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I. Historical Background

When screaming Stukas tore open the skies over Poland on September 1, 1939, and ushered the major powers of Europe into what would ultimately be global warfare, the United States was the only major military power to have a semi-automatic rifle as standard military issue, and even then there were only about 50,000 Garands actually issued to troops. All other participants still armed their troops with the tried and proven bolt action, even though France, Germany and Imperial Russia had used semi-auto rifles to some extent during World War I.

To understand such thinking, it is necessary to take a brief look at military arms development over the centuries. The earliest practical, hand-held firearms were matchlocks, in which a piece of smoldering cord or rope was attached to the hammer. When the trigger was pulled, the hammer would fall and sparks from this "match" would come in contact with the priming powder, thus igniting the powder charge in the breech end of the barrel, driving the ball out of the barrel and toward its target. These snapping matchlocks first appeared around 1470. In earlier versions, the "match" was actually applied to the touch hole by hand.

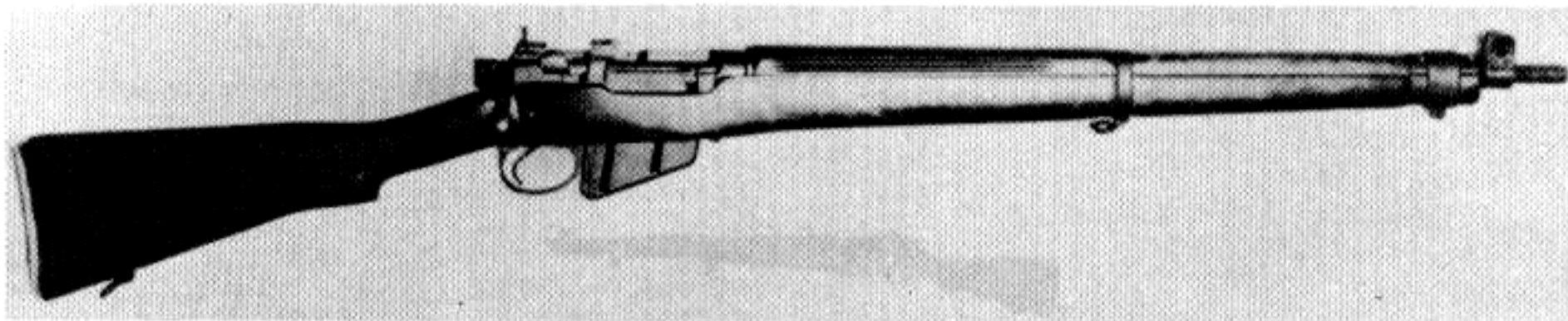
Leonardo da Vinci first illustrated the wheel-lock mechanism around 1500, and it was considered such an awesome weapon that it was banned within the Holy Roman Empire in 1518. Although vastly more efficient than the matchlock, it was very complicated and expensive to produce. The first true flintlocks appeared a little less than 100 years later, around 1610. While the flintlock was demonstrably the most efficient form of ignition developed up to that time, the matchlock

didn't fall into disuse in Europe until around 1700. Although obsolete in both theory and fact long before that, the matchlock didn't become obsolete in actual use until that time since large numbers of matchlock muskets were already in service. Then, just as today, the guardian of the royal checkbook was reluctant to discard weapons which could still be used, even if they weren't the latest development.

Such reluctance to change carried over well into the 19th and even the 20th centuries. The percussion cap was patented in 1807, yet this superior ignition system didn't become standard in the United States and Europe until the 1840's. Even though the first successful self-contained metallic cartridges appeared in the 1850's, most of the Civil War was fought with muzzleloading rifles and muskets and cap and ball revolvers, most of which were made *during* the war, *after* the obsolescence of muzzleloaders. A few breechloading repeaters such as the Spencer, saw service in the conflict, but the true value of repeating rifles in battle wasn't proven until 1877.

Low budget Western movies or TV shows often show U.S. Cavalry armed with lever action Winchesters (always the ubiquitous M1894, of course). This is a totally erroneous picture, as the official U.S. rifles and carbines of the post-Civil War era were single shot .45-70 "trap door" Springfields, with a few Spencer .56's still in service. Although they have appeared in the hands of guerrillas virtually all over the world, lever action Winchesters have been used only sparingly as official military weapons, and then solely in Europe. However, their first such use was to alter the art of warfare forever. At the battle of Plevna, in what is

THE FIGHTING GARAND



British No. 4 Mk. I Lee Enfield was typical of the bolt action rifles with which most belligerents entered World War II. Virtually all were direct descendants of weapons developed prior to the turn of the century. Only the United States entered the war with a semi-automatic rifle as standard issue. Even then, many troops were still armed with the M1903 Springfield.

now Bulgaria, an overly confident Imperial Russian Army attempted to storm the Turkish position with their single shot rifles in the summer of 1877. The Turks were armed with M1866 Winchesters, and proceeded to annihilate the Russian forces. When the Russians decided to try a re-run of the same battle at the same place six weeks later, the results were the same. All in all, the Russians lost 30,000 men in the two debacles at Plevna.

Word of the Russian defeat spread like wild-fire across Europe, and the race for repeating arms was on. Within a comparatively short time for the military (a few years), virtually every continental army had adopted a bolt action repeating rifle. Even the United States had at least examined some dozen bolt actions in the 1872 ordnance test, but had decided to stay with the .45-70 Springfield.

With the introduction of the French 8mm Lebel smokeless cartridge in 1886, the trend toward smaller bore military arms was made possible. By the end of the century, it was pretty well established that a .30 caliber cartridge was the most efficient compromise for military use. The advent of smokeless powder also meant that truly successful semi-auto rifles and pistols could be devel-

oped, arms which previously would have become fouled by black powder residue after only limited firing.

That great machine gun inventor, Hiram S. Maxim, had actually come up with a sound design for a semi-auto rifle as early as 1881, but turning a sound design into a military reality can often be a frustrating experience, as arms designers throughout America and Europe were discovering. Von Mannlicher produced numerous semi-auto rifle designs in Austria in the 1890's, at least a couple of which were imminently practical. While John M. Browning toyed with semi-auto rifle designs in America, a Major Cei-Rigotti was busy inventing a gas-operated semi-automatic rifle which had a port in the barrel and a tappet system for operating the bolt. Although his design didn't cause much of a stir in 1900, it was widely copied by both the Germans and the Soviets when they finally got into the swing of semi-auto rifle production late in World War II.

A study of the history of Europe during the 19th Century reveals that war was almost a perpetual state of being somewhere on the continent during that turbulent era, so it's little wonder



U.S. M1 Garand was the first semi-automatic military rifle to see service as standard issue. Adopted in 1936, it was America's main battle rifle until the late 1950s, saw extensive service in both World War II and Korea. Many still consider it the best battle rifle ever made.