ordered 6000 of the Lindner Type II, but they were not ready for delivery until 1864, after the entire lot was built. The War Department refused the order, saying that they no longer needed the carbines. They were eventually sold to France ten years later.

Weapon	Ammunition	Weight	Magazines	Price
Lindner Carbine	.58 Minie Ball (Combustible Cartridge)	2.72 kg	1 Internal	\$271

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Lindner Carbine	SS	3	1- Nil	5	3	Nil	44

Lindsay Double Rifle-Musket Model 1863

Notes: with two percussion ignition systems, and with one barrel slightly ahead of the other (so as not to have both going off at once, the Lindsay had two triggers; the front fired the left barrel, and the rear the left barrel. Perhaps 1000 were built, and they were actually used in one battle near the end of the war, plus by a few individuals late in the war. Unfortunately, if the left barrel was fired first, the firing of the right barrel unduly fouled the right barrel, and the pulling of the front trigger often caused the inadvertent firing of

both barrels (and massive kick and shoulder bruises). Most of the weapon had metalwork in bright metal, though the rear leaf sight was blued. It has three barrel bands, with the front sling swivel on the center band and the rear sling swivel in front of the trigger guard. The bayonet was modified to fit around both barrels. The stock is black walnut, oil finished.

The first ROF figure is to load one barrel; the second is for both barrels.

Weapon	Ammunition	Weight	Magazines	Price
Lindsay Double Rifle-Musket	.69 Minie Ball	7.19 kg	1 Internal	\$1077

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Lindsay Double Rifle-Musket	1/7 (1/14)	5	2-3- Nil	10	3	Nil	121

Maynard Carbine

Notes: There are two versions of the Maynard Carbine, Type I and Type II. Both use copper cartridges, also designed by Maynard. The barrel is half-octagonal and 20 inches in length. The trigger guard has an extension which actuates the opening of the breech. Metalwork is iron and is blued, as is the barrel. The rear sight is a tang sight and the front is a blade. Some later versions had a sling swivel on the toe of the stock for a loose sling. Despite being manufactured in Massachusetts, the Maynard Carbine was bought up by the soon-to-be Confederate States before the start of the Civil War. Some 6000 were built and delivered, and issued to what Jefferson Davis considered his elite units. Ignition of the primer was by a percussion cap, though the Type I used the Maynard Tape Primer system. The .35-40 Maynard proved to be positively anemic and was quickly dropped or converted to .50 Maynard.

The Type II is made in only one caliber. Some 20,200 were built and delivered, primarily in 1859 to the soon-to-be Confederate states. The barrel was slightly longer at 20.375 inches. It used conventional percussion caps. Otherwise, it is identical to the Type I for game purposes.

Weapon	Ammunition	Weight	Magazines	Price
Maynard Carbine Type I	.35-40 Maynard	2.72 kg	1 Internal	\$323
Maynard Carbine Type I	.50 Maynard	2.72 kg	1 Internal	\$719
Maynard Carbine Type II	.50 Maynard	2.72 kg	1 Internal	\$723

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Maynard Carbine Type I (.35-40)	1/2	1	Nil	5	1	Nil	34
Maynard Carbine Type I (.50)	1/2	3	2- Nil	5	5	Nil	58
Maynard Carbine Type II (.50)	1/2	3	2- Nil	5	5	Nil	60

Merrill Carbine

Notes: This carbine fired a Minie Ball attached to a combustible paper cartridge or, unusually, a non-combustible foil or rubber cartridge. (The non-combustible packages increase loading time, but have no other effect in game terms.) There were Type I and Type II versions, but the only difference was the markings and the lack of a patch box (they discovered it was not necessary), had a different rear sight, a stock with the fore-end being longer and fuller, and a different latch on the breech opening mechanism. (For game purposes, the two types are identical. Both had a 22.125-inch browned or blued barrel (Naval and Marine versions were more likely to have browned barrels). It was loaded by unlatching and lifting the breech lever, which caused the breechblock to move back, exposing the chamber. All metalwork was bright brass. Naval and Marine versions are tin-plated. The bolt face is copper-plated. Several thousand Type Is and 14,500 Type IIs were built, which made it one of the most-issued modern rifles of the Civil War. The Merrill Carbine was known for its relatively light weight.

Weapon	Ammunition	Weight	Magazines	Price
Merrill Carbine	.54 Minie Ball	3.06 kg	1 Internal	\$268

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Merrill Carbine (Combustible Cartridge)	SS	2	1- Nil	5	3	Nil	42
Merrill Carbine (Noncombustible Cartridge)	1/2	2	1- Nil	5	3	Nil	42

Millennium Muzzleloaders Competitor

Notes: As the name would indicate, the Competitor is designed for blackpowder rifle competitions. Except for the blackpowder propellant and inline ignition, the Competitor is a modern rifle, with a synthetic stock in matte charcoal or Mossy Oak finish. The metalwork is blued. The sights use a fiberoptic/bright paint system called by Millennium Muzzleloaders the Bright-Line system. The Competitor is also drilled and tapped for a scope mount. The trigger is fully user-adjustable and the Competitor comes with a

synthetic ramrod. Barrel length is 24 inches.

Weapon	Ammunition	Weight	Magazines	Price
Competitor	.45 Blackpowder	3.18 kg	1 Internal	\$570
Competitor	.50 Blackpowder	3.23 kg	1 Internal	\$577

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Competitor (.45)	1/5	3	1- Nil	6	3	Nil	82
Competitor (.50)	1/5	3	1- Nil	6	3	Nil	87

Morse Carbine

This carbine fired a metallic cartridge which was heavy-caliber and had a decent case size with a large powder charge. They were built at the Military Works in Greenville, South Carolina, with about a thousand built and issued to South Carolina troops. The Morse Carbine is one of the most advanced firearms the Confederates had manufactured, but it did not appear until 1864. Except for the barrel and sights, the metalwork was brass, and the Morse carbine had a blocky, lumpish appearance. Reloading is done via a tilting breech; loading methods differ with the Model of the Carbine. Type I's used a moveable operating rod, which also the firing pin. The Type II latching mechanism uses a hollow iron rod in which is the firing pin. The hollow rod becomes flanged at the end going into the breech with a knurled front edge that covers the firing pin where it contacts the round. The Type III has a sliding breechblock to open the breech and close it. In all cases, the internal loading and firing mechanism are controlled by a hand lever under the wrist. All are identical for game purposes.

The barrel may be round or half-octagonal, and is 21 inches long. It is blued iron.

Weapon	Ammunition	Weight	Magazines	Price
Morse Carbine (Round Barrel)	.50 Morse	3.57 kg	1 Internal	\$282
Competitor	.50 Blackpowder	3.59 kg	1 Internal	\$285

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Morse Carbine (Round Barrel)	SS	4	2- Nil	5	4	Nil	63
Competitor (.50)	1/5	4	2- Nil	5	4	Nil	64

Morse Inside Lock Musket

Notes: These were designed for use by the Union forces in the Civil War. Fewer than 200 were made; the reason is it's, ah...innovative design, with a centrally-mounted hammer and percussion cap nipple. A shaft runs through the weapon, through the lock, and terminates at the percussion nipple. The barrel is 40.31 inches.

Weapon	Ammunition	Weight	Magazines	Price
Inside Lock Musket	.69 Blackpowder	4.81 kg	1 Internal	\$236

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Inside Lock Musket	1/6	5	2-3- Nil	9	4	Nil	42

NEF Huntsman

This is for the most an old early 18th-century design muzzleloader, but it has some modern refinements. The stock is American hardwood with a walnut finish, but the stock is also weatherproofed. A polymer-stocked version is also built. The front and rear sights both have fiberoptic inlays. The 24-inch barrel has a black oxide finish; the rest of the metalwork is color-case hardened, and the barrel is rifled. The 26-inch barrel is less common, still made in significant numbers. The Huntsman is also drilled and tapped for a scope mount. The Stainless Huntsman is a variant with a matte nickel finish receiver instead of being color-case hardened.

Weapon	Ammunition	Weight	Magazines	Price
Huntsman (24" Barrel)	.45 Blackpowder	2.95 kg	1 Internal	\$275
Huntsman (26" Barrel)	.45 Blackpowder	3.02 kg	1 Internal	\$296
Huntsman (24" Barrel)	.50 Blackpowder	3.05 kg	1 Internal	\$295
Huntsman (26" Barrel)	.50 Blackpowder	3.12 kg	1 Internal	\$299

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Huntsman (.45, 24")	1/6	2	1- Nil	6	3	Nil	41

Huntsman (.45, 26")	1/6	2	1- Nil	6	3	Nil	44
Huntsman (.50, 24")	1/6	2	1- Nil	6	3	Nil	44
Huntsman (.50, 26")	1/6	3	1- Nil	6	3	Nil	47

Nock Volley Gun

Notes: The Nock Volley Gun was an attempt to increase the firepower of the then-new rifled muskets. Despite the name, the Nock Volley Gun was invented by James Wilson in the late 1770s; the first guns were delivered in the early 1780s. However, the maker of the barrel cluster was stamped on the top barrel, "H.Nock," and so the hybrid weapon became to be known as the Nock Volley Gun. The name "Volley" came from the use of a cluster of simultaneously-fired rifled barrels; the result was much like a burst from an assault rifle. (There was no provision to fire the barrels individually or keep some barrels unloaded; it was all or nothing.) The Nock Volley Gun proved to be heavy, produce massive muzzle flash and smoke, and prone to cause shoulder bruising and injuries due to the massive amount of powder required to fire 7 barrels simultaneously. This was not so important on a ship or from a fortification where the weapon could be bipod or tripod mounted, but an individual infantryman carrying one was not a happy camper unless he was a masochist. Barrels were short at 20 inches and chambered for .52-caliber balls (though a more common loading was a patched .49 or .495 ball). Eventually, complaints about the difficulty of using the Nock Volley Gun led to loadings reduced to 41.5 grains of powder (down from 57 grains), and the use of paper partridges loaded with a .445 ball. Nonetheless, the tremendous gout of fire and smoke led to the rifle being banned on ships for fear of setting the rigging on fire. On land and sea, the Nock disappears from military service after 1805.

But this was not the end of the Nock. It acquired a following among hunters, especially those hunting birds. In the 1830s, some of the first cased rifle rounds were used on modified Nocks. The Volley could bring down just about anything, and African hunters also used the Nock. One hunter, COL Thomas Thornton, uses a 12-barreled variation. Most of these cartridge-firing versions were break-open and chambered for rounds like .500 Nitro Express. These could be fired with some of the barrels unloaded. (Quite frankly, with the figures I'm getting, it mystifies me how anyone could fire a fully-loaded .500 Nitro-firing Nock!)

However, the Nock again fell into the dustbin of history around the 1860s – until the late 1950s. John Wayne and company were looking for massive amounts of period weaponry, including a Nock for Jim Bowie as played by Richard Widmark. Though one fully authentic Nock was used in the movie, the laborious loading and long loading times meant that most Nocks appearing in the film were fired electrically with a surreptitious powder loading band being fitted to the Nock.

Today, one can still get a Nock, whether old-style or cartridge firing. The Rifle Shoppe will sell you parts kits, though an assembled gun will cost you a mint in IRL terms.

Note that the barrels of the Nock are each rifled. Damage is per ball (or bullet); treat as a 7-round burst (or 12-round, for the Thornton Rifle) for volley effects.

Weapon	Ammunition	Weight	Magazines	Price
Nock Volley Gun (Original Loading)	.52 Blackpowder	6.8 kg	7 Internal	\$2285
Nock Volley Gun (Common Loading)	.49 Blackpowder	6.8 kg	7 Internal	\$2285
Nock Volley Gun (Reduced Loading)	.445 Blackpowder	6.8 kg	7 Internal	\$2285
Nock Volley Gun (Cartridges)	.500 Nitro Express	8.62 kg	7 Internal	\$7323
Nock Volley Gun (Thornton Variation)	.500 Nitro Express	11.69 kg	12 Internal	\$13032

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Nock Volley Gun (Original Loading)	1/42	3	2- Nil	6	12	Nil	57
Nock Volley Gun (Common Loading)	1/42	3	1- Nil	8	7	Nil	55
Nock Volley Gun (Reduced Loading)	1/42	2	1- Nil	8	3	Nil	52
Nock Volley Gun (Cartridges)	1/7	8	1-2- 3	7	23	Nil	73
Nock Volley Gun (Thornton Variation)	1/12	8	1-2- 3	7	37	Nil	73

Parker-Hale Volunteer 2-Band Target

Notes: The Volunteer is a replica of an old-world type of rifle; the original was designed for rifled balls, but the Parker-Hale version

is designed to fire a modern update of a Minie Ball-type round. (The range below reflects that this is a rifled weapon and not a smoothbore.) Ignition is by percussion, and the barrel is a very long 32-inch barrel with a heavy profile. The stock is of walnut, and oil-finished; a not is given to modern methods with the checkered (straight) wrist and checkered fore-end. The front sights are of a type that was once common, a ball-shaped sight called a globe; the rear sight is an adjustable ladder sight. The receiver has a color-case hardened finish, the barrel is blued, and the buttplate, trigger guard, and parts of the fore-end are brass.

The Whitworth is a similar design, but has a 36-inch barrel which does not have a heavy profile.

Weapon	Ammunition	Weight	Magazines	Price
Volunteer	.451 Blackpowder	4.31 kg	1 Internal	\$701
Whitworth	.451 Blackpowder	4.37 kg	1 Internal	\$763

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Volunteer	1/6	2	1- Nil	7	2	Nil	104
Whitworth	1/6	2	1- Nil	8	2	Nil	114

Piedmontese Model 1844/60 Rifled Musket

Notes: Originally built in Torino Italy, they were converted to then-modern standards in 1860, in hopes to sell them to the US Army, who would buy just about any reasonably-modern firearm at the time. They originally a copy of the French Model 1822 musket, they then became their own rifles. They were bought by Secretary of War Stanton in correspondence to Marcellus Hartley, without going through normal channels, as other parties were interested and they were regarded all over Europe as weapons of quality. The Union bought some 2000 copies. Barrel length is 42 inches.

Weapon	Ammunition	Weight	Magazines	Price
Piedmontese Model 1844/60	.69 Blackpowder	5.93 kg	1 Internal	\$678

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Piedmontese Model 1844/60	1/8	35	2- Nil	10	3	Nil	67

Prussian Model 1809 Musket

Notes: These muskets, used throughout the Civil War, were perhaps some of the oldest in use in that war. They were made by Potsdam, Saarn, Naisse, and Suhl. Originally a flintlock, the Model 1809 was converted to percussion ignition well before the Civil War. Some 100,300 were bought by the US Government. Their external metalwork is finished in bright steel. Barrel is 42.38 inches.

Weapon	Ammunition	Weight	Magazines	Price
Prussian Model 1809	.72 Blackpowder	4.99 kg	1 Internal	\$249

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Prussian Model 1809	1/8	5	2-4- Nil	9	5	Nil	46

Prussian Model 1839/55 Rifled Musket

Notes: This rifled musket had several versions, primarily differentiated by caliber. They had both Prussian and American markings, and were used only by Union forces during the Civil War. Some 65,000 were imported from Suhl, Potsdam, Zella, and Mehliis armories.

Two broad versions, other than caliber, were produced. The Type I was based on the Model 1839. It uses the Belgian cone type of percussion lock, and the cone may be screwed onto the breech. Their bores ranged from .60 to .715. They were imported for the Union by Herman Boker, a company still in business. It is interesting that the importation order listed the Type I as "smooth bore," though they were definitely rifled.

The Type II came in a .615 bore version only. While the Type I could not accept a bayonet, the Type II could. They have a long-range adjustable long range sight, with a brass bead front sight. These were imported by John Hoey, but not until 1862.

Barrels for all were 43.75 inches.

Weapon	Ammunition	Weight	Magazines	Price
Prussian Model 1839/55	.69 Blackpowder	5.94 kg	1 Internal	\$408
Prussian Model 1839/55	.70 Blackpowder	6.02 kg	1 Internal	\$411
Prussian Model 1839/55	.715 Blackpowder	6.16 kg	1 Internal	\$414
Prussian Model 1839/55	.615 Blackpowder	5.36 kg	1 Internal	\$392

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
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Prussian Model 1839/55 (.69)	1/8	3	2- Nil	10	2	Nil	69
Prussian Model 1839/55 (.70)	1/8	3	2- Nil	10	3	Nil	69
Prussian Model 1839/55 (.715)	1/8	3	2- Nil	10	3	Nil	70
Prussian Model 1839/55 (.615)	1/8	3	1- Nil	10	2	Nil	64

PS Justice Rifled Musket

Notes: These rifles, coming in Types I-III, were made in response to an emergency order by the Union forces, Type I was built from already made stocks and furniture, usually black walnut, and mostly unseasoned; they tended to crack or warp with weather and abuse. The rifling consisted of wide bands and shallow grooves. It used long range rear sights. The lock and trigger were taken from surplus Model 1816 Muskets, and the three barrel bands from Model 1840 or 1841 Muskets. The Type I had a 39-inch barrel.

The barrel of the Type II was, like the rest of the rifle, crudely made, something you might find in a war emergency manufacture. It has a browned barrel, but the rest of the metalwork was natural metal, except for the brass buttplate. The stocks were made from blanks, and were generally shipped out in their unseasoned condition; they weren't black walnut, they were made of blackened walnut. The trigger guard had a distinctive reverse bow, and there were no provisions for sling swivels. It too had a 39-inch barrel.

The Type III, unlike the others, was built from newly-manufactured parts, and had seasoned black walnut stocks. The Type III had a browned 39-inch barrel. Most fittings were brass. The front sight was a broad blade, and the rear sight a two-leaf adjustable sight. The barrel was secured with wide barrel bands, three in number, with a sling swivel at the top band and the rear swivel on the middle band.

Despite the differences between the sub-models, all are identical in game terms.

Weapon	Ammunition	Weight	Magazines	Price
PS Justice Rifled Musket	.69 Blackpowder	5.62 kg	1 Internal	\$248

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
PS Justice Rifled Musket	1/8	3	2- Nil	9	3	Nil	62

Puckle Gun

Notes: The Puckle Gun (also known as the Defence Gun) was a flintlock weapon that was years ahead of its time; vaguely similar percussion revolvers were not available until 1814, nearly a hundred years after the Puckle Gun was first demonstrated. The Puckle Gun was, astonishingly for 1717, the first example of a revolving firearm. The ammunition was loaded, one chamber at a time, into cassettes; the firing handle was unscrewed, and the cassette inserted into the frame. Though loading a full cassette was impractical on the battlefield (it took nearly an hour), the cassette could be removed and another preloaded cassette inserted, which took only 20 seconds. A cassette held 11 shots. The entire gun sat on a tall tripod, allowing the firer to fire the gun from a standing (and less fatiguing) position. The Puckle Gun is fired in a manner similar to a standard flintlock -- the chamber was indexed, then powder placed on the pan and the cassette locked. After firing a round, the cassette was unlocked and advanced by hand, then the firing procedure begun anew. This seems complicated, but the Puckle Gun was able to fire 9 shots per minute, where an experienced infantryman might be able to manage as much as 5 shots per minute, and three was more likely. Aiming is not its strong point, and the Puckle gun has shorter range than is standard for a flintlock rifle, though the 36-inch barrel mitigates this somewhat. The muzzle of the barrel also has a fixture ahead of its time: a flash suppressor, as well as another ahead-of-its-time features for a small arm, a leaf sight. Puckle actually made two versions of his gun: one which fired conventional round shot, and one which fired square shot, to be used against the Turks "and other heretics." However, though the square bullet was meant to cause more damage, the actual increase in damage is not quantifiable in Twilight 2000 v2.2 terms, and their flight path was unpredictable. Unlike most firearms of the period, the Puckle Gun was made of brass instead of iron or steel. It had no pistol grip or stock, though it had a primitive T&E mechanism. Loaded cassettes weigh 0.92 kg; unloaded, they weigh 0.85 kg.

Alas, the Puckle Gun could not pass the giggle test, despite its technical brilliance and usefulness as a volley weapon. In addition, Puckle found investors who were essentially feckless and insisted on decreased manufacturing standard before they essentially stole Puckle's company's money, and the British Army itself and the Crown would not invest in the strange firearm. Though a few were built and employed, the Puckle Gun was basically a failure, though no fault of Puckle's.

Weapon	Ammunition	Weight	Magazines	Price
Puckle Gun	32mm Blackpowder	11.22 kg	11 Cassette	\$945

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Puckle Gun	1/2	8	2-3- 4	10	5	Nil	157

Remington Carbine

Notes: Two chamberings for this carbine were made; the .46 Short, was the US Military cartridge (Remington had a license for the .46 Short, meant for their upcoming New Model Army revolver, but also used in the Remington Carbine. Some 5000 were produced. The Remington Carbine was also known as the Split Breech Remington, because it used a split breech mechanism, an early version of the rolling block. Furniture is black walnut, and metalwork is iron, including a case-hardened receiver. The fore-end was short to save weight, and around this fore-end was the iron barrel band. The front sight was a blade, and the rear a folding single adjustable leaf. The barrel was round, 20 inches, and blued. After the Civil War, it was common among civilians to modify the Remington Carbine to use .56-50 Spencer, and to be used as hunting weapons or general home defense weapons.

Weapon	Ammunition	Weight	Magazines	Price
Remington Carbine	.46 Smith & Wesson Short	3.18 kg	1 Internal	\$248
Remington Carbine	.56-50 Spencer	3.27 kg	1 Internal	\$254

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Remington Carbine (.46)	SS	2	1- Nil	5	3	Nil	51
Remington Carbine (.56-50)	SS	3	1- Nil	5	3	Nil	48

Remington M-700ML

Notes: This is the blackpowder counterpart to the great Remington Model 700 cartridge rifles, using blackpowder inline operation. The Model 700ML is otherwise a modern firearm, with a synthetic stock finished in natural black or Mossy Oak camouflage. The front sight can be a bead or a blade, and is dovetailed to allow changes of front sight. The rear sight is an open adjustable model. The Model 700ML is also drilled and tapped for a scope mount. The metalwork is finished in either satin blue or stainless steel. A Youth version with a shorter stock is available; but this is otherwise the same as the standard Model 700ML. Barrel is 24 inches.

Weapon	Ammunition	Weight	Magazines	Price
Remington 700ML	.45 Blackpowder	3.52 kg	1 Internal	\$570
Remington 700ML	.50 Blackpowder	3.57 kg	1 Internal	\$577
Remington 700ML	.54 Blackpowder	3.62 kg	1 Internal	\$585

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Remington 700ML (.45)	1/5	2	1- Nil	6	3	Nil	82
Remington 700ML (.50)	1/5	3	1- Nil	6	3	Nil	87
Remington 700ML (.54)	1/5	3	2- Nil	6	3	Nil	91

Remington Model 1863 Contract Rifle

Notes: Also known as the Zouave Rifle, this is a shortened version of the Springfield 1855; it has a 33-inch blued barrel with 3-7 grooves in its bore (most have five). The lock plates and lockwork is case-hardened; most other metalwork is bright brass, including the metal parts of the ramrod. The Model 1863 had only two barrel bands, but they are wider than normal. The bayonet lug is large, locking the saber-type bayonet securely.

Weapon	Ammunition	Weight	Magazines	Price
Model 1863 Contract Rifle	.58 Minie Ball	4.31 kg	1 Internal	\$427

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1863 Contract Rifle	1/6	4	2- Nil	8	4	Nil	91

Robbins & Lawrence Windsor Rifle-Musket

Notes: Though the official caliber for this rifle-musket is .577, a .58 Minie Ball will fit, though it will be slightly tight. This is a copy of P-1853, with royalties paid to the Windsor arsenal in England. It was originally meant to be re-sold in Europe, under the Pattern 1853. They were meant for use in the Crimean War, but the Union side ended up keeping the 16,000 rifles they had assembled, as well as buying back more from the British. This was awkward, because in the early parts of the Civil War, the British supported the Confederate side. The three barrel bands were soldered to the barrel, with an additional front sight blade soldered in front. The rear sight was a simple notch.

Weapon	Ammunition	Weight	Magazines	Price
Robbins & Lawrence	.577 Minie Ball	4.16 kg	1 Internal	\$483

Windsor

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Robbins & Lawrence Windsor	1/7	4	2- Nil	9	4	Nil	110

Ruger M-77/50

Notes: Similar in concept to the Remington 700ML, the Ruger M-77/50 is the blackpowder counterpart to the Ruger M-77 cartridge rifle. It uses inline ignition, and has a 22-inch barrel. The stock may be laminated American hardwood or synthetic. Sights consist of a gold bead front and a folding rear ladder/peep sight. The Ruger M-77/50 has integral one-inch scope mounts, and comes with a pair of one-inch scope rings. Metalwork may be blued or stainless steel. Unlike most blackpowder weapons of this type, the Ruger M-77/50 has a three-position safety. A variant called the Officer's Model has a checkered pistol grip wrist and fore-end and a curved buttplate.

Weapon	Ammunition	Weight	Magazines	Price
M-77/50	.50 Blackpowder	2.95 kg	1 Internal	\$536

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
M-77/50	1/5	3	1- Nil	7	3	Nil	80

Savage 10ML

Notes: This is another blackpowder weapon based on a cartridge rifle, in this case the Savage Model 10/110 series. Like the Remington and Ruger examples, it uses inline ignition, and has a stock which is basically like that of its cartridge rifle counterpart which can be laminated hardwood or synthetic (the synthetic stock may be black or camo finished). The rear sights are adjustable, and the front sight is a ramp with a fiberoptic inlay. The sights may be deleted and the rifle bought with a factory installed scope (not included below), but is normally drilled and tapped for a scope mount. Metalwork may be blued or stainless steel. Barrel is 24 inches.

Weapon	Ammunition	Weight	Magazines	Price
Model 10ML	.50 Blackpowder	3.52 kg	1 Internal	\$577

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 10ML	1/5	3	1- Nil	7	3	Nil	87

Saxon Model 1844 Rifled Musket

Notes: This rifled musket was built under the direction of Liege, Belgium, though manufacture was farmed out to several smaller armories. Like many rifled muskets of the period, these started out as smoothbore, but were rifled in the 1850s. Two rear sights have been noted on these rifled muskets: a notched, block-mounted sight, and a leaf site, plated in brass and with three sighting holes. Metalwork is brass over iron. The barrel was left in bright metal steel. It is not known how many were imported, nor who used it; it was used by the Union side, however. Barrel length is 42.75 inches.

Weapon	Ammunition	Weight	Magazines	Price
Model 1844 Rifled Musket	.71 Blackpowder	6.05 kg	1 Internal	\$541

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1844 Rifled Musket	1/8	3	2- Nil	10	3	Nil	68

Saxon Model 1851 Rifle-Musket

Notes: The original design for the Model 1851 used the Tige system, used to pre-expand the Minie Ball before impact with flesh. In actuality, the Tige system added unnecessary complexity to the rifle, and made the Minie Ball unstable in flight, seriously degrading accuracy. Therefore, the Tige system was quickly dropped, and few made it to the world's armed forces. None of the Model 1851s imported by the US used the Tige System. George Schuyler, the purchasing agent for the Confederacy, secured 27,055 for the Confederacy, while Marcellus Hartley, the purchasing agent for the Union, was only able to buy 1740 of these rifles. The Model 1851 was often referred to as the Dresden Rifle, due to large numbers being imported into Prussia through Dresden. The 39.75-inch barrel was secured with three bands; the front band also had the blade front sight. The rear sight was an adjustable leaf, graduated for 200, 400, and 600 paces (a pace being about 30 inches). Model 1851s are essentially modernized Model 1844.

And the Model 1857 is essentially a modernized Model 1851. They were produced from 1857-1861. Purchasing agents from the Union side of the American Civil War were unable to get many of them, as demand in Europe for the rifle was so high. The Confederates were unable to get any. It has a 41.75-inch barrel, browned barrel, with otherwise bright metal finish and brass barrel bands with a brass blade front sight. Furniture again is European Walnut.

Weapon	Ammunition	Weight	Magazines	Price
Model 1851 Rifle-Musket	.58 Minie Ball	4.04 kg	1 Internal	\$492
Model 1857 Rifle-Musket	.58 Minie Ball	4.17 kg	1 Internal	\$511

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1851 Rifle-Musket (Tige System)	1/7	5	Nil	9	4	Nil	99
Model 1851 Rifle-Musket	1/7	4	2- Nil	9	4	Nil	108
Model 1857 Rifle-Musket	1/7	4	2- Nil	10	4	Nil	113

Sharps Model 1851 Carbine

These 1457 carbines were built for the 1st and 2nd US Dragoons, though not issued to them until the Mexican War; they then saw service amongst the Confederates in the Civil War; 60 were also issued to the US Marines. They fired a combustible cartridge of paper or linen, tipped by a Minie Ball. There were Type I and Type II versions. Operation was by falling block; when fallen, the hammer base was enclosed within the lock. The firing pin was retained by a spring. The operating lever was under the base of the fore-end and was squeezed to open the breech. It used the Maynard Tape Primer System, and was fired by percussion. On the left side of the barrel band, extending to the frame, was a 9-inch sling bar and swivel. All metalwork except for the 21.625-inch barrel was brass. Some models had an implement box set into the left side of the stock; this was also brass when present.

The Model 1851 Sporting Carbine, also known as the Model 1851 Carbine Type II, was originally designed for civilian hunters rather than as a military weapon; only 400 were built. Three calibers were available, with a combustible case tipped by a Minie Ball. They did not have the sling bar, and sometimes had a browned barrel. The sling bar was omitted on the Type II, with the sling swivel being an eyebolt screwed directly into the fore-end. They typically saw only private use by Union troops in the Civil War, i.e., by soldiers or relatives and friends buying the Sporting Carbine for soldiers on the lines. Usually the heaviest calibers were sent to troops by their relatives and friends, along with a copious supply of ammunition. Some 400 of these carbines were produced. The barrel was 21.625 inches and blued; some had blued and engraved frames and lock plates.

The Model 1852 Carbine also fired a combustible paper or linen case tipped by a Minie Ball. The Maynard tape system was abandoned in favor of Sharps' own slanted-breech pellet primer system. It has bright-finished barrels and brass metalwork. The Type II was the sporting model (Sharps Model 1852 Sporting Carbine) and approximately 600 were built. The barrel could be octagonal or round. Again many found their way to the troops in the conflict. Other than loading times, these are identical to the Model 1851. Barrels were 21.875 inches.

The Model 1853 is for the most part identical for game purposes identical to the Type I Model 1852, The operating lever was a spring-loaded stud, retaining the operating lever pin, and thus the latch was directly on the breechblock. At first, metalwork (except the barrel) were brass, but they were later blued iron. The barrel was also blued. Some had the 9-inch sling bar with sling swivel. Some 900 were used by the Free Staters in Kansas, and took part in the Bloody Kansas massacre. John Brown's rebels had some 7000 on hand, though not all were used in the 1859 raid on Harpers Ferry. These were later issued to Union troops. For game purposes, it is identical to the Model 1852 Type I.

The Sharps Model 1855 was the last Sharps slanting block design, and the last to use the Maynard Tape Primer System. It was in many ways similar to the Model 1852 and Model 1853. It had a 21.75-inch round barrel. The Navy bought 101 of the same rifle, but used a .577 caliber round fired from an 18-inch barrel. 50 of these were equipped with the rather useless Rollins White cocking device. This was difficult to use and prone to jamming, and these carbines were quickly discarded. The Type II was the same, but was the civilian version, identical to the Type I for game purposes. The Type III was similar to the Type I, but had the caliber increased to .577, and a 21-inch barrel which was usually round and blued. The Type IV is similar to the Type III, but had an 18-inch or 19-inch barrel. It was primarily issued to US Marines.

The Model 1859 Carbine used the Sharps Pellet Priming System, but this version of the system also allowed for the use of conventional percussion caps. It had a 22-inch barrel with a case-hardened frame, brass metalwork, and a sling ring on the left side of the wrist.

The Model 1859 New Model Carbine used a gas check system that ensured that the breech remained sealed until deliberately opened. The sealing of the breechblock was advanced at the time. 3000 Early Models were built; 1500 were sold to Georgia, and 1500 to the War Department. They had brass metalwork except for the blued barrel. The Late Model had all-iron construction except for the furniture, and had an implement box on the left side of the stock, also iron. Some 30,000 were bought by the War Department and 4000 by the US Navy, and were primarily issued out to the Marines. For game purposes, they are identical to the Model 1859 Carbine.

The Model 1863 New Model Carbine came in Early Models, which had an implement box, and the Late Model, which didn't. Both used all-iron metalwork. It is identical to the Model 1859 Carbine for game purposes. Some 60,000 were built.

The Model 1865 New Model Carbine was virtually identical to the Model 1863 New Model Carbine. 5000 were built. They are identical to the Model 1859 Carbine for game purposes.

Weapon	Ammunition	Weight	Magazines	Price
Model 1851 Carbine Type I	.52 Minie Ball (Combustible Cartridge)	3.18 kg	1 Internal	\$277

Model 1851 Sporting Carbine	.36 Minie Ball (Combustible Cartridge)	3.18 kg	1 Internal	\$256
Model 1851 Sporting Carbine	.44 Minie Ball (Combustible Cartridge)	3.31 kg	1 Internal	\$265
Model 1851 Sporting Carbine	.52 Minie Ball (Combustible Cartridge)	3.49 kg	1 Internal	\$277
Model 1852 Carbine (Round Barrel)	.52 Minie Ball (Combustible Cartridge)	3.46 kg	1 Internal	\$280
Model 1852 Carbine (Octagonal Barrel)	.52 Minie Ball (Combustible Cartridge)	3.48 kg	1 Internal	\$285
Model 1855 Carbine Type I	.52 Minie Ball (Combustible Cartridge)	3.46 kg	1 Internal	\$278
Model 1855 Carbine Type III	.577 Minie Ball (Combustible Cartridge)	3.59 kg	1 Internal	\$282
Model 1855 Carbine Type IV (18" Barrel)	.577 Minie Ball (Combustible Cartridge)	3.49 kg	1 Internal	\$252
Model 1855 Carbine Type IV (19" Barrel)	.577 Minie Ball (Combustible Cartridge)	3.53 kg	1 Internal	\$262
Model 1859 Carbine	.52 Minie Ball (Combustible Cartridge)	3.52 kg	1 Internal	\$271

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1851 Carbine Type I	1/2	3	2- Nil	5	3	Nil	53
Model 1851 Sporting Carbine (.36)	1/2	2	1- Nil	5	1	Nil	47
Model 1851 Sporting Carbine (.44)	1/2	2	1- Nil	5	3	Nil	50
Model 1851 Sporting Carbine (.52)	1/2	3	2- Nil	5	3	Nil	53
Model 1852 Carbine (Round Barrel)	SS	3	2- Nil	6	3	Nil	54
Model 1852 Carbine (Octagonal Barrel)	SS	3	2- Nil	6	3	Nil	55
Model 1855 Carbine Type I	1/2	3	2- Nil	6	3	Nil	54
Model 1855 Carbine Type III	1/2	4	2- Nil	5	4	Nil	54
Model 1855 Carbine Type IV (18" Barrel)	1/2	4	2- Nil	5	4	Nil	45
Model 1855 Carbine Type IV (19" Barrel)	1/2	4	2- Nil	5	4	Nil	48
Model 1859 Carbine	SS	3	2- Nil	5	3	Nil	51

Sharps Model 1853

Notes: These rifles all stem from the 1853 design. They use a combustible cartridge based on nitrated paper or linen. They used Sharps' own patented pellet-primer mechanism (essentially a magazine for percussion caps); the mechanism held six caps. Reloading the magazine takes 2 phases. The Model 1853 had a 27.325-inch round, browned barrel, with the rest of the metalwork being brass, except for the receiver, which was case-hardened steel. One barrel band, an inch wide, secured the barrel about two-thirds of the way up the fore-end. The butt had a brass plate, and inside was a compartment for cleaning supplies. The rear sight was an adjustable leaf and the front was a blade. Production numbers were low, and they were made exclusively for the US Navy.

The Model 1855 Type was almost identical to the Model 1853; it was a bit heavier, primarily due to the barrel lengthened to 28.25 inches. It too was made for the Union Navy, but fewer than 200 were made and delivered. Less than 50 of the Type II were made; originally, the Type II had a mechanism that opened the bolt, cocked the hammer, and loaded a percussion cap from the magazine with one stroke. It proved very unreliable, and those that were made had this mechanism removed, effectively making them Type I's again. Only 12 of the Type IIs were made. The Type III had a barrel lengthened to 39 inches (and intended for sharpshooting), and made of bright steel. The other metalwork was made in bright iron.

The Model 1859 was again similar to the 1853 and 1855, but a new breech block mechanism was introduced, one that simplified production. It was the straight breech, as opposed to the slanted breech of the earlier rifles. The Type I version had a 30-inch blued

barrel and were built for the Union Army and Navy; some 4300 were built. The rest of the metalwork, other than the barrel, were case-hardened iron. The Type II was identical except for the use of a socketed spike bayonet instead of a saber-type bayonet. The Type III had a 36-inch barrel and was made for sharpshooters; 600 were made. 2000 Type IVs were made; they were issued only to COL Hiram Berdan's 1st and 2nd Regiments, US Sharpshooters. They had double set triggers and 30-inch round blued barrels.

The Models 1863 Types I & II were identical for game purposes to the Models 1859 Types I & II. About 7150 of these were built.

Weapon	Ammunition	Weight	Magazines	Price
Sharps Model 1853	.52 Minie Ball (Breechloading)	3.97 kg	1 Internal	\$683
Sharps Model 1855 Type I/II	.52 Minie Ball (Breechloading)	4.08 kg	1 Internal	\$692
Sharps Model 1855 Type III	.52 Minie Ball (Breechloading)	4.39 kg	1 Internal	\$801
Sharps Model 1859 Type I/II/IV	.52 Minie Ball (Breechloading)	3.97 kg	1 Internal	\$710
Sharps Model 1855 Type III	.52 Minie Ball (Breechloading)	4.14 kg	1 Internal	\$771

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Sharps Model 1853	1/3	3	2- Nil	7	3	Nil	81
Sharps Model 1855 Type I/II	1/3	3	2- Nil	7	3	Nil	84
Sharps Model 1855 Type III	1/3	3	2- Nil	9	3	Nil	115
Sharps Model 1859 Type I/II/IV	1/3	3	2- Nil	8	3	Nil	91
Sharps Model 1855 Type III	1/3	3	2- Nil	9	3	Nil	107

Sharps & Hankins Model 1861

Notes: This rifle was designed for US Marines actively stationed aboard ships, and only about 700 were produced. It fired a specially-designed rimfire metallic cartridge round. It fired via a simple cocking lever; the barrel slid forward and the shooter put a fresh round into the breech and closed it again with the same lever he used to open the breech, with the barrel pulling back into the breech. The barrel was a bit long at 32.75 inches, and it was browned. Most of the metalwork was case-hardened, but the buttplate was brass. The stock was secured to the barrel by four barrel bands.

The Model 1862 was a "carbine" variant, with a 27-inch barrel and no fore-end, barrel bands, or bayonet lug. The firing pin was moved inside the receiver, and it had a lubricating aperture on the side of the frame. This version was not well received and few were built.

The Model 1862 Army Carbine had a 23.625-inch blued barrel. The firing pin is connected to the hammer in early models; later, the firing pin was a part in of itself and was in the rear of the frame. The breech opened via an operating lever connected to the trigger guard. Most metal parts other than the barrel were case-hardened; unlike most rifles and carbines of the time, most of the parts were steel instead of iron. Some had no fore-end, but most had a short fore-end, not much longer than to provide gripping space. The Model 1862 Cavalry is basically the same, but with a short 19-inch barrel. The Model 1862 Cavalry was used exclusively by the 9th and 11th New York Volunteer Cavalry Regiments. The Model 1862 Navy Carbine was much more produced than any other of the variations of this rifle, with 11,000 being produced for the Union Navy and Marines. It is almost identical to the Army Carbine, but had a leather cover over the barrel to help prevent rusting. For game purposes, it is identical to the Army Carbine.

Weapon	Ammunition	Weight	Magazines	Price
Model 1861 Rifle	56-.52 Sharps	3.63 kg	1 Internal	\$1216
Model 1862 Carbine	56-.52 Sharps	3.5 kg	1 Internal	\$1216
Model 1862 Army Carbine	56-.52 Sharps	3.46 kg	1 Internal	\$688
Model 1862 Cavalry Carbine	56-.52 Sharps	3.34 kg	1 Internal	\$641

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1861 Rifle	SS	3	2- Nil	8	3	Nil	105
Model 1862 Carbine	SS	3	2- Nil	7	3	Nil	83
Model 1862 Army Carbine	SS	3	2- Nil	6	3	Nil	64

Model 1862 Cavalry Carbine	SS	3	2- Nil	5	3	Nil	51
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Spencer Army Rifle

Notes: The Spencer is often said to be the best firearm of the Civil War. It was innovative, near-soldier-proof, used the rapid fire capabilities inherent in its design, and eliminated the possibilities of wet powder. It was often the first time most Confederate soldiers had faced soldiers armed with repeating rifles. It was procured by the Union government and the soldiers alike, and the first government order was signed by Abraham Lincoln himself. Procurement was limited only by the ability of the Spencer Repeating Rifle Company itself; the Union would have bought as many as they could make. The lever-action mechanism was designed by Christopher Spencer himself. The design placed the tubular magazine in the butt. The blued barrel was 30 inches; to a military that is used to barrels sometimes over 40 inches, this was a carbine, though by today's measurement, it is a rather long-barreled rifle. The receiver and mechanism were case-hardened. The rear sight was a single adjustable leaf, while the front sight was a blade.

The Navy Rifle was essentially the same, except for its markings. It was primarily issued to Marines.

The Rifle-Musket was not really a musket in any way; the term more denotes the increased length of the barrel. The barrel was 38 inches long, and the extra length was designed for sharpshooters.

The Spencer Model 1860 Carbine was a shorter version of the Army Rifle; it had a 22-Inch barrel. Though available in 1860, Union purchases and issue did not start until 1863. By then, a large number of Union soldiers were already using the Spencer Carbine, bought by soldiers or their families and friends and used in the Civil War as early as 1861. The Model 1865 was little used in the Civil War, as they were not available until early 1865. Eventually, 21,511 were produced. The Model 1865 used a shorter 20-Inch barrel and a different cartridge than the Model 1860. Both used a tubular magazine in the stock, and both were cocked by using the enlarged trigger guard. The Model 1865 had a cutoff switch, allowing the shooter to load one shot at a time instead of feeding from the magazine. The Union bought over 30,000 of the Model 1865 Burnside Contract Carbines; most didn't see combat in the Civil War due to their late entry. For game purposes, both Model 1865s are identical.

Weapon	Ammunition	Weight	Magazines	Price
Spencer Model 1860 Army Rifle	56-.52 Spencer	4.54 kg	7 Tubular	\$1177
Spencer Model 1860 Rifle-Musket	56-.52 Spencer	4.71 kg	7 Tubular	\$1258
Spencer Model 1860 Carbine	56-.52 Spencer	3.74 kg	7 Tubular	\$1096
Spencer Model 1865 Carbine	.50-52 Spencer	3.63 kg	7 Tubular	\$1011

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Spencer Model 1860 Army Rifle	LA	3	2- Nil	8	3	Nil	85
Spencer Model 1860 Rifle-Musket	LA	3	2- Nil	9	2	Nil	109
Spencer Model 1860 Carbine	LA	3	2- Nil	6	3	Nil	59
Spencer Model 1865 Carbine	LA	3	2- Nil	6	3	Nil	53

Springfield Joslyn Model 1861

Notes: The first breechloading rifle to be built in large numbers, the Joslyn was made for general issue, though it was not issued to Union troops until 1865, shortly before the end of the Civil War. Joslyn was a subcontractor of Springfield. Two versions were built: the Army version, which fired a .52 caliber bullet, the Navy version (Model 1862), which fired a .58-caliber bullet. Both were metallic cartridges. The Model 1864 could fire the Spencer .56-52 cartridge or the Joslyn .54 cartridges. It also had a number of small improvements. The Model 1865 had a slightly different action, not measurable in Twilight 2000 v2.2 rules. Barrel length was 35.5 inches; it was round and blued. Three bands connected to the fore-end.

Weapon	Ammunition	Weight	Magazines	Price
Joslyn Model 1861	56-52 Spencer	4.61 kg	1 Internal	\$808
Joslyn Model 1862	.58 Springfield Rimfire	4.92 kg	1 Internal	\$970
Joslyn Model 1864	.56-52 Spencer	4.61 kg	1 Internal	\$808
Joslyn Model 1864	.50-40-640 Joslyn	4.58 kg	1 Internal	\$960

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Joslyn Model 1861	SS	3	2- Nil	9	3	Nil	113
Joslyn Model 1862	SS	4	2-3-	9	4	Nil	119

Joslyn Model 1864	SS	3	Nil 2-	9	3	Nil	113
Joslyn Model 1864	SS	4	Nil 2-3- Nil	9	4	Nil	123

Springfield Model 1841 Rifle

Notes: Though these rifles were assembled at the Springfield Armory, the parts were actually made at the Harpers Ferry Arsenal. It called by many names, including Mississippi Rifle, Windsor Rifle, Harpers Ferry Rifle, Whitney Rifle, Remington Rifle, Yarger Rifle. These names were connected to subcontractors who assembled or even manufactured the Model 1841 Rifle. The Model 1841 Rifle was actually a Rifled Musket, as it fired a ball down a rifled barrel and not a Minie Ball. The Model 1841 was replaced in 1855 by the Model 1855 Rifle-Musket, which was actually a rifle; this was a direct order from the Secretary of War. The Model 1841 was not rifled at first; it was a musket, unrifled. The Corps of Cadets at West Point received the Model 1841 Rifles for purposes of training underclassmen after they had been declared obsolete. The Model 1841 had a V-notch rear sight and a brass blade front sight; it had three barrel bands secured by screws. These sights were later upgraded for precision by Harpers Ferry, as there were complaints about the accuracy of the rifle because of its sights. The left side of the rifle had a patch box set into the left side of buttstock, and it was of pretty substantial size. The barrel is a short and reasonably manageable 36.375 inches.

Subcontractors for the Model 1841 included Remington; Robbins, Kendall and Lawrence, Robbins & Lawrence (not the same company), Tryon & Son, and Whitney. Confederate copies were made largely in South Carolina at Palmetto, though some were made in Northern armories for state militias before the Civil War began.

There were a number of modifications and alterations made to the basic Model 1841 pattern. Almost all of these modifications were done by the Harpers Ferry Arsenal. Most were variations in the sights, the barrel bands, or the bayonet used, though the first alteration was to fire Minie Balls. After the Fourth Alteration, the caliber was stepped up to .58 caliber, and the second pattern bayonet was used. The Linder Modification was a major modification designed to use combustible paper cartridges, essentially turning it into breechloading rifle. (It's conceptually similar to an inline.) The rear leaf sights were modified to take into account the more standardized ballistics. Modifications were applied to Confederate rifles as they were captured and brought in to armories.

One of these Confederate rifles based on the Model 1841 was the Asheville Armory Rifle, which was based on the 1st Alteration. The C Chapman Rifle was based on the 4th Alteration. There were dozens of others; they were often handmade in individual workshops and may not have necessarily had interchangeable parts or high production numbers.

Weapon	Ammunition	Weight	Magazines	Price
Model 1841 Rifle	.54 Blackpowder	4.41 kg	1 Internal	\$323
Model 1841 Rifle (1st Alteration)	.54 Minie Ball	4.41 kg	1 Internal	\$443
Model 1841 Rifle (4th Alteration)	.58 Minie Ball	4.6 kg	1 Internal	\$459
Model 1841 Rifle (Linder Modification)	.58 Minie Ball, Combustible Cartridge	4.75 kg	1 Internal	\$483

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1841 Rifle	1/8	2	1- Nil	8	2	Nil	50
Model 1841 Rifle (1st Alteration)	1/6	3	2- Nil	9	3	Nil	95
Model 1841 Rifle (4th Alteration)	1/6	4	2- Nil	9	4	Nil	100
Model 1841 Rifle (Linder Modification)	1/5	4	2- Nil	9	4	Nil	105

Springfield Cadet Musket Model 1841

Notes: This musket was designed and specially made for cadets at West Point; as a result, Springfield made just enough for West Point to use (about 450). It was in West Point service until 1856; when the Civil War broke out, when it was pressed into service. The Cadet Musket had no rear sight and has three barrel bands. Most had a 40-inch barrel with three securing bands; it may have been a later modification, perhaps only a field modification, but examples have also been found with 31-inch and 34-inch barrels. Ignition is by percussion.

Many of the Cadet Muskets received rifled barrels starting in 1857; some 341 were so rifled. The contract was drawn up in 1851, so the nomenclature was Rifled Cadet Musket Model 1851. These had 40-inch barrels, but not the shorter barrels. They were equipped with long-range rear sights. These were finished bright except for the buttplate and barrel bands, which were brass.

Weapon	Ammunition	Weight	Magazines	Price
Cadet Musket 1841 (40" Barrel)	.57 Blackpowder	4.27 kg	1 Internal	\$227

Cadet Musket 1841 (34" Barrel)	.57 Blackpowder	3.86 kg	1 Internal	\$196
Cadet Musket 1841 (31" Barrel)	.57 Blackpowder	3.66 kg	1 Internal	\$183
Rifled Cadet Musket Model 1851	.57 Blackpowder	4.68 kg	1 Internal	\$379

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Cadet Musket 1841 (40")	1/6	3	2- Nil	9	4	Nil	38
Cadet Musket 1841 (34")	1/6	3	2- Nil	8	4	Nil	36
Cadet Musket 1841 (31")	1/6	3	2- Nil	7	4	Nil	30
Rifled Cadet Musket Model 1851	1/8	3	2- Nil	9	3	Nil	63

Springfield Model 1855 Rifle-Musket

Notes: The winds of war had been blowing since well before the outbreak of hostilities in the Civil War, and the North was attempting to modernize as quickly as they could get funding. The Model 1855 and later rifles were attempts at this. The Model 1855 were the first American firearms to use the Minie Ball instead of a round ball for ammunition, though it was still a muzzleloader. This rifle was made in Massachusetts by Springfield, as well as at Harpers Ferry (now in West Virginia, then in Virginia), and by Eli Whitney's company in Connecticut. Springfield also built a much smaller number of rifles for the training of the Corps of Cadets at West Point. The Model 1855 used the Maynard tape primer system, where percussion caps were embedded in paper and (theoretically) could be easily moved from one cap to another, much like a child's cap gun. In actuality, the tape would get wet in rainy weather or even normal use and fall to pieces quickly, negating the advantages of a tape primer system. It was nonetheless being used through the Civil War; even captured examples were duplicated by the Confederates. There were generally three types of these rifles produced; Type I had a long-base notch-type rear sight, adjustable for long and short range, and metalwork was bright iron in finish. Type II used a smaller two-leaf sight, also adjustable for long or short range. Type II used an iron fore-tip and a patch and maintenance box was set inside the right side of the buttstock. Barrels for the standard rifle were 40 inches long; for the Cadet Rifle, 38 inches (and a stock 1 inch shorter). The first number under ROF is for when the tape primer system is working properly; the second is for the usual, when it is not working.

The Model 1861 was roughly the same, but corrected numerous deficiencies of the Model 1855. It was the primary rifle of the Civil War, and produced by Springfield, Eagle, Colt, Alfred Jenks & Son, Whitneyville Armory, William Mason, ASH Waters James D Mowry, and some 27 other armories large and small, in a practice similar to the way World War 2 firearms would be manufactured about 78 years later. It dispensed with the tape primer system. Most of the metalwork was finished bright, except for the rear sights, which were blued. As designed, they had two-leaf long/short range sights, but many were supplied with Model 1858 sights. The stock was walnut and oil-finished. Barrels continued to be at 40 inches, and the caliber remained the same. All had the patch box in the right buttstock.

The Confederate armory at Richmond, Virginia made a near-copy (close enough for game purposes) of the Springfield Model 1855, calling it the Richmond Armory Rifle-Musket. It was the primary Confederate small arm throughout the Civil War. It however did not use the Maynard tape primer system.

Weapon	Ammunition	Weight	Magazines	Price
Model 1855 Rifle-Musket	.58 Minie Ball	4.2 kg	1 Internal	\$494
Model 1858 Cadet Rifle-Musket	.58 Minie Ball	4.11 kg	1 Internal	\$475
Model 1861 Rifle-Musket	.58 Minie Ball	4.16 kg	1 Internal	\$494

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1855 Rifle-Musket	1/5 (1/7)	4	2- Nil	9	4	Nil	108
Model 1858 Cadet Rifle-Musket	1/5 (1/7)	4	2- Nil	9	4	Nil	103
Model 1861 Rifle-Musket	1/7	4	2- Nil	9	4	Nil	108

Starr Carbine

Notes: Another weapon that soldiers or their families and friends frequently bought for use in the Civil War, the Starr came in two versions that at first seem to be quite different from each other. The Starr Percussion Carbine was fired by loading a combustible case of paper or linen, with a Minie Ball at its tip. The Starr Carbine saw considerable use in the Western Campaign of the Civil War,

on both sides -- it was built from 1858 until 1865, and most of the 1st Arkansas Volunteer Cavalry Regiment were armed with Starr Percussion Carbines. The breech was opened using the lever, which was an enlarged trigger guard. The round, blued barrel was 21 inches in most of the Starr Percussion Carbines, though early in the production run the barrel was 18 inches. The breech, lever, and action are case-hardened, but the barrel band and the buttplate are brass. A sling ring on a bar was on the left side; the sling ring is large enough to be attached to a Cavalryman's saddle.

The Starr Carbine fires a different caliber, and uses rimfire cartridges instead of the combustible case. However, they essentially have the same action, with some adjustments to allow it to take metallic cartridges. In less than one month, March to April 1865, Starr tested, built and delivered 5,002 of these carbines to the Union, and they were all issued out, though they did not see much action.

Weapon	Ammunition	Weight	Magazines	Price
Starr Percussion Carbine (18" Barrel)	.54 Combustible Cartridge	3.27 kg	1 Internal	\$634
Starr Percussion Carbine (21" Barrel)	.54 Combustible Cartridge	3.35 kg	1 Internal	\$664
Starr Carbine	.52-56 Sharps	3.35 kg	1 Internal	\$668

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Starr Percussion Carbine (18" Barrel)	1/3	3	2- Nil	5	3	Nil	44
Starr Percussion Carbine (21" Barrel)	1/3	3	2- Nil	5	3	Nil	52
Starr Carbine	SS	3	2- Nil	5	3	Nil	57

Thompson/Center Black Diamond

Notes: This weapon has a modern stock, but standard percussion ignition and muzzleloading. It can use standard percussion caps or inline-type primers for ignition. The stock is synthetic with checkering on the pistol grip wrist and fore-end. Stock color may be black, faux black walnut, or Realtree Hardwoods camo. The rear sight is a click-adjustable steel peep sight, and the front sight is a ramp. Both have fiberoptic inserts, and the Black Diamond is drilled and tapped for a scope. Metalwork may be blued or stainless steel. The XR (Xtended Range) variant has a 32-inch barrel, as opposed to the 26-inch barrel of the Black Diamond. Standard caliber is .50, but .45 is available upon request. The Black Diamond and XR are not rifled, unlike most modern blackpowder weapons.

Weapon	Ammunition	Weight	Magazines	Price
Black Diamond	.45 Blackpowder	3.06 kg	1 Internal	\$255
Black Diamond	.50 Blackpowder	3.09 kg	1 Internal	\$258
XR	.45 Blackpowder	3.31 kg	1 Internal	\$219
XR	.50 Blackpowder	3.34 kg	1 Internal	\$235

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Black Diamond (.45)	1/6	2	1- Nil	7	3	Nil	22
Black Diamond (.50)	1/6	3	1- Nil	7	3	Nil	24
XR (.45)	1/6	2	1- Nil	8	3	Nil	27
XR (.50)	1/6	3	1- Nil	8	3	Nil	28

Thompson/Center Omega

Notes: A modern inline weapon, the Omega is made primarily of synthetic furniture with blued metalwork. The furniture may be black, RealTree Hardwoods, or gray. It has a lever-action system, allowing one to load the primer from the breech rather than the muzzle, and to easily and safely clear duds. Atop the receiver it is drilled and tapped for a scope, with auxiliary iron sights consisting of a click-adjustable fiberoptic rear and a TruGlo fiberoptic dovetailed front sight. It has a rifled barrel 26 inches long. The breechblock cannot be lowered unless the hammer is fully cocked back, and vice versa.

Weapon	Ammunition	Weight	Magazines	Price
Omega	.50 Blackpowder	3.46 kg	1 Internal	\$332

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Omega	1/5	3	1- Nil	7	3	Nil	87

Traditions Vortek Ultralight LDR

Notes: Despite being a blackpowder break-open muzzle-loading rifle, the Ultralight LDR is a modern inline weapon. The Ultralight LDR has no iron sights, but does have a MIL-STD-1913 over the receiver. The stock and fore-end are of Synthetic Hogue Overmold, and may be had in Black or Reaper Buck (a Camouflage design). Metalwork is of chrome/moly steel, with a Cerekote finish. The Ultralight LDR is in fact quite light in weight for the size of the weapon, largely due to its synthetic stock.

Weapon	Ammunition	Weight	Magazines	Price
Vortek Ultralight LDR	.50 Blackpowder	3.08 kg	1 Internal	\$699

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Vortek Ultralight LDR	1/5	2	1- Nil	6	1	Nil	93

Triplett & Scott Repeating Rifle

Notes: Made by Meriden Manufacturing, the Triplett & Scott is named for its two designers -- who borrowed heavily from Spencer's design. Kentucky bought 3000 of these rifles in 1865 and the Civil War was nearly over, but began to dispose of them in 1868, selling them off to entities like youth shooting programs, civilians, and state militias. Like Spencer's design, the Triplett & Scott is fed by a 7-round tubular magazine in the buttstock. To reload, the barrel is rolled aside 120 degrees, giving access to the spring-loaded magazine. It was shorter and handier than a Spencer Rifle, with a 27.5-inch barrel. Most of the metalwork was blued iron, with the exception of the buttplate; even the single barrel band was blued iron. The front sight was a blade and the rear sight an adjustable leaf.

Weapon	Ammunition	Weight	Magazines	Price
Triplett & Scott	.50-52 Spencer	4.24 kg	7 Tubular	\$1087

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Triplett & Scott	LA	3	2- Nil	7	3	Nil	77

Wesson Military Carbine

Notes: Manufactured by Frank Wesson's company, the Wesson Military Carbine was known for being light and handy. It uses a break-open action, like most modern single-barrel firearms. Wesson started building them in 1859. The barrel was an octagonal 24-inch barrel which was blued. The barrel is steel, though the rest of the metalwork is iron. The front sight is a blade, and the rear a folding leaf sight. The stock was black walnut; the fore-end was very short, not much more than required to hold the rifle still. The Type I did not have the automatic extractor of later models. Sling rings were to the rear of the cocking lever and at the front. Cocking was done by pressing the trigger to the front of the trigger guard.

The Type I Kittedge (named for the arms dealer who sold the US government the carbines) was for game purposes the same as the Type I. Most were used by troops raised in Indiana. The Type II Wesson Carbine was also the same as the Type I for game purposes, but differed somewhat mechanically, with the "oscillating lock" located on left side of the breech. It had an automatic extractor. It was not used by the military; it was sold only as a sporting carbine.

Weapon	Ammunition	Weight	Magazines	Price
Wesson Military Carbine	.44 Henry Rimfire	2.61 kg	1 Internal	\$504

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Wesson Military Carbine	SS	2	1- Nil	6	3	Nil	60

Whitney Model 1861 Navy Rifle

Notes: This rifle is often called the Plymouth Rifle because the Whitney 1861 was tested on the *USS Plymouth* for eventual general use by Union Navy sailors. The sailors were allowed a lot of latitude on modifying and improving the design as long as the basic design remained intact. The Whitney 1861 therefore had a barrel length, sights, bayonet, and butt trap that had a lot of input from the actual naval personnel who would have to use it. The result was a rifle that had a lot in common with the late Springfield designs, but was higher-caliber to tear sails and blast through wood planks to kill the enemy sailors behind them. It had a relatively short 34-inch barrel so it would not be unwieldy on deck, and it had more stock to help keep it steady on a rolling deck. It had two wide barrel bands, and a rear leaf sight and a front bead sight. The ramrod had the interesting feature of being cupped to fit around a Minie Ball. Metalwork is blued, and the stock is of Black Walnut.

Weapon	Ammunition	Weight	Magazines	Price
Model 1861 Navy Rifle	.69 Minie Ball	4.37 kg	1 Internal	\$494

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1861 Navy Rifle	1/6	5	2-3-	9	4	Nil	99

Whitney Model 1855-Derivative Rifle for Militia

Notes: Produced only in small numbers for smaller state militia units, these rifles were essentially shortened versions of the Springfield 1855. They used a 33-inch browned barrel with otherwise bright metal, and Black Walnut furniture. They used a tangent-type rear sight with a block and blade front sight. The lockwork was unmilled and could be a bit crude, and the "Militia Rifle" used the Maynard Tape Primer system. It used a saber-type bayonet that fastened to a socket on the right side of the barrel.

Weapon	Ammunition	Weight	Magazines	Price
Model 1855-Derivative Rifle	.58 Minie Ball	3.87 kg	1 Internal	\$427

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Model 1855-Derivative Rifle	1/6	4	2- Nil	8	4	Nil	91

Whitworth Rifle

Notes: The Whitworth Rifle was part of a design process to replace or upgrade the Pattern 1853 Enfield; this design process sort of presaged the modern design competition philosophy, and the Whitworth Rifle was one of those contenders. The Whitworth rifle was eventually cut from the competition by the British Army in 1857, though the British were able to sell the design in small numbers to the new French Army and the Confederate Army. The Whitworth saw its last official military use by the Foreign Legion in 1861. The Whitworth was an accurate rifle, but difficult to reload quickly. Even skirmishers (the ancestors of today's snipers), though they liked the Whitworth's accuracy, did not appreciate the Whitworth's reloading time, though they did appreciate the light weight vs. accuracy. However, shooters in the budding civilian competition shooting clubs of the time quickly snapped up the decommissioned Whitworths; they saw in the Whitworth a very accurate rifle, and in civilian competition, the long reloading times didn't matter much.

For Sir Joseph Whitworth, round barrels, even when rifled, were simply too long to produce the desired accuracy – some 800 meters was desired, which was a very long range by the technology of the period. Whitworth thought that a barrel with very "hard" rifling would produce better accuracy – and they did; skirmishers and sharpshooters were able to wring sometimes 1600 meters out of the Whitworth, which is approaching modern standards. Whitworth achieved this by using a barrel with a twisting hexagonal shape, so that the matching hexagonal cross-sectional matching bullets couldn't help but rotate with the rifling – and the rifling rate could be adjusted as necessary. (Whitworth standardized on a 1-20 twist, about twice that of an equivalent rifle of today.)

The Confederates employed the Whitworth among their sharpshooters during the Civil War, where they were sometimes topped by some of the first riflescopes in history. The US Civil War also supplied the death knell for the Whitworth – they were much more prone to fouling due to the tight and rigid rifling, and in the Whitworth's barrel, this just made reloading longer; in a heavy battle, this could drop (in T2K terms) to a 1/12 or longer. (The time in the charts below is with a clean bore.) The sharpshooter was essentially cleaning the bore of an already difficult-to-clean bore every time he reloaded, and in a badly fouled bore, the shooter was literally jamming the bullet, powder, and patch down the barrel with all his force. This also changed the ballistics of each round fired, lowering effective range.

(To simulate this effect, increase time to reload by one per eight consecutive shots taken without cleaning the bore. Per eight consecutive shots, decrease short range below by two.)

The range of a Whitworth, when everything was working right and topped with a scope, could be magnetic to Confederate sharpshooters. One of the posters to [Juhlin's Forum](#) had on his sig line the last words of Union General John Sedgwick, which were something like, "They couldn't hit an elephant at this dis--" and was then shot below the right eye, it is believed, with a Whitworth rifle. (Five sharpshooters claimed the kill, but all had Whitworth rifles.)

There were several barrel lengths available to Whitworth shooters – 33, 36, and 39 inches. (The Confederates typically used 33-inch barrels.) Though the hexagonal bullet was the most common, a hollow round ball was also employed, which expanded into the hexagonal bore of the Whitworth. They were effective, but did not have the range or hitting power of the hexagonal bullet; they were easier to make. The shape of the hexagonal bullet created more striking power and penetration (in T2K terms).

Modern reproductions are made by Parker Hale, Pedersoli, and Euro Arms; they have a greater standard of metalwork, but are otherwise faithful reproductions. They are quite popular among Civil War reenactors, and in modern blackpowder target competitions, often hit targets at 600 meters or more.

Weapon	Ammunition	Weight	Magazines	Price
Whitworth Rifle (33" Barrel)	.45 Blackpowder Hexagonal Bullet or Hollow Ball	4.08 kg	1 Internal	\$557
Whitworth Rifle (36" Barrel)	.45 Blackpowder Hexagonal Bullet or Hollow Ball	4.2 kg	1 Internal	\$657
Whitworth Rifle (39" Barrel)	.45 Blackpowder Hexagonal Bullet or Hollow Ball	4.33 kg	1 Internal	\$668

Weapon	ROF	Damage	Pen	Bulk	SS	Burst	Range
Whitworth Rifle (Hex Bullet, 33" Barrel)	1/8	3	1-1- Nil	7	2	Nil	99
Whitworth Rifle (Hex Bullet, 36" Barrel)	1/8	3	1-1- Nil	8	2	Nil	108
Whitworth Rifle (Hex Bullet, 39" Barrel)	1/8	3	1-1- Nil	8	2	Nil	116
Whitworth Rifle (Round Bullet, 33" Barrel)	1/7	2	1- Nil	7	2	Nil	83
Whitworth Rifle (Round Bullet, 36" Barrel)	1/7	2	1- Nil	8	2	Nil	90
Whitworth Rifle (Round Bullet, 39" Barrel)	1/7	2	1- Nil	8	2	Nil	96