*Apr - U.S. Army rifles 1903 to 1950*

# The Veterans Memorial Museum Newsletter

## April 2018

The Museum is open Wednesday - Saturday 10 a.m. until 4 p.m.
To set up a tour, call the Museum at 256-883-3737 during Museum hours.

## Museum News in March

- Buy a General Admission ticket to the U.S. Veterans Memorial Museum for a friend. Tickets may be obtained at the Museum office.


- Buy a T-shirt from the U.S. Veterans Memorial Museum for a friend or for yourself. T-shirts may be obtained from the Museum's front office for $20 each. They come in medium, large, and x-large sizes. Get them while they last!


Front


Back

- The U.S. Veterans Memorial Museum has made arrangements to restore a Sherman tank, an American World War II glider, and a World War 1-vintage Liberty "Class B" Truck.

    - The Sherman tank hull has been shipped to PA, along with a brand new engine (made in 1943) with zero miles on it. The restoration service is cleaning, installing, and testing the engine before returning the tank to the Museum sometime at the end of this year. Plans are to repaint the tank and retain its original WW II markings.
    - The American World War II glider is in the Museum's storage area. The person who will restore the glider has inspected it and is currently obtaining the parts needed to complete the project.
    - The Liberty truck needs a bed and some engine work. The Museum has a blueprint for construction of the truck bed. The engine needs to be overhauled and put back into serviceable condition. Plans are to obtain new truck tires as part of the restoration. We expect this project to be completed before next year's Veteran's Day Parade.

**DONATIONS TO ASSIST IN REPAIR AND UPGRADE:** If you would like to be a part of maintaining our military history, you can make a tax-exempt financial donation to:

U. S. Veterans Memorial Museum Restoration Project
2060 Airport Road
Huntsville, Alabama 35801

The U. S. Veterans Memorial Museum is a non-profit tax-exempt museum.
A tax-deductible receipt will be provided.

- **March 1: Ridge Instruments Co. Inc.,** is a small business located in Decatur, Alabama. Ridge currently has a contract for 144 ea. TOW II (tube launched, optically tracked, wire guided) upgrade kits to be installed in Royal Saudi Land Forces (RSLF) M901A and M113 vehicles. These kits provide the ability for the launcher to have digital (rather than analog) electronics and enable the launcher to launch and guide all variants of TOW antitank/bunker buster missiles. The U.S. Veterans Memorial Museum has graciously allowed Ridge to train their installers on the museum's M901A1. In a letter to the museum, Ridge Instrument Inc. president Timothy Yeager stated that, "The ability to see the actual cable assembly routing, the drilled hole locations, the panels that must be removed and all of the functional items that we will be dealing with when we get to the depot in Saudi Arabia is extremely valuable. Museum personnel have been extremely helpful to our crew, making sure that we knew where we might find ladders or electrical power etc. should we need it and checking on us periodically to make sure we had what we needed. Ridge is very grateful to the museum for allowing us to train on the vehicle. It was a real bonus to be working around such a fantastic array of historical military vehicles and artifacts. The museum is a great asset to the Huntsville-Madison County area. Military history buffs should plan on having plenty of time during their visit to take it all in."

- **March 22, 10 am:** A press conference was held to announce scheduling and arrival of **The Wall That Heals**, a mobile, three-quarter-scale replica of **The Vietnam Veterans Memorial** in Washington, D.C., and its companion Mobile Education Center. The Museum hosted city representatives, local Vietnam Veterans groups, and media members.

## *Upcoming Events*

The following Museum-related events are scheduled:

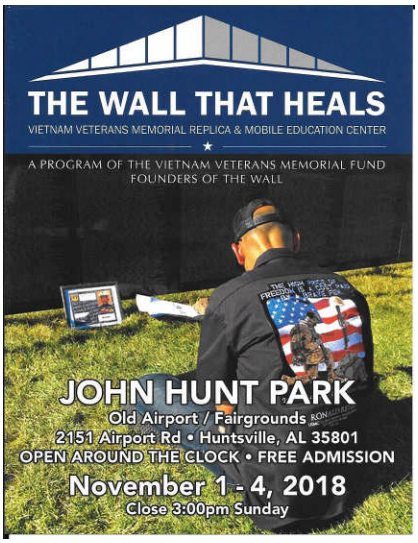
- The *North Alabama Chapter of the 8th Air Force Historical Society* meets the **first Friday of the month** at the Sunny Street Cafe on the SW corner of Slaughter Rd. & US 72. Order and eat as you wish; the formal meeting starts at 12 noon.

- The *Vietnam Veterans of America* is celebrating the Seventh Annual Vietnam Veterans Welcome Home at the Huntsville-Madison County Veterans Memorial in downtown Huntsville on **Saturday, April 7**. The Meet and Greet lasts from 9 to 10:30 am; the official celebration begins at 11:00 am.

- The *Knight of Columbus* is putting on a breakfast on **Sunday, April 15**, from 9 to 11 am. The cost is $5 per adults and $3 for children. Once a year, the Knight of Columbus breakfast benefits the U.S. Veterans Memorial Museum.

- *Fifi*, the B-29 Superfortress, will be on display at the Executive Flight Center Airport on 358 Bolling Road, Huntsville, AL, from **May 24 to May 27.** Visiting hours are 9 am to 5 pm. This event is sponsor by The Commemorative Air Force. Ramp access is $10 for adults and $5 for ages 10-17. Fifi is presently one of only two airworthy B-29s.

- **The Wall That Heals** is coming to Huntsville's John Hunt Park, from **November 1 to 4**. The Wall will be open continuously until it closes on Sunday at 3:00pm. The admission is free for the duration of the event. In addition, local schools can arrange field trips to bring students to the event. Visitors will not only experience the Wall; they can also learn the living history of veterans in attendance willing to share their stories. The mobile Education Center, along with classroom instruction provided by the Vietnam Veterans Memorial Fund, will enhance and expand the visitors' experience and education about the Vietnam War and our veterans. **The Wall That Heals** is presented by the Vietnam Veterans Memorial Fund, the founders of The Vietnam Veterans Memorial in Washington, D.C., and hosted by Vietnam Veterans of America Chapter 1067, Huntsville. Presenting sponsors include Intuitive Research and Technology, the City of Huntsville, and the Redstone-Huntsville Chapter of the Association of the United States Army (AUSA).

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## *The Springfield M1903 Rifle*

The story of the "US Rifle, .30 caliber, M1903", otherwise known as the Springfield M1903, began late in the 19th century, when U.S. troops, engaged in the Spanish-American war, found their bolt-action, .30 caliber Krag and .45 caliber single-shot Springfield (Trap-Door) Model 1873 rifles far inferior to the bolt-action Mausers used by Spanish troops. It soon became apparent that a more powerful, fast-firing rifle was required. By 1901, the Springfield armory produced a prototype rifle that combined features of both the 1898 Krag and the 1893 Spanish Mauser. Furthermore, Springfield entered into negotiations with Mauser Werke and finally acquired the rights for the Mauser bolt action for $200,000. At about the same time, new ammunition was designed for the rifle. A rimless cartridge that fired a pointed, 150 gr. jacketed bullet at a muzzle velocity of approximately 2,700 fps (670 m/s) - about 700 fps (680 m/s) faster than the old .30-40 Krag cartridge - achieved a 28% increase in muzzle energy. The new cartridge was designated “Cartridge, Ball, Caliber .30, Model of 1906”.

***1903 and 1917 Springfield Rifles***

With the outbreak of the First World War, it was soon realized that Springfield could not keep up with the demand to arm the American Expeditionary Forces leaving for Europe. The U.S. Army quickly adopted the Model 1917 rifle based on the British Enfield pattern. The M1903 rifles were manufactured by the Springfield armory and the Rock Island armory, while Winchester Arms produced the M1917.

Both the Model 1903 and 1917 rifles are on display at the Veterans Museum, located in the World War I display in the “40 & 8" boxcar.

During the interwar period, there was little development of the M1903. With the outbreak of the Second World War, the U.S. Army again found itself short of rifles. While the standard U.S. rifle was already the semi-automatic M1 Garand, it was decided that it must be supplemented by a simpler and cheaper bolt-action rifle. The Remington Arms company was set up to create a simplified rifle for wartime production. Adopted in 1942, the M1903A3 rifle featured a number of parts made by stamping instead of machining, receiver-mounted peep-hole sights instead of the leaf-type tangent sights, and, on some rifles, A1 type stocks with semi-pistol grips (so-called C-stocks). Some M1903A3 rifles were also fitted with two-groove barrels instead of the more common four-groove barrels. M1903A3 rifles were manufactured by Remington Arms and the Smith-Corona Typewriter company. M1903A4 sniper rifles, also built by Remington, used telescope optical sights in place of standard open iron sights. This version was probably the longest living variant of the M1903, being used by U.S. troops until the 1960s as a sniper rifles.

There were also two more offspring of the M1903 family. First was the M1903 Mark 1 rifle, developed during the Word War I by engineer and arms designer John Pedersen. This was not less than a conversion of a manually-operated rifle into a magazine-fed, semi-automatic rifle. Standard M1903s were altered to accept a ‘Pedersen device’, and became officially known as

the "US pistol, semi-automatic, .30 caliber, M1918". This device was inserted into a modified M1903 action in place of the standard bolt, and featured a semi-automatic action with a box magazine that fired specially-designed, .30 caliber straight-wall cartridges of relatively low power. The device allowed any soldier equipped with modified M1903 to fire rapidly from the hip while advancing into enemy positions. The device was fed from forty round magazines, and required an ejection port to be cut in the left wall of the receiver. The Pedersen device had numerous drawbacks and was later found to be ineffective, so in the 1920s, almost all "M1918 pistols" were scrapped and Mark 1 rifles converted to the standard pattern.

***M1903 Springfield with loading clips***

The M1903 rifle is a manually operated, rotating bolt, magazine-fed rifle. The action of the M1903 mirrored the modified Mauser action, with dual front lugs that lock into the receiver, and an additional lug at the rear of the bolt. Unlike the Mauser design, on the M1903 the rear lug was located horizontally on the bolt when the bolt was closed, or in the straight up position when the bolt was unlocked. This required a split bridge at the rear part of the receiver. The bolt handle was bent down and located at the rear of the bolt. The Mauser-type non-rotating extractor was used. On the left side of the receiver, there was a magazine cut-off in the form of the bolt stop switch. This switch, when engaged, limited the bolt travel so the spent case still could be extracted but a new cartridge could not be fed from the magazine, thus converting the rifle to a single-shot type. The safety was also of the Mauser type, located at the rear of the bolt. The M1903 was a striker-fired design, with cocking on the bolt open, and a firing pin knob protruding behind the bolt, so the action state could be easily checked manually or visually to see whether or not it was cocked.

The box magazine was integral to the action and held five rounds in a staggered order. The magazine could be filled with single rounds manually, or by using 5-round stripper clips, which were inserted into clip slots machined into the receiver bridge.

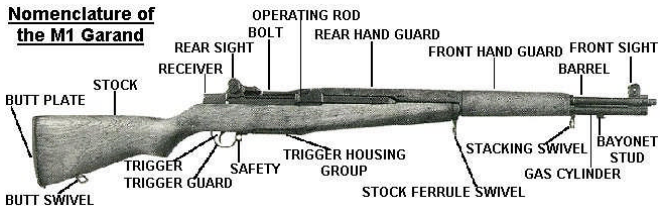
The iron sights of the M1903 consisted of a blade front sight and barrel-mounted tangent-type leaf rear sights. On the M1903A3, the rear sights were replaced by peep-hole (diopter) sights, mounted on the receiver bridge. M1903A4 sniper rifles had no open sights at all; instead, these rifles were equipped with M73B1 2.5X telescopic sights, commercially known as the Weaver Model 330.

The wooden one-piece stock with upper handguard has a distinctive shape. Most M1903 (and some M1903A3 and M1903A4) rifles featured stocks with straight grips, while M1903A1 (and some M1903A3 and M1903A4) rifles were equipped with the semi-pistol grip C-stocks.

The Museum has examples of the M1903, M1903A3, and M1903A4 rifles on display, including a Mark I M1903 made with the Pederson device, an M1903A1 sniper model, and an M1903 that was used on a U.S. Navy destroyer stationed at Pearl Harbor during the 7 December 1941 Japanese attack.

# *The Springfield M1 Garand Rifle*

French Canadian-born engineer John Garand went to work at the U. S. Army's Springfield Armory in 1917 and began working on a .30 caliber primer-actuated blowback Model 1919 prototype. In 1924, twenty-four rifles, identified as 'M1922s', were built at Springfield and tested at Fort Benning in 1925. These tests led to a further trial of an improved Garand. As a result, the Ordnance Board ordered a .30-06 Garand variant. In March 1927, the cavalry board reported that trials among the Thompson, Garand, and 03 Springfield had not led to a clear winner. This led to a gas-operated .276 (7 mm) model (patented by Garand on 12 April 1930). In early 1928, both the infantry and cavalry boards ran trials with the .276 Pedersen T1 rifle, calling it "highly promising" despite its use of waxed ammunition, shared by the Thompson. On 13 August 1928, a semiautomatic rifle board (SRB) carried out joint Army, Navy, and Marine Corps trials between the .30 Thompson, both cavalry and infantry versions of the T1 Pedersen, the 'M1924' Garand, and the .256 Bang, and on 21 September, the board reported no clear winner. The .30 Garand, however, was dropped in favor of the .276 caliber version.




Further tests by the SRB in July 1929, which included rifle designs by Browning, Colt–Browning, Garand, Holek, Pedersen, Rheinmetall, Thompson, and an incomplete one by White, led to a recommendation that work on the (dropped) .30 gas-operated Garand be resumed, and a T1E1 was ordered on 14 November 1929.

Twenty gas-operated .276 T3E2 Garand rifles were made and competed with T1 Pedersen rifles in early 1931. The .276 Garand was the clear winner of these trials. The .30 caliber Garand was also tested, in the form of a single T1E1, but was withdrawn with a cracked bolt on 9 October 1931. A 4 January 1932 meeting recommended adoption of the .276 caliber and production of approximately 125 T3E2s. Meanwhile, Garand redesigned the T1E1 bolt and the improved design, now designated T1E2, was retested. The day after the successful conclusion of this test, Army Chief of Staff General Douglas MacArthur personally disapproved any caliber change, in part because there were extensive existing stocks of .30 M1 ball ammunition. On 25 February 1932, Adjutant General John B. Shuman, speaking for the Secretary of War, ordered work on the rifles and ammunition in .276 caliber cease immediately and completely and all resources be directed toward identification and correction of deficiencies in the Garand .30 caliber. On 3 August 1933, the T1E2 became the "semi-automatic rifle, caliber 30, M1". In May 1934, 75 M1s went to field trials; 50 went to infantry, 25 to cavalry units. Numerous problems were reported, forcing the rifle to be modified, yet again, before it could be recommended for service and cleared for procurement on 7 November 1935, and standardized on 9 January 1936. The first production model was successfully proof-fired, function-fired, and fired for accuracy on 21 July 1937.

Production difficulties delayed shipments to the army until September 1937. Rifle production began at Springfield Armory that month at a rate of ten rifles per day and reached an output of 100 per day within two years. Despite going into production status, design issues were not at an end. The barrel, gas cylinder, and front sight assembly were redesigned and entered

production in early 1940. Existing "gas-trap" rifles were recalled and retrofitted, mirroring problems with the earlier M1903 Springfield rifle that also had to be recalled and reworked approximately three years into production and foreshadowing rework of the M16 rifle at a similar point in its development. Production of the Garand increased in 1940 despite these difficulties, reaching 600 a day by 10 January 1941, and the army was fully equipped by the end of 1941. Following the outbreak of World War II in Europe, Winchester was awarded an 'educational' production contract for 65,000 rifles, with deliveries beginning in 1943.


*M1 Garand Springfield Rifles on display at the Veterans Museum located in the Would War II display*

The M1 Garand was made in large numbers during World War II; approximately 5.4 million were made. They were used by every branch of the U. S. military. By all accounts, the M1 rifle served with distinction. General George S. Patton called it "the greatest implement of battle ever devised." The impact of faster-firing infantry small arms in general soon stimulated both Allied and Axis forces to greatly increase their issue of semi- and fully automatic firearms then in production, as well as to develop new types of infantry firearms.

Much of the M1 inventory in the post-World War II period underwent arsenal repair or rebuilding. While U.S. forces were still engaged in the Korean War, the Department of Defense determined a need for additional production of the Garand. Springfield Armory ramped up production but two new contracts were awarded. During 1953–56, M1s were produced by International Harvester and Harrington & Richardson, in which International Harvester alone produced a total of 337,623 M1 Garands. A final, very small lot of M1s was produced by Springfield Armory in early 1957, using finished components already on hand. Beretta also produced Garands using Winchester tooling.

The British Army looked at the M1 as a possible replacement for its bolt-action Lee–Enfield No.1 Mk III, but it was rejected when rigorous testing suggested that it was an unreliable weapon in muddy conditions. However, surplus M1 rifles were provided as foreign aid to American allies; including South Korea, West Germany, Italy, Japan, Denmark, Greece, Turkey, Iran, South Vietnam, etc. Most Garands shipped to allied nations were predominantly manufactured by International Harvester from 1953-56, and from Springfield Armory from all periods.
Some Garands were still being used by the United States into the Vietnam War in 1963; despite the M14's official adoption in 1957, it was not until 1965 that the changeover from the M1 Garand was completed in the Army' active-duty component (with the exception of the sniper variants, which were introduced in World War II and saw action in Korea and Vietnam). The Garand remained in service with the Army Reserve, Army National Guard and the Navy, well into the 1970s or longer. Due to widespread United States military assistance as well their durability, M1 Garands have also been turning up in modern conflicts, such as the insurgencies in Iraq and Afghanistan.

## *General Information*

The U.S. Veterans Memorial Museum, located in Huntsville Alabama, is a 501c3 not-for-profit organization. We have more than 30 historical restored military vehicles dating from World War I to the present, as well as artifacts and other memorabilia dating back to the Revolutionary War. Our displays include a "Merci" 40 and 8 boxcar from World War I, a Cobra attack helicopter, a collection of jeeps, Sherman and Stuart tanks, a half-track, a White Scout car, as well as flags, maps, uniforms and other artifacts from every U.S. conflict. We also maintain a research library of books and periodicals covering U.S. military actions since the Revolutionary War.

The Museum is located just west of Memorial Pkwy in John Hunt Park at 2060A Airport Road, Huntsville, AL 35801. The U.S. Veterans Memorial Museum is dedicated to promoting the accomplishments of American military men and women.

The Museum's web page is: www.memorialmuseum.org.
The Museum email is: Info@memorialmuseum.org.

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