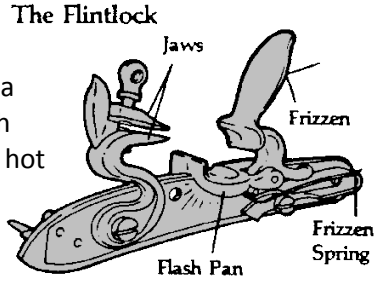
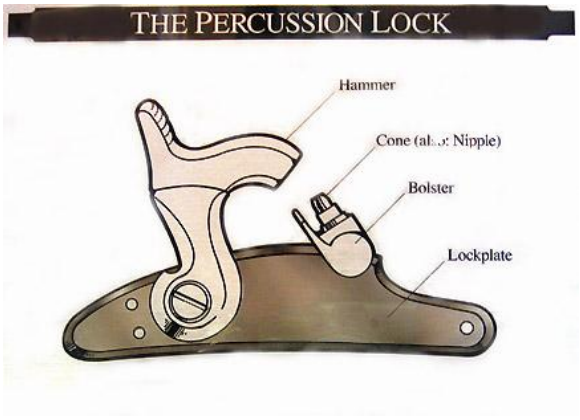
MUSKETS AND RIFLES OF THE MEXICAN WAR

The American infantryman during the Mexican War was armed primarily with a flintlock musket, also referred to as a "firelock." This weapon was not much different from that used by these soldiers' forefathers in the American Revolution. Several different models of flintlock muskets were used during the Mexican War, but all required that a pan of black powder be ignited by sparks from a piece of flint striking steel. When pulled, a flintlock's trigger released a spring loaded hammer that held a wedge-shaped flint which would strike against a steel frizzen. At the same instant, the frizzen opened, exposing a pan filled with powder. The ignited powder burned through a small touch hole called the vent located in the side of the barrel next to the pan. The hot gases passed through the vent setting off a charge of powder in the chamber. The resulting explosion would hurl the projectile down the barrel and out the muzzle.



The beginning of the Mexican War coincided with a shift in the U.S. Army from the flintlock firing system to the much more reliable percussion cap, or "cap-lock" ignition system. Flintlock muskets were temperamental weapons and often failed to discharge. This was especially true during times of humid or rainy weather. In some instances, the vent became clogged and prevented the flame from reaching the chamber, creating a "flash in the pan" but no discharge. The percussion cap system, officially adopted by the U.S. Army in 1842, was an innovation that greatly improved the reliability of period firearms and made flintlock muskets obsolete. A small copper cap containing a tiny amount of fulminate of mercury would be placed on top of a hollow machined cone that screwed into the touch hole or vent. When the musket's trigger was pulled, it released a spring loaded hammer that would strike the percussion cap, igniting the fulminate of mercury, which shot hot gases through the vent and into the barrel's chamber. The small caps were first carried in a pocket of the soldier's jacket, but this proved impractical and a new accouterment called the cap box was introduced. The percussion cap system worked under almost any condition. Following the Mexican War, later model flintlock muskets were mechanically converted to the percussion cap system just in time for America's Civil War.



Smoothbore muskets of the Mexican War were sighted for a range of 120 to 130 yards. For closer targets, the musket had to be aimed lower, while for targets further away, the piece had to be aimed higher. Beyond 220 yards the result of musket fire was uncertain, and beyond 450 yards the ball seldom delivered a serious wound. A 16 to 18-inch long socket bayonet could be affixed to the end of the barrel, effectively turning the weapon into a modern-day pike. Despite range and accuracy limitations, the flintlock smoothbore musket was a deadly weapon. Military rifles also saw use during the Mexican War. Rifles had been produced by U.S. arsenals as early as 1803, but had remained largely a specialty weapon. The range of a period rifle in the hands of a good soldier was twice that of a smoothbore musket.

There is documented evidence that U.S. Ordnance Department personnel at Fort Leavenworth issued the Mormon Battalion at least three different types of infantry weapons, a flintlock smoothbore musket - Model 1816, a flintlock rifle - Model 1803, and a percussion cap rifle possibly the Model 1841. Mormon volunteers were promised that they could keep their arms and equipage once their twelve-month term of service had been completed. The following section briefly describes the arms issued to the volunteer soldiers of the Mormon Battalion.

Model 1803 Flintlock Rifle

Model 1816 Smoothbore Caplock

Model 1841 Caplock Rifle

United States Musket Model 1816 - The .69 caliber Model 1816 flintlock smoothbore musket, along with the very similar Model 1835, was the mainstay infantry weapon during the Mexican War. From 1816 until 1840, over 675,000 Model 1816 flintlock muskets were produced at the Springfield Armory in Massachusetts and the Harpers Ferry Armory in Virginia. The Model 1816 enjoyed the highest production run of any flintlock musket produced by the United States. The weapon measured 57 and 11/16 inches in overall length, weighed 9 pounds, 5 ounces and, as with most smoothbore muskets, had no rear sight. The Model 1816 had a one-piece, full stock of walnut and the three steel bands that secured the barrel to the stock were retained with springs. A steel ramrod with a button shaped head was stored under the barrel. The weapon was fitted with a lug near the end of the barrel to support a 16-inch, triangular blade bayonet.

The Model 1816 was manufactured as three distinct types. Type I weapons were produced until 1822 and were finished with both bright and browned parts. The lower sling swivel was affixed to a stud in front of the trigger guard. The Type II model consisted of those weapons manufactured from 1822 to 1831, had parts finished in brown, and the lower sling swivel was riveted to the trigger guard itself. Finally, Type III muskets were made from 1831 to 1840. All parts were finished bright and included small improvements, such as the addition of the ball-shaped section to trigger guard where it was drilled for the lower sling swivel. This final production run was known as "National Armory bright."

A good deal is known about the Model 1816 flintlock muskets that were issued to the Mormon Battalion in August 1846 at Fort Leavenworth thanks to surviving weapons maintained by the LDS Museum of Church History and Art. These weapons have been authenticated by Battalion experts and are periodically displayed for the public by museum curators. All of the surviving Mormon Battalion Model

1816's in the LDS Museum collection are Type II weapons, stamped "Harpers Ferry" on their casehardened lock plates and dated "1827."

The Model 1816 was one of the oldest weapons to see action during the Civil War. With the development of the percussion cap ignition system in the 1830s, the Model 1816 musket became obsolete. Many of these flintlocks eventually found their way to state militias and a number were later modernized by replacing the flintlock with the percussion system.

United States Rifle Model 1803 - One of the key U.S. shoulder firearms, the .54 caliber Model 1803 flintlock rifle, was originally thought to be the weapon issued to the famous Lewis and Clark Expedition to the Louisiana Territory. The graceful lines and Kentucky rifle styling is evident in this early weapon and the unique length of its stock caused many to refer to it as a "half stock" rifle. A total of 4,023 Model 1803 rifles were manufactured at the Harpers Ferry Armory, Virginia between 1803 and 1807. Due to exigencies of the War of 1812, production of this model was resumed in 1814 and continued through 1820, with an additional 11,680 weapons being produced. The Model 1803 rifle's barrel initially measured 33-1/2 inches, but the length was increased in 1815 to 36 inches, for an overall length of approximately 47 inches for the entire weapon. Rifling consisted of seven grooves inside a part octagon and part round barrel. A brass blade served as the front sight with an open type sight for the rear. The barrel was secured to the wooden stock with a sliding key and two iron ferrules, which held a brass-tipped steel ramrod against a long rib under the barrel. The molded walnut stock of the Model 1803 boasted a small cheekrest and a brass patch box on the right side of the butt. All metal parts were finished bright except the browned barrel, barrel rib, and ramrod ferrules. Like many rifles of that time period, the Model 1803 had no fixtures for a bayonet.

According to U.S. Ordnance Department records, a limited number of Model 1803 rifles were issued to soldiers of the Mormon Battalion. The invoice transcript for arms distributed by the

U.S. Ordnance Department to Captain Jefferson Hunt's Company A lists "4 Rifles Half St. (Stock), Harpers Ferry." No doubt stamped "Harpers Ferry" on the lock plates, the manufacture date of these rifles issued to the Battalion remains unknown.

United State Rifle Model 1841 - Commonly referred to as the "Mississippi Rifle," the Model 1841 rifle is regarded by many weapons experts as one of the most handsome of all percussion cap system firearms. The .54 caliber "Mississippi Rifle" owes its nickname to the successful use of this weapon by a Mississippi regiment under the command of Jefferson Davis in the Mexican War. During its period of manufacture and use, military authorities regarded the Model 1841 as the best of its type. The Harpers Ferry Armory manufactured a total of 25,296 of these rifles and contractors produced another 45,500.22 The walnut stock held a 33-inch round barrel which was fastened by two barrel bands. Brass mountings were finished bright while the barrel remained brown.23 The lock plate was casehardened, and the Model 1841, as with most rifles of this time period, had a large patch box located on the right side of the stock. Initially, the rifle was not fitted with a bayonet. However, beginning in 1855, the Model 1841 rifle was remanufactured to support a sword bayonet that was developed with three different fittings stud, ring, and socket.24 Just prior to the Civil War, 8,879 of these weapons were rebored to .58 caliber, improved rear sights were added, and their brass tipped ramrods were replaced by an all steel type with an exaggerated trumpet head profile.

As with the Model 1803 "half stock" rifle above, primary sources indicate that the Mormon Battalion was issued a limited number of "yaeger" (German for "hunting") or "cap lock" rifles for the purpose of sharpshooting and hunting. The only cap lock rifles available during this time period would have been the newly produced Model 1841 or Mississippi Rifle. Which individuals received these prized weapons is unknown. Common sense speculation would indicate that rifles distributed to the Battalion were most likely given to the best shots or the most skilled hunters. Unfortunately, there are no surviving Mormon Battalion flintlock or cap lock rifles in the LDS Museum of Church History and Art collection. Before the correct types of rifles issued to the Battalion can be identified, additional research is needed.