

## Reenacting / Living History How-Tos: Materials

### THE AUSTRIAN RIFLE

#### a.k.a. “The Lorenz”

by John Tobey

**I**t Known to Civil War soldiers as simply, “Austrian Rifles” and to modern collectors as “the Lorenz”, the Austrian Model 1854 rifle-musket saw widespread use in the Army of the Potomac prior to 1864. In fact, it was the second-most popular imported long arm in the hands of *all* Federal troops, with 226,924 imported by the US Government during the Civil War.<sup>1</sup>

Although there were small numbers of other Austrian weapons used by Federal forces, such as the 1854 Short Rifle, this article covers only the Model 1854 and its derivative, the Model 1861, because these two types were usually not differentiated by the US government.

#### *Importation*

What was the ratio of different types issued? Of one group of 16,511 Lorenzes identifiable by type, 15,528 were .54 caliber Model 1854s; 12,384 had the block sight and 3,144 the leaf sight.<sup>2</sup> In the same group, 983 were also Model 1854s, but bored out to .58 caliber.

Accessories included combination tools (comprised of a cone wrench, screw driver, and spring drift), ball screws, wipers, and cleaning jags of the Austrian pattern; interestingly, there appears to be no documentation of spare cones or spring vices of a distinct Austrian pattern being issued to Federal troops—when issued, these items were probably of the standard US pattern.

Another model was imported and described as “Austrian rifle muskets, bored out to .58 caliber.”

“In imitation of the Enfield rifle; barrel and lock blued, and tompon and snap cap attached...somewhat superior, in every respect, to [the other two types of Lorenz rifles previously described].”

A total of 7,376 of these guns had been received, and these were certainly the “Model 1861” weapons described later in this article.

#### *Basic Models*

The basic design was worked out by an Austrian gun maker named Josef Lorenz and was adopted by the Austrian army in 1854.<sup>3</sup>

At 53 inches in length, the Lorenz was slightly shorter than the standard three-band Springfield. It does indeed, however, have three barrel bands, with the upper band (really a combination of nose cap and upper band) and middle band being mounted very close together.

The German and Austrian gunsmiths usually matched the individual parts of the weapon by adding serial numbers, which was a necessary procedure because the Lorenz was hand-made and parts will not be completely interchangeable. These numbers can often be found on almost every part of the gun, from the major parts (lock, stock, barrel, and bayonet) to relatively minor ones like barrel bands and the lock plate escutcheon.

Unlike the American arms that were normally stocked with black walnut, the Austrian weapons were usually stocked with beech wood, which is extremely hard, and many stocks have a cheek piece carved as an integral part of the butt. As is so typical of middle-European arms, there are exceptions to almost any characteristic one may chose to study, and stock material and shape is no exception: a few Lorenzes can be found with walnut stocks, and others have no cheek-pieces.

As designed and issued to the Austrian army, the weapon was normally .54 caliber, and was rifled with four lands and grooves.

The US government preferred weapons that conformed to its own newfound standard of .58 caliber, so many Austrian rifles were consequently bored out by American and European gunsmiths, presumably in an attempt to make them more marketable to the US Army. Unfortunately, there was little consistency in the machining processes used to do this, and when the delivered weapons were actually inspected, bores were found to measure .56, .57, .59, and even .60 in addition to the .54 stock diameter and the desired .58.<sup>4</sup> Theoretically, all the weapons with bores other than .54 and .58 were



Nose cap and front barrel band, also showing the peculiar brass-sleeved rammer (all photos by John Tobey)

put into storage, but it’s hard to accept this as being put into practice during the weapon shortages that lasted from late 1861 to late 1862. Indeed, this variation in bore size may account for the inconsistent performance recorded by Lorenz rifles in the field. Some units reported their weapons as being extremely accurate, and other units recorded theirs as being unable to hit anything at over 100 yards.

The M1854 came in two basic models. One was equipped with a block sight that was supposed to be issued to the center companies of a regiment and a leaf sight that was issued to sharpshooters and the flank companies.<sup>5</sup>

A second version made its Austrian debut in 1861, and included a redesigned lockplate shaped much like that used on the English Enfield. Although this model was not normally differentiated by the US Army, it was sometimes called the “Austrian Enfield”. This so-called “M1861” was only manufactured with the leaf sight.<sup>6</sup>

Some researchers have held the opinion that the M1861’s were only imported late in the war, after the Austrians had sold off the older models they had available in storage. A closer look at the documentation, both written and photographic, refutes this.

The original Austrian rammer has an elongated head encircled by a brass band. Many of the .58 caliber weapons, however, were returned from the service carrying .58 caliber Springfield rods.

#### *The Lorenz Bayonet*

The general design is similar to that used in the Enfield and Springfield models, with two important differences.

The blade has a “cruciform” cross section, instead of the roughly triangular shape of the Enfield or Springfield. The length is also greater: because the rifle itself is only about 53 inches long, the blade of the bayonet is made slightly longer (19 inches) than the Enfield) to give the Austrian infantryman an equal reach in a theoretical bayonet match with one of his Continental opponents!

The mortice in the shank is also unlike the “L” shaped model in the other two arms. The Lorenz mortice slants diagonally up and around the shank in a spiral, making the movement to fix the bayonet a simple twisting motion instead of one using a combination of twisting and pushing.

Although the Lorenz was manufactured using up-to-date methods that should have provided the weapons with a high degree of interchangeability, bayonets appear to be custom fit to a particular weapon. One Federal officer reported that some of his unit’s Austrian



Model 1854 lockplate

rifles, “could not mount a bayonet without hammering it on.”<sup>7</sup>

Many original Lorenz bayonets bear rack numbers stamped on the bayonet shanks. These numbers would have matched the serial numbers put on the guns themselves or the supplementary “rack” numbers.

The Austrian-made scabbard was made of leather-covered wood, although few of them likely saw usage by Federal soldiers, particularly in the Army of the Potomac. The most common scabbard for this weapon was undoubtedly the one of US pattern and manufacture as shown in the photograph.

### Issue

It really is a shame that this weapon has not been reproduced, because it would have been a common sight in the marching columns of the Army of the Potomac in 1862 and 1863. A quick scan of the units comprising the Army of the Potomac for two mid-war battles—Antietam and Gettysburg—that were either partially or totally equipped with this weapon yields quite a few regiments.

Most of these regiments turned in their Lorenz rifles during the army-wide refitting that occurred during the winter of 1863-1864, and the number of these weapons in the hands of the Army of the Potomac dwindled.

### Implements and Accoutrements

It is worthwhile to look at the ordnance reports of a company who was actually issued with Lorenz rifles to get an idea of what items were normally carried by soldiers who were armed with this weapon.<sup>8</sup>

Company I of the 64th New York was issued almost a hundred .54 caliber Lorenz rifles in December 1861, along with Austrian-made combination tools and cleaning jags, the latter of which were called “wipers” per the US terminology. There was no record of spare cones, spring vices, tompions, or ball screws. The cartridge boxes were recorded as being “.54 caliber”, although it is unclear whether this refers to the actual model of box, or if the box was really just a .58 box used for carrying .54 rounds. The slings were probably US-made.

By May 1862, the same company had seventy rifles, seventy gun slings, seventy combo tools, and seventy wipers. They had also acquired four ball-screws of some pattern, presumably US.

After the 1862 battle of Fredericksburg, the record shows sixteen rifles, sixteen gun slings, nine wipers, thirteen combination tools, two

ball screws, and two spring vices. This last item was almost certainly of the standard US pattern, since no corresponding Austrian models have been documented at all.

For the Gettysburg campaign, the company carried eighteen rifles, eighteen gun slings, seventeen wipers, eighteen combo tools, three spring vices, and three ball screws.

None of the ordnance returns of this company show any issue or retention of the following: tompions, spare cones, or tumbler and band-spring punches. These items were apparently not carried by



Model 1861 lockplate. This gun is .58 caliber, and the stock is stamped “OHIO”.

this unit.

Sometime in the autumn of 1863, the company began to acquire a few .58 Springfield rifle-muskets, and most of the succeeding reports list one or two of these weapons being used in the company. Interestingly, these weapons were supplied with the same .54 caliber ammunition that was provided for the Austrians! This can be seen in the reports listing the ordnance supplies being carried by the small groups of men listed as “on detached service”. One report from early 1864 lists four men on detached service: one is carrying a .58 weapon, the rest having the .54 caliber Austrians. This same detachment is recorded as carrying 160 rounds of .54 caliber ammunition.

Unlike most of the regiments in the Army of the Potomac that were armed with European weapons, the 64th was not re-equipped with US-made guns during the massive refitting that occurred before the 1864 Overland Campaign. The regiment crossed the Rapidan that spring still carrying its trusted Austrians.

On September 3, 1864, the whole regiment finally gave up its Austrians and received .58 caliber Springfields, along with the expected supply of combo tools, wipers, ball screws, spring vices, spare cones, band-spring and tumbler punches, and tompions.

### Repair Parts

In their research on imported European arms, Noe, Yantz & Whisker reported a lack of evidence for the importation of spare parts; such articles would normally include at least springs, cones, and rammers. Repairs would therefore have necessitated the retrofitting of US-style spare parts, unless other Austrian weapons could be “cannibalized” for spare parts.

An interesting account of what would happen to broken Lorenz can be found in the journals of a soldier from New York; when the cone on his Lorenz needed replacing, he was forced to accompany it several miles from his camp into Washington where it was repaired by armorers, most likely by re-threading the bolster to accept a US-style cone.<sup>9</sup>

### Soldier Reactions

The Lorenz had a mixed reception in the ranks of Federal troops. Some regiments loved theirs, and others detested them. For example, whereas the 23rd Pennsylvania rated their Austrians as, “most efficient firearms,” the 47th Massachusetts had their entire complement condemned as worthless.

One common comment made regarding the Lorenz was that it was 'rough' when compared to its American and English equivalents. A soldier in the 5th New Jersey wrote,

"In January 1862, our old muskets were turned over to the quartermaster and the Austrian rifle issued in their stead. They were a very handy piece to carry being short, light and very easily cleaned, being finished in the rough (that I suppose was owing to there not have time to finish them.)"<sup>10</sup>

Quartermaster Hendrie of the 104th Pennsylvania rated his unit's arms as, "very superior weapons, although not so well finished as the American arms." The colonel of the same regiment put it even more simply, stating that the guns were "rough but good and reliable."<sup>11</sup>



Above: Lorenz's Non-adjustable block sight.

### ***Austrian Rifles for Reenactors***

Sad but true, authenticity-minded reenacting organizations usually avoid portraying many fine regiments because of an inability to procure the requisite Austrian rifles.

At the present time [2006], there are *no* reliable sources for a proper reproduction of the Lorenz rifle. About the only option left to the living historian is to build one from a combination of available original and reproduction parts, or to refurbish an original gun that is a "basket case."

Reproduction stocks are available from Lodgewood Manufacturing. The most difficult component to procure will usually be the proper ramrod; the easiest ramrod substitute is a cut-down tulip-headed-style rammer from an 1863 Springfield.

Original barrels should be inspected by a qualified gunsmith before being discharged, even with a blank round.



Below: Leaf sight on a Lorenz

### ***Endnotes***

<sup>1</sup> William B. Edwards, *Civil War Guns* (Gettysburg PA, Thomas Publications, 1997) p. 256

<sup>2</sup> Ibid, p. 261

<sup>3</sup> Alexander Vasquez, *Notes on the Austrian M1854 Infantry Rifle*, published at: <http://home.owc.net/~domet/Lorenz.htm>

<sup>4</sup> Noe, Yantz, & Whisker, *Firearms from Europe* (Rochester NY, Rowe Publications 1999) p. 82

<sup>5</sup> Vasquez

<sup>6</sup> The terminology of "Model 1861" comes from Alexander Vasquez's article. In Civil War era correspondence, this weapon is usually indistinguishable from the Model 1854.

<sup>7</sup> Joseph G. Bilby, *Civil War Firearms* (PA, Combined Publishing 1996) p. 66

<sup>8</sup> All of the ordnance information comes from reports originally submitted by Captain Lewis Fassett of Company I, 64th New York, copies of which were kindly provided to the author by Mr. Stephen Rogers.

<sup>9</sup> *Charley Mosher's Civil War*.

<sup>10</sup> Alfred Bellard, *Gone for a Soldier* (Boston. Little, Brown & Co. 1975) p. 38

<sup>11</sup> Bilby, p.64

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### **Editor's Note**

This article on the Austrian "Lorenz" rifle-musket is just one of several research pieces originally prepared for *The Columbia Rifles Research Compendium, 2nd Edition*, that was removed from the *CRRC* due to space constraints.

*The Columbia Examiner* hopes to publish several more *CRRC 2nd Edition* "outtakes" over the next year or so.