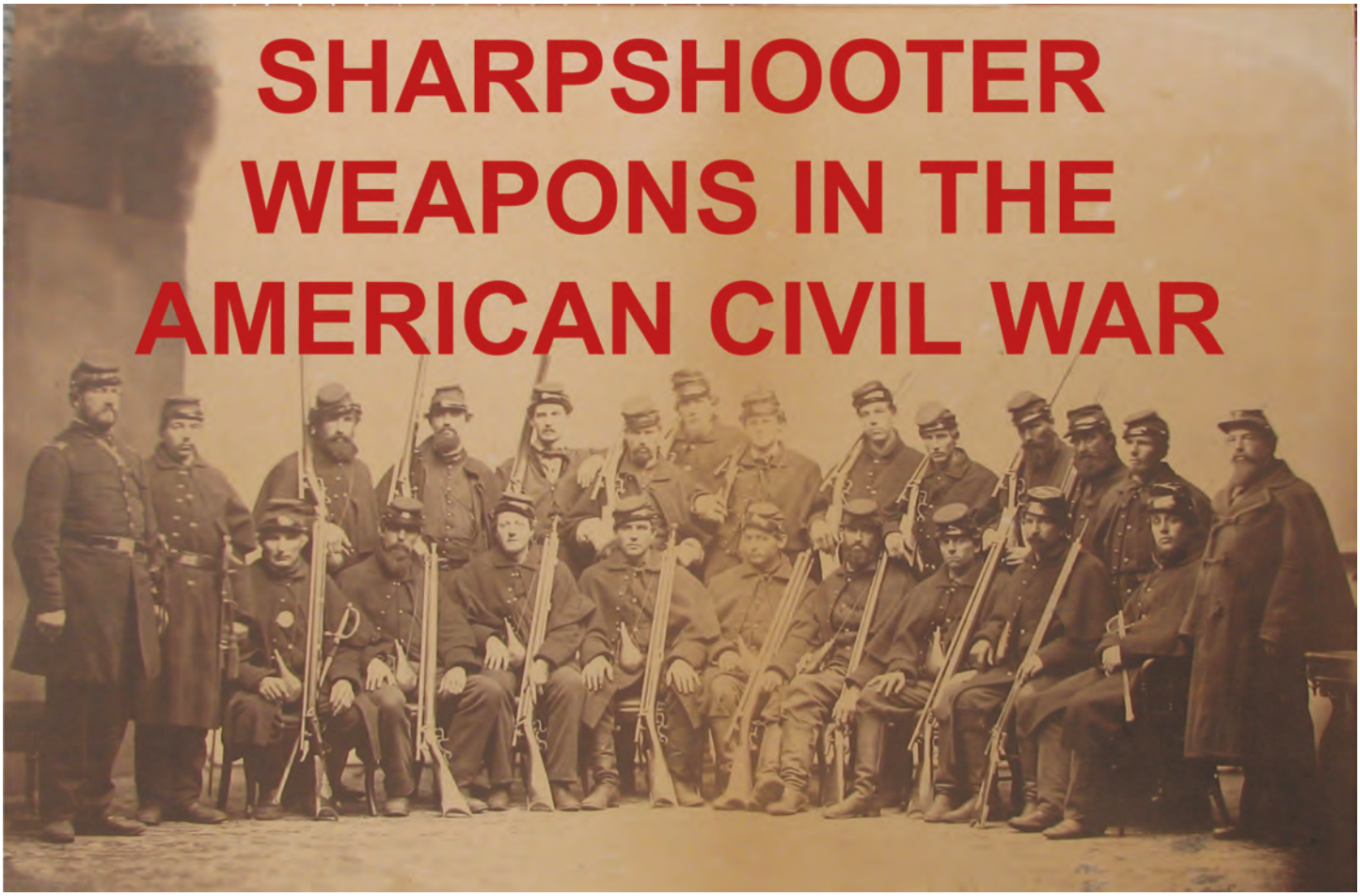

Figure 1. Sharpshooter Weapons in the American Civil War (photo ex. author's collection) .

Sharpshooter Weapons in the American Civil War

By Bob Carlson

There is a proud tradition of sharpshooting in the military history of our nation (Figure 1). From the defeat of General Edward Braddock and the use of flank companies of riflemen in the French and Indian War, to the use of long rifles against Ferguson and the death of General Simon Fraser in the Revolutionary War at Saratoga, to the War of 1812 when British General Robert Ross was shot on the way to take Baltimore in 1814 and when long rifles were instrumental at New Orleans in January 1815, up to the modern wars with the use of such arms as the Accuracy International AX338 sniper rifle, sharpshooters have been crucial in the outcome of battles and campaigns. I wish to dedicate this discussion to a true American patriot, Chris Kyle, a much decorated Navy Seal sniper whom we lost in February of this year, having earned two silver and four bronze stars in four tours of service to his country. He stated that he killed the enemy to save the lives of his comrades and his only regret was those that he could not save. He also aided his fellow disabled veterans for whom he worked tirelessly with his Heroes Project after returning home. He exemplified the true sharpshooter by his courage, skill, and patriotism.

As described by Gary Yee [1], a sharpshooter is "a military marksman skilled in shooting." The concept of sharpshooting in the civil war era included, but was certainly not limited to, long-range sniping. There are basically four types (Figure 2). A fourth class sharpshooter was a common soldier merely instructed to act in this capacity; a third class was one proficient in positional warfare who gains proficiency through practice in the combat situation; second class were trained sharpshooters, most who qualified by shooting a 10-inch group at 200 yards in a designated sharpshooter unit; and the first class included exceptional marksmen engaged in true long-range sniping akin to modern warfare. Their varied functions (Figure 3) included: dominating the battlefield as skirmishers; suppressing defenders during a siege to advance a line or to keep attackers at bay; harassing target officers and artillerymen from a long-range; instilling psychological fear and feelings of helplessness and demoralization using "annoyance" fire (an odd term for shooting one in the head); protecting the advance, rear guard, and flank soldiers (a most dangerous position both from enemy and "friendly" fire); and generally being used as "force multipliers" to maximize the effect of a smaller number of soldiers due to their increased lethality.

- ✓4th class: common infantry
- ✓3rd class: in positional warfare
- ✓2nd class: designated "qualified" SS's
- ✓1st class: exceptionally skilled "snipers"

Figure 2. Definition of sharpshooting.

- ✓Battlefield domination
- ✓During siege
- ✓Long range harassment
- ✓Instill psychological fear
- ✓Advance & rear guard & flank protection
- ✓Force multiplier

Figure 3. Functions of sharpshooters.

Sharpshooting tactics underwent continuous ingenious changes. The use of dug rifle pits and other means of cover increased with experience. Steady rests using stumps, tripods, bayonets, sandbags, and even carcasses were used. Simultaneous firing by multiple marksmen was done, especially at long range as when Virginia sharpshooters killed General James Mulligan in July 1864. Firing was done through loopholes in embankments, sometimes using mirrors. Men fired obliquely to avoid direct frontal exposure. The concept of individual marksmen acting independently and choosing their own positions was followed more frequently as the war progressed. As with many other disciplines in the war, i.e., trains, telegraph, medicine, etc, sharpshooting was also a developing science.

A brief, albeit not comprehensive, review of some of the cast of characters is in order. Generally, sharpshooters in the Union army (Figure 4) were better organized and had more formal tactical training, but an innate skill with firearms was more prevalent in the Confederate armies.

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- ✓Countless indep. Co's
- ✓Berdan's SS's
- ✓Bucktails
- ✓Birge's Western SS's
- ✓Andrew's Mass. SS's
- ✓Birney's SS's (203rd PA)
- ✓Misc. Co's/Battalions of SS's

Figure 4. Union sharpshooter units.

There were countless independent companies of sharpshooters in the Union forces who were mainly used for skirmishing duties and flank protection. The earliest and most famous units were Berdan's first and second US Sharpshooters (USSS), authorized by General Winfield Scott and Secretary of War Simon Cameron and organized by Hiram Berdan, an excellent marksman, mechanical engineer, and inventor, in mid-June 1861. Their formation as a separate, distinct branch of service was probably conceived by Caspar Trepp, an ex-Swiss officer during the Crimean War; however, Berdan had more influence and therefore was credited with forming the units named for him. They instituted qualification standards requiring 10 shots at 200 yards without a rest with an average distance from the center not more than 5 inches. Their training was mostly by Lieutenant Colonel Frederick Mears, Ninth Infantry. They used, sequentially, heavy benchrest rifles, Colt revolving rifles, and the famous "Berdan Sharps" rifles. Marksmanship, range estimation, and tactics were stressed, a unique concept at that time. The second USSS were formed in September 1861. The Bucktails (13th Pennsylvania Regiment in 42nd Pennsylvania Reserves) used Berdan Sharps rifles after they were issued Springfield and Enfield rifle muskets. Birge's Western Sharpshooters (called 14th MO, then 66th IL), formed by Colonel Birge under General John Fremont, used Dimick plains rifles and later Henry rifles. Andrew's Sharpshooters (1st Co. of Massachusetts Volunteer Sharpshooters), were formed by Captain John Saunders at the behest of Governor John Andrew in July 1861, initially intended to be part of Berdan's group but attached sequentially to the 15th, 19th, and 20th Massachusetts Regiments. They initially used heavy benchrest rifles and later Sharps rifles. The Second Company Massachusetts Sharpshooters, formed in September 1861, were armed with heavies, and Enfield and Springfield rifles. Birney's Brigade of Sharpshooters (203rd PA) were promised Spencer repeating rifles but issued Springfields. There were countless other companies and brigades of sharpshooters throughout the war. Late in 1864, the Berdan Sharpshooters, Bucktails, and others declined, with severe attrition and ending enlistments, but the Union continued to arm flank companies and individual commanders formed their own sharpshooter battalions in their divisions.

Some of the most crucial characters in Confederate sharpshooting (Figure 5) were as follows. There were no real formal sharpshooter regiments in the first year of the war.

- ✓Robert Rodes
- ✓Jeb Magruder
- ✓Patrick Cleburne
- ✓Cadmus Wilcox
- ✓McGowan's Brigade
- ✓Innumerable Co.'s/Battalions

Figure 5. Confederate sharpshooter units.

Figure 6. Maj. Gen. Patrick Cleburne (from John Plaster, *Sharpshooting in the Civil War*).

Robert Rodes was an early innovator with his battalions of sharpshooters, and R.E. Lee and Jackson allowed him to innovate and then adopted his organization for the entire Army of Northern Virginia. Jeb Magruder formed some of the earliest organized sharpshooters on the Peninsula in April 1862 in response to Berdan's sharpshooters. Patrick Cleburne (Figure 6) formed sharpshooter battalions in multiple Georgia, Alabama, Tennessee, Mississippi, and Louisiana battalions in the Army of Tennessee on the divisional level. They used Whitworth and Kerr rifles and many P1853 and P1860 Enfield rifles and stressed range estimation and marksmanship training. In 1864, Cadmus Wilcox spurred R.E. Lee to increase sharpshooter battalions including Mahone's, Posey's, Gordon's, and Pegram's brigades. McGowan's Brigade in Pender's Division included my hero, Sergeant Berry Benson, who displayed amazing courage and skill as a skirmisher, scout, and long-range sniper, using mostly his P1860 Enfield short rifle. There were innumerable other companies and battalions of sharpshooters in the Confederate armies in addition to those mentioned here, employing a number of weapons as we will evaluate later.

A wide variety of firearms were used by sharpshooters in the American Civil War due to their widely varied functions and developing technology, i.e., skirmishing at 200 to 500 yards versus long-range sniping. Having a fascination with their psychology, tactics, technology, and most of all their courage, I have developed a special interest in sharpshooters and their weapons. I hope to review some of these particular arms and why they were used in various, often changing situations with their varying advantages and disadvantages. Whereas many of these rifles were amazingly accurate for their time, they definitely do not resemble today's extreme accuracy of, for instance, the McMillan Tach 50! Some of the reports of extremely long shots in the American Civil War (i.e., a mile or more) were possibly the result of "grouped fire" by a number of sharpshooters firing simultaneously.

Figure 7. Twenty three members of 1st Co. Mass. (Andrew's) Sharpshooters with Cpt. Jack Saunders, proudly displaying their "heavies" & wearing Mass. issued dark caped greatcoats (Author's collection).

FIRST COMPANY OF MASSACHUSETTS (ANDREW'S) SHARPSHOOTERS

Figure 8. Mass. Gov. John Andrew, frontispiece (from Alden Ellis, *The Massachusetts Andrew Sharpshooters*).

The First Company Massachusetts Sharpshooters, called Andrew's Sharpshooters (Figure 7) as they were formed at the behest of Governor John Andrew (Figure 8), were organized and led by Captain John Saunders (Figure 9), of Salem, Massachusetts. A 3-year regiment of 98 men mustered on September 2, 1861; they were ultimately attached to the 15th, 19th, and 20th Massachusetts regiments. They were first armed with heavy benchrest target rifles (heavies), most with telescopic sights. From Lieutenant Bicknell's unit history, they "used target rifles weighing 30 to 50 pounds each, loaded with a false muzzle and starter and an attached scope mounted the entire length of the barrel. Each had its own set of bullet molds, swedges, charges, and powder flask. They required to be loaded with the utmost care and precision and could be fired effectively only from a rest" (Figure 10).[2]

In a letter from Private Theodore Compess, Company K, 20th Massachusetts Regiment, after Balls Bluff, he stated, " . . . the Mass. Sharpshooters . . . are very efficient . . . here let me praise my Mass. Sharpshooters. They fire accurately a mile, hardly ever miss, they killed many . . . They have

Figure 9. Cpt. Jack Saunders (Author's Collection).

Figure 10. Note false muzzle, bullet starters and large powder flasks (Author's Collection).

telescopes attached to their guns, which weigh an average 30 pounds . . . the Mississippi sharpshooters opposed our Mass. men" (from a copy of a letter, courtesy of Lewis Leigh).

This description illustrates some of the disadvantages of these heavies in combat conditions. Many were bought by the state from G.W Langdon. Many more were personal arms made mainly by quality Northeast gunsmiths, for which they were promised a $60 bounty, which they never received. After the Peninsula Campaign, they were literally forced to accept Sharps rifles due to the unsuitability of the heavies for skirmishing. In General Lander's Brigade on October 1st and 2nd, 1861, they first demonstrated their efficiency near Edward's Ferry. The first use of formally raised sharpshooters was at Ball's Bluff, but they were deployed to hold a position in line of battle rather than in supporting a line, which is the proper use of sharpshooters. During the siege of Yorktown in April 1862, sharpshooters were attached to the 15th Massachusetts Regiment of Gorman's Brigade, in Sedgwick's Division of Sumner's II Corps.

Still with the II Corps, Captain Saunders was killed in the West Woods action at Sharpsburg on September 17, 1862, in the battle of Antietam, when the 15th Massachusetts Regiment received devastating fire from front, flank, and rear from the brigades of Semmes, Early, and Barksdale. Here, within 20 minutes, 330 15th Massachusetts men had fallen, 75 killed and 255 wounded. Lieutenant Bicknell described vividly "the Hell of Antietam . . . darkness and smoke increased till, with a deafening roar, a broad sheet of flame leaped across the stone wall. . . 350 out of 45 sharpshooters down on my left—450 of the 15th Mass. fallen on my right." [3] Saunders was shot through the heart as his First Company Massachusetts Sharpshooters were nearly decimated, many carrying their heavies as skirmishers. He carried a Colt M1860 army revolver, inscribed on the backstrap, "To Jack Saunders, Boston, Mass" (Figures 11 and 12) and his field glass, inscribed on the tube, "Capt. Crook to Capt. Jack Saunders" with a Masonic emblem (Figure 13). It is claimed by Lieutenant Bicknell in his unit history that Saunders was actually shot by an "artificer" (craftsman) who at Yorktown refused to go into line of battle as he was hired only to "keep the heavies in working order," [4] and was punished by Saunders by being literally tied to a tree for an extended period. After this punishment, he vowed that "Captain Saunders should die for this." [4] I believe that his cause of his death must remain speculative, despite eyewitness accounts, because of the withering fire being received by the 15th Massachusetts Regiment at the time (Figures 14 and 15).

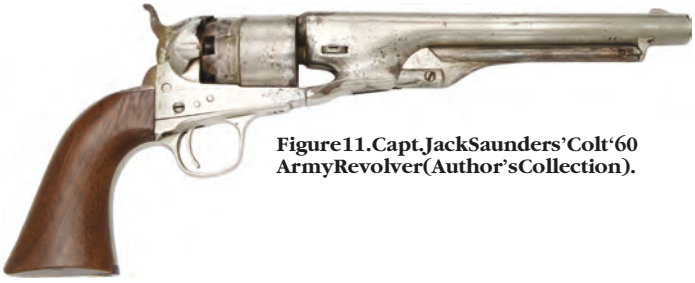

Figure 11. Capt. Jack Saunders' Colt '60 Army Revolver (Author's Collection).

Figure 12. Backstrap inscription "To Capt. Saunders Boston, Mass" (Author's Collection).

Figure 13. Capt. Jack Saunders' Field Glass with inscription "Capt. Crook to Capt. Jack Saunders" and Masonic symbol (Author's Collection).

Figure 14. 15th Mass. "Wounded Lion" Monument marks forward position in West Woods, Sharpsburg.

HEAVY BENCHREST TARGET RIFLES

Telescoped and globe-sighted heavy-barrel target rifles, many privately owned and made by Northeast gunsmiths, were used throughout the American Civil War, especially early in the Peninsula Campaign beginning at Yorktown. They varied with the maker and were of widely different weights, as indicated in the discussion above on the Andrew Sharpshooters. Many of these rifles were used throughout the war by Berdan's and Andrew's sharpshooters and many smaller units. Brady's Michiganders carried 16-pound rifles. Their use was moderately and gradually decreased despite their superior accuracy, as the rate of fire was slow with

Figure 15. Capt. Saunders listed as killed with Andrew Sharpshooters on 15th Mass. Monument, West Woods, Antietam.

Figure 16. Andrew Sharpshooters Monument on Cemetery Ridge, Gettysburg.

cumbersome loading, ordnance supply was difficult, sights and hair-triggers were delicate, and their weight was a severe detriment. Some, perhaps one per company, were retained and carried in supply wagons and brought forward and issued to the most skilled marksmen when situations warranted. Companies C (MI) and E (NH), in First USSS, remained armed with different heavies throughout the war. The Andrew's Sharpshooters Monument on Cemetery Ridge (Figure 16) shows a heavy as many still carried them to silence artillery crews on the ridge at Gettysburg on July 2, 1863, even though most had been literally forced to accept Sharps rifles by this time. Oddly, the monument indicates a heavy being fired off-hand without a rest! Captain Stevens, Second USSS, told of a Wisconsin sharpshooter using a 28-pound target rifle at Petersburg against a Confederate, also using a telescoped rifle, dueling with him.

Morgan James heavy target rifles (Figure 17) are known to have been commonly used by sharpshooters. G.H. Ferris was listed as an apprentice to Morgan James in Utica, New York. His heavy, weighing 21 pounds, in .414 caliber (Figure 18), has double-set triggers and a full length, 35½-inch scope. John Brown, with his sons Andrew and Freeman, made target rifles for the US government in Fremont, New Hampshire, and their gun shop served as a recruiting station for sharpshooters. Charles V. Ramsdell, in Bangor, Maine, made heavies for the First Company Maine Sharpshooters in Second USSS, this example (Figure 19) weighing 14 pounds, in .48 caliber with a full-length scope. Cyrus Baldwin Holden (Worcester, Massachusetts) rifles were ordered for some Massachusetts Andrew's Sharpshooters by the state. Others pictured here (Figure 20), by George O. Leonard (Keene,

Figure 17. Morgan James Bench Rest Target Rifle (courtesy: Les Jensen, West Point Museum).

Figure 18. G. H. Ferris (Utica, NY) benchrest target rifle (Author's Collection).

New Hampshire), D. H. Hilliard (Cornish, New Hampshire), and W. Billinghurst (Rochester, New York), are representative of other heavies made by Northeast gunsmiths that may have been carried to war as personal weapons by sharpshooters. Winslow Homer's woodcut (Figure 21), reproduced in Harper's Weekly in 1862, illustrates a Union sharpshooter perched in a tree with his heavy target rifle. The subject is thought to possibly be a member of Company D, Berdan's Second USSS, squinting through the 4-power scope of a Ramsdell or Morgan James rifle near Yorktown in the Peninsula Campaign. Homer confided that sharpshooting, to him, was "as near murder as anything I ever could think of in connection with the army and I always had a horror of that

Figure 19. Charles V. Ramsdell (Bangor, ME) target rifle (Author's Collection).

Figure 20. George O. Leonard (Keene, NH), D. H. Hilliard (Cornish, NH) and W. Billinghurst (Rochester, NY) heavy bench rest rifles (Author's Collection).

Figure 21. Winslow Homer's "AOP Sharpshooter on Picket Duty" (Author's Collection).

Figure 22. Ziegler's Grove, Cemetery Ridge, Gettysburg.

branch of the service," [5] after sighting a Confederate officer through a sharpshooter's scope. The First and Second Companies of Massachusetts sharpshooters fought at Ziegler's Grove and Cemetery Ridge at Gettysburg (Figures 22 and 23), some still using heavies.

Figure 23. 2nd Co. Mass. Sharpshooters Monument at Gettysburg.

Figure 24. Hiram Berdan (from John Plaster's *Sharpshooting in the Civil War*, page 26; and Roy Marcot's *U.S. Sharpshooters*, page 29).

BERDAN'S SHARPSHOOTERS

As discussed briefly under Union sharpshooter units, Hiram Berdan (Figure 24) formed his First USSS in June 1861. Although Berdan initially requested Springfield rifle muskets, they actually used sequentially their own heavy benchrest rifles, the obsolete M1819 Hall converted to percussion, the Colt .56 caliber revolving rifle, and finally their promised special-order Sharps rifles. They first wore grey caped great-coats, soft grey felt Havelock hats, leggings, and blue trousers (Figure 25). These were soon abandoned due to their "secessionist" colors, in favor of the more familiar green frock coats with black hard rubber eagle buttons and kepis (Figure 26). Initially they carried heavy benchrest rifles as mentioned earlier (Figures 27 and 28).

US HALL MODEL 1819 CONVERSION RIFLE

Some converted M1819 Hall rifles (Figure 29) were issued to Berdan's Sharpshooters at their encampment at Weehawken, New Jersey, as a stopgap measure for guarding their camp, as initially many were essentially unarmed despite many being armed with their heavy benchrest rifles. A single-shot breechloader in .54 caliber, the conversion to percussion was a simple one with the top of the pan ground off and a nipple installed in the flash hole. A new hammer was placed for striking the large military nipple. They probably retained these until they were issued Colt .56 caliber revolving rifles in February 1862, and finally their promised Sharps rifles in the Spring of 1862.[6] Hiram Berdan's feelings about these converted Hall rifles were expressed in a letter to Brigadier General Landers on September 25, 1861, "The men could suffer any punishment for disobedience . . . before they would go into the field with any such weapon. They would have the same contempt for these common guns that a housepainter would have for a whitewash brush."

Figure 25. Berdan's Sharpshooters, 1862 (courtesy: Don Troiani, www.historicalimagebank.com).

Figure 26. Co. D. 2nd USSS Fall 1862 (courtesy: Don Troiani, www.historicalimagebank.com); Berdan sargeant's frock coat (ex. coll. Don Troiani).

COLT .56 CALIBER REVOLVING RIFLE

Colt's .56 caliber revolving rifles (Figures 30 and 31) were reluctantly accepted by Berdan's Sharpshooters when ordered to use them on December 12, 1861, ostensibly until their "promised" Sharps rifles were received. Most were issued to the Second USSS under Colonel Henry Post; initially, 882 rifles were received. Colonel Randolph B. Marcy, McClellan's chief of staff and a friend of Samuel Colt, sent letters to Secretary of War Cameron supporting approval of these

Figure 27. A 2nd USSS with his "heavy."

Figure 28. Sharpshooters using a "heavy" with bayonet rest and a Sharps rifle ("A Good Shot" by Dale Gallon, courtesy of Gallon Historical Art, Gettysburg, PA).

escaping the breech and injuring the face and neck; multiple cylinders firing simultaneously, severing forefingers or thumb; bursting of the cylinder or barrel breech; and difficulty in maintaining and cleaning the rifle.

They were first used at Yorktown, Virginia, on April 5, 1861 (Figure 33), to silence artillery crews. On April 11, men of Company F, First USSS, using Colts, were the first US

Figure 29. U.S. Hall M1819 Conversion Rifle (Author's Collection).

breechloaders despite Chief of Ordnance James Ripley's preference for M1861 Springfields. The Coltrifles were supported by President Lincoln and pushed by Colt secretary Hugh Harbison, at a cost of $45 each. These had a 5-shot cylinder and weighed 10.5 pounds when loaded. The three-leaf rear sight is graduated to 100, 300, and 600 yards. The sharpshooters' opinion of them

Figure 30. Martial Colt .56 caliber Revolving Rifle (Author's Collection).

was far from enthusiastic. Wyman S. White wrote, "They were five-chambered breechloaders, very pretty to look at, but upon examination and testing they were found inaccurate and unreliable, prone to get out of order and even dangerous to the user." [7] Their disadvantages (Figure 32), as outlined in a Second USSS's letter, included being too light (9#5oz.) for the size and weight of the ball; small shavings of lead and fire

Figure31.Asharpshooterwith hisColt.56caliberRevolving Rifle.

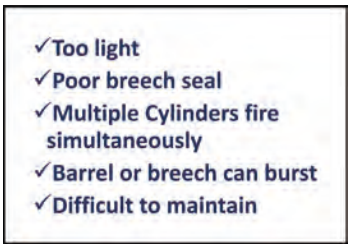

Figure32.DisadvantagesofColt RevolvingRifle.

unit to down an enemy aircraft, a Confederate observation balloon. On April 30, sharpshooters fired Colts repeatedly at sandbags around a cannon muzzle, fouling the bore and exploding the gun. Lieutenant Colonel William Ripley (Vermont Company First USSS) said, "Gun after gun was silenced and abandoned as the USSS's skill at long range did great harm to the rebels." In mid-May and June 1862, they relinquished their Colt rifles finally. Many of them were used by the 21st Ohio Infantry and the Second, Third, and Fourth Michigan cavalry from mid-1862 until 1864. Between January 1861 and June 1866, 4612 Colt revolving rifles were ordnance purchased in .56 caliber.

The promised special-order Sharps rifles (Figures 34 and 35) were finally issued to the First USSS on May 8, 1861, and to the Second USSS on June 1, 1861. Truman Head, also known as "California Joe" (Figure 36), had brought his own Sharps rifle with single trigger and sword bayonet to the Peninsula in the spring of 1862, which led to an enthusiasm among his comrades for the Sharps rifle. Eventually, the Ordnance Department purchased 2000 special-order Sharps rifles with double-set triggers and angular socket bayonets. Many were also used with single triggers. They were sighted to 800 yards and could reliably hit a man-sized target at 400+ yards with their .52 caliber projectile. Their advantages (Figure 37) included rapidity of fire (10 shots/minute by a trained marksman); being easily loaded in the prone position; lightweight (8#8oz.); rugged design and simple function; a safer improved gas seal; a self-contained pellet primer (but of questionable reliability); and they were easily disarmed by removing the block if capture was imminent. A disadvantage was that, despite carrying 60+ rounds, these were often depleted as at Malvern Hill, and these .52 caliber rounds (a linen cartridge with 160 grains (gr) of powder and a 450-grain lead bullet, with a muzzle velocity of 1068 feet per second [fps]), were sometimes difficult to replace relative to .58 caliber cartridges.

Figure33.RelicColt.56caliberRevolvingRifledugat1stUSSScampnearYorktown(ex.LewisLeighcollection).

Figure 34. Berdan contract M1859 Sharps Rifle, inscribed to J.A.B. (possibly Jesse A. Baldwin, Michigan Co. K, 1st USSS) (Author's collection).

Figure 35. "Berdan's Sharpshooters, Summer-Fall, 1863" (courtesy: Don Troiani, www.historicalimagebank.com).

Figure 36. Truman Head, "California Joe," with his private purchased Sharps Rifle (from Maj. John Plaster's *Sharpshooting in the Civil War*).

- ✓Rapid rate of fire
- ✓Easily loaded while prone
- ✓Light weight
- ✓Simple function
- ✓Safer than Colt rifles
- ✓Pellet primer
- ✓Easily disabled

Figure 37. Sharps Rifle's advantages.

Their advantages were put to use in countless combat situations. Major General Hastings, First USSS, described how a skirmish line of sharpshooters turned back a line of battle, attributing this to their marksmanship and "the rapidity with which their sharps could be loaded and fired." The Second USSS's firepower was apparent in crossing Kelly's Ford on the Rappahannock in November 1863, when from the bluffs "they suppressed the rebel pickets (who) could not stand the Sharps rifle." The Pennsylvania Bucktails, with 180 Sharps rifles from Berdan's stash, drove back Rodes' Alabamians at South Mountain as with their "Sharps rifles, they were able to pick off many a Confederate who, attempting to reload his inferior weapon, was compelled to expose his position." They were the first to attain the crest of the pass and captured two mountain howitzers, yet another situation in which the firepower of the Sharps was crucial.

One of the most crucial actions involving Sharps rifles was the Second USSS delaying William Calvin Oates' 15th Alabama, and by extension all of Law's Brigade of Hood's Division, in their attempt to take the Round Tops to turn the Union left at Gettysburg (Figures 38 and 39). They first resisted the Alabama troops at Slyder Farm at the base of Big Round Top (Figure 40). Colonel Stevens, Second USSS, said, "With such a stinging effect did the Second Regiment pepper the Confederates up and down the mountainside, from behind boulders and trees and finally from across the ravine, that some of the rebel officers termed it a perfect 'hornet's nest.'" Their rapid fire (each carrying 60 to 100 rounds) and

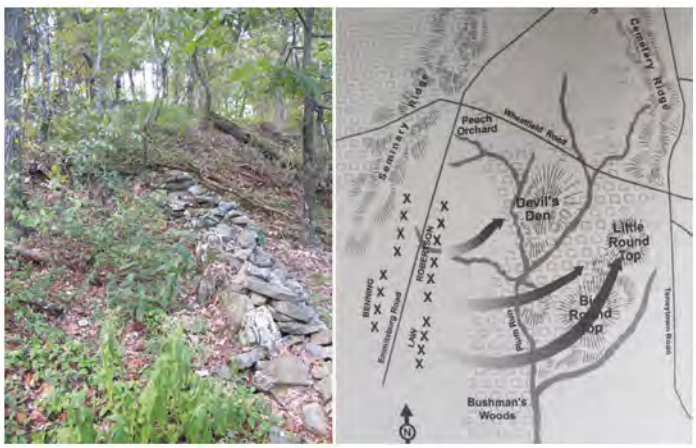

Figure 38. 2nd USSS position at stone wall at base of Big Round Top.

Figure 39. Col. William Calvin Oates, 15th Alabama (from Phillip Tucker's *Storming Little Round Top*, page 44).

their green uniforms, camouflaged by the green foliage and moss-covered rocks, were advantageous. The Second USSS later fought on Little Round Top (Figure 41) and joined Company B, 20th Maine, between the round tops to finally route the 15th Alabama. Colonel Oates described "a withering fire pouring down upon us from every direction, it seemed that the regiment was doomed." In action on Cemetery Ridge on July 3, 1863, New Hampshire Sharpshooters in the First and Second USSS's both were crucial in repulsing Picket, Pettigrew, and Trimble's charge (Figure 42). The First Wisconsin Company, First USSS, sustained withering fire at the Deep Cut at the second battle at Manassas (Figure 43). The Second USSS were also heavily engaged south of Miller's cornfield at Sharpsburg (Figure 44). Homer Stoughton, who later led them at the Round Tops, wrote, "While lying on their faces on open ground, they did more damage to the enemy than any brigade on our front or right, we firing obliquely." Using their high rate of fire, "there was bloody work on that part of the field." The Second USSS lost 3 officers killed and 48 wounded (including commander Post) plus 3 enlisted killed and 48 wounded, out of 130 sharpshooters engaged, a 50% casualty rate. These are just a representative few of the actions in which the Sharps rifle definitely earned its respected position as one of the most effective sharpshooter weapons of the American Civil War. In addition to the Berdan's Sharpshooters, Sharps rifles were also issued to The Massachusetts Andrew's Sharpshooters, the Bucktails (180, Berdan claimed 650, were issued to the 13th

Figure 40. 2nd USSS "Hornet's Nest" Monument at Slyder Farm, base of Big Round Top.

Figure 41. Monument to Michigan 2nd USSS on Cemetery Ridge, Gettysburg.

Figure 42. Monument to NH 1st & 2nd USSS on Cemetery Ridge, Gettysburg.

Figure 43. "Deep Cut" at 2nd Manassas.

Figure 44. 2nd USSS Monument south of Miller's Cornfield, Sharpsburg.

rifles for Sharps and Merrill rifles (as per Gary Yee, and Edwin Coddington, in his *The Gettysburg Campaign*). [8] The Sixth Michigan carried them at Port Hudson, Louisiana. An unknown number were issued to the US Marines (serial #8992 in the Marine Corps Museum being identical to this example).

SPRINGFIELD M1861 AND M1863 RIFLE MUSKETS

The M1861 and M1863 Springfield rifle muskets (Figure 46) and P1853 Enfields were the most frequently used sharpshooter weapons. With either, a competent marksman could hit a man-sized target at 300 yards, perhaps 500 yards for an exceptional marksman. Firing a .58 caliber Minie-ball and weighing 10 pounds 4 ounces, most Springfields had flip-up rear sights to 100, 300, and 500

Figure 45. Martially marked Merrill Rifle (Author's Collection).

Pennsylvania Infantry of the 42nd Pennsylvania Reserves out of Berdan's stash in Washington, DC, for 2 years), some independent New York Sharpshooters (the 54th New York armed flank companies with 200 Sharps rifles in 1862) and a number of troops in the Ninth and 11th Connecticut.

MERRILL RIFLE

Small numbers of Merrill rifles were issued to individual sharpshooters in the Seventh and 10th Michigan, the First Company of Massachusetts Sharpshooters and the Fourth Arkansas. This .54 caliber breechloading rifle (Figure 45), with a 33-inch barrel, with the stock cartouched with "ZB" for Zaddock Butt, was one of the 770 Merrill rifles purchased by US Ordnance during the Civil War. The rifle has a tall front blade sight and a two-leaf folding rear sight graduated to 500 yards. The only regiment entirely armed with them was the 21st Indiana. Many surviving Andrew's Sharpshooters after Antietam exchanged their heavy-target

yards, whereas Enfields had ladder sights graduated to 900 yards. Hiram Berdan initially requested Springfields in mid-July 1861. In August 1861, Thomas Kane's Bucktails (13th Pennsylvania Regiment), determined to enter service as a rifle regiment, accepted Springfield and Enfield rifle muskets, replaced 1 year later by double-set trigger Sharps rifles. Their superior marksmanship with their Springfields was shown

Figure 46. Springfield M1861 Rifle Musket (Author's Collection).

Figure 47. General John Turner Ashby.

Figure 48. Birney's (203rd PA) Sharpshooter with Springfield Rifle Musket (courtesy: Don Troiani, www.historicalimagebank.com).

on June 6, 1862, in the Shenandoah at Harrisonburg battles during which 105 Bucktails inflicted 70 casualties on the First Maryland and 58th Virginia Infantry, including General Turner Ashby's death (Figure 47).[9] They resisted 1500 cavalrymen under J.E.B. Stuart at Catlett's Station before the second battle at Manassas. Sustaining great losses, the Bucktails were prominent in General Meade's attack on Jackson's Corps on the Confederate right at Fredericksburg, December 13, 1862. Despite requests by First Michigan sharpshooter Colonel Charles DeLand for Sharps or Henry rifles, they were issued M1861 and M1863 rifle muskets also. Springfields were also used by the Union ad hoc sharpshooter unit at Morris Island. Major Thomas Brooks, assisting the siege of Fort Wagner, said, "A corps of sharpshooters was selected by test of marksmanship, armed with the Springfield musket, thoroughly practiced and proved themselves efficient."[10] They proved inadequate against Whitworth-armed Confederate sharpshooters of the Charleston Battalion and the 20th South Carolina when at 500+ yards range, but improved as the siege lines went closer and with the use of loop-holes in the parapets for firing. Some of Birney's (203rd Pennsylvania) Sharpshooters (Figure 48) formed by Major General David Birney in the fall of 1864, used M1863 Springfields. They wore Berdan's remaining stocks of green coats and caps and brown leggings, and carried M1864 cartridge boxes with the embossed "US" on the flap.

HORACE E. DIMICK PLAINS (AKA DEER & TARGET) RIFLE

The heavy-barreled Horace E. Dimick (St Louis) plains rifle (Figure 49), firing usually a .44 caliber (varied from .31 to .55) hollow-based chasseur variant of the Minie-ball, weighs 12 pounds. The bore has deep 6-groove rifling. It has a screw-adjusting "Rocky Mountain" strap rear sight and a brass blade front sight. These were issued to Birge's Western Sharpshooters (Figure 50), formed in November 1861, by Colonel John W. Birge under Major General John Fremont, recruiting three companies from Ohio, three from Illinois, and others from Iowa, Wisconsin, Michigan, and Minnesota. They were also called "squirrel tails" after their headgear, redesignated "Western Sharpshooters, 14th Regiment Missouri Infantry" in April 1862, after Shiloh, and in January 1863, the 66th Illinois Infantry. In December 1862, the 10 companies of the 66th Illinois had 516 arms described as civilian target rifles. On September 18, 1861, Fremont contracted for 1000 rifles to arm them. All were likely delivered, with 472 recorded as received by May 1862. This is the only known instance in which an entire regiment was armed with "sporting" arms. Lorenzo Barker, unit historian, stated, "Dimick rifle accoutrements include a bullet pouch with bear skin covering and a powder flask or horn. In the pouch . . . the soldier carried his screwdriver, bullet mold and patch cutter . . . Birge's boys molded their own bullets, greased and patched them with as much care as an old hunter would and used them effectively."[11] General C.F. Smith praised the 66th Illinois who "engaged a Confederate 12-gun battery for 3 days at 200 yards continuous fire and deserves great credit in the capture of Fort Donelson."[12] In late 1863, as they more commonly skirmished at 200 to 300 yards, they switched to using privately purchased Henry rifles in lieu of the heavy,

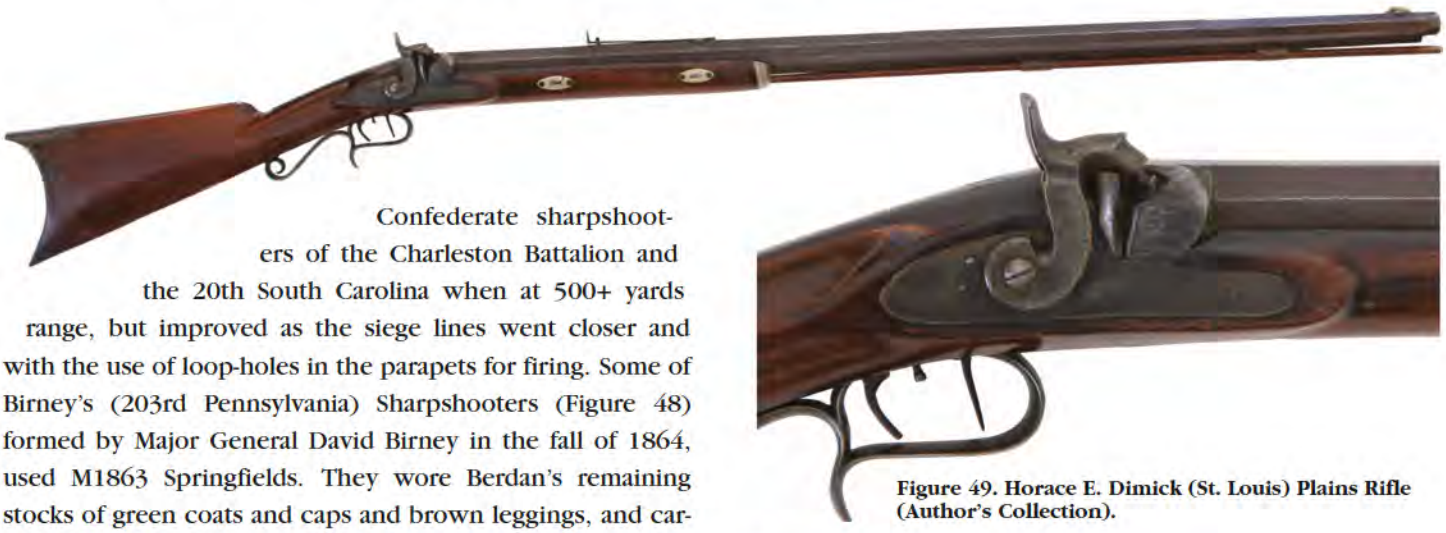

Figure 49. Horace E. Dimick (St. Louis) Plains Rifle (Author's Collection).

Figure 50. Birge's Western Sharpshooters with their Dimick Rifles (from Maj. John L. Plaster's *Sharpshooting in the Civil War*).

the Dimick rifles became a burden. The practical range of the Henry was approximately 200 to 250 yards despite the rear ladder sight graduated to 900 yards (Figure 54), although Private Upson, 190th Indiana, purportedly placed 12 of 15 shots in a man-sized target at 500 yards (?). Early problems included fouling of the exposed coil-spring magazine tube with dirt; being too heavy (10 pounds loaded); overheating of the barrel with rapid firing with no wooden forearm and a relative lack of power. But the firepower, a realistic rate of perhaps 32 rounds per minute, was illustrated by a Confederate soldier calling the Henry "that damned Yankee rifle that's loaded on Sunday and fired all week." At Atlanta in July 1864, Private Prosper Bowe, Company D, 66th Illinois, recalled, " . . . we started our 16-shooters to work. The first column in front nearly all fell [at] the first two or three volleys. I stood and fired 90 rounds without stopping. My barrel

Figure 52. Pvt. George Yerington, Co. D, 6th IL (from Lorenzo Barker's *With the Western Sharpshooters*).

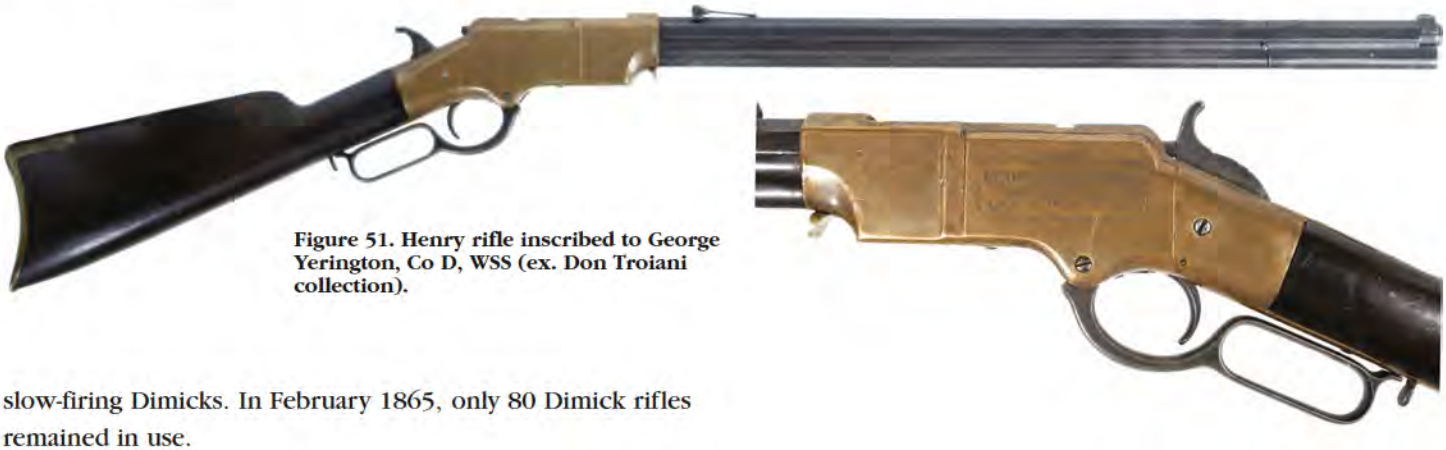

Figure 51. Henry rifle inscribed to George Yerington, Co D, WSS (ex. Don Troiani collection).

slow-firing Dimicks. In February 1865, only 80 Dimick rifles remained in use.

HENRY RIFLE

The .44 caliber Henry rifle, weighing 9.5 pounds, fired a 216 gr bullet with 28 gr of black powder with a muzzle velocity 1125 fps. Its main advantage was its firepower due to its 15-round magazine and its relatively lighter weight compared with the Dimick rifle. Approximately 250 were privately purchased by Birge's Western Sharpshooters (WSS; 66th Illinois), at $42 each, in late 1863, in the serial number range from 1600 to 2200. These are represented by the Henrys pictured here, one whose receiver is inscribed to Private George Yerington (Figure 51), a WSS with the 66th in the Atlanta Campaign, from Bainbridge, Michigan (Figure 52) and one to Louis Quinius, (Figure 53), a German immigrant, who fell ill after spending 14 days on solitary sniper duty in the Wilderness. They commonly skirmished at about 200 to 250 yards so that the weight and slow rate of fire of

Figure 53. Henry inscribed to Louis Quinius, Co.B, WSS (ex. Collection of Daniel Cullity, Jr.).

Figure 54. Henry rifle sight graduated to 900 yards.

was so hot I could not touch it."[13] At Eden Crossroads near Savannah, the 66th Illinois defeated 980 Georgia militia men and were honored by Sherman with special duty at headquarters. The firepower of the Henry was evidenced in General Dodge's statement on May 16, 1864, " . . . the enemy in heavy force charged upon the right of the 66th Illinois, striking it in the flank . . . armed with the Henry rifle . . . by a stubborn resistance and a steady, cool fire, checked the enemy's advance."[14] Governor Yates also armed some 64th Illinois Infantry, known as Yates' Sharpshooters, with the Henry rifle, in 1863. A large number were used by the Seventh Illinois Infantry, as evidenced by the famous photograph of their color guard all armed with Henrys.

SPENCER NAVY RIFLE

The Spencer Navy rifle (Figure 55), in .52 caliber rimfire, has a 30-inch barrel with a lug under the muzzle for a Collins $21^{3}/_{16}$-inch saber bayonet, manufactured c. 1862 to 1864 by Spencer Rifle Co., Boston, Massachusetts, with 6-groove rifling, having a seven cartridge magazine in the buttstock. It fired a 56-56 rimfire cartridge with a 285 gr bullet and 45 gr black powder. The powder charge was increased from 25 gr to 34 to 40 gr from 1861 to 1864, with a muzzle velocity of 930 fps.[15] This dwarfed the power of the Henry rifle. This example, serial number 584, is one of the first 600 ordered by President Lincoln for the inland Navy to counter Confederate sharpshooters harassing Union gunboats, wreaking havoc on officers and deck gun crews and capturing or destroying many vessels. Total Navy purchases were 1009, of which 709 were of this pattern, patented March 6, 1860, the remainder of the contract being "army" Spencers made with a front sight post for mounting a socket bayonet (11,500 made). The effectiveness of the Confederate sharpshooters on shore was illustrated by the repulse of Commodore John Rogers' James River Squadron at Drewery's Bluff in their attempt to shell Richmond on May 15, 1862. Southern marksmen on the CSS Cotton in Bayou Tech, Louisiana, fired on the Federal ships Estrella, Kingman, and Calhoun, and the Cotton was then silenced by marksmen of the Eighth Vermont and 75th New York.[16] Confederate sharpshooters firing from levees and trees almost captured Admiral David Dixon Porter's gunboat squadron on Steele Bayou near Vicksburg and wreaked havoc on his Red River Squadron. These and countless other similar instances were the stimulus for acquiring the navy Spencers as a counter measure.

SPENCER ARMY RIFLE

The Spencer Army rifle is identical to the Spencer Navy rifle, but it has a front sight stud to accept an angular socket bayonet. The example shown here (Figure 56), serial number 349, was issued to Sergeant James Starkey, Eighth Independent Ohio Sharpshooters, formed to oppose John Hunt Morgan's raid through Indiana and Ohio. In his book *Spencer Repeating*

Figure 55. Spencer Navy Rifle with Collinsville saber bayonet (Author's Collection).

Figure 56. Spencer Army Rifle carried by an 8th Ohio Independent Sharpshooter Sgt. James Starkey (Author's Collection).

Figure 57. Whitworth rifle with iron sights (Author's Collection).

Firearms, Roy Marcot states, "The first recorded shipment of these Spencer Repeaters took place . . . on February 19th, 1863. Major P.V. Hagner, Ordnance Inspector of contract arms, sent his first Spencer army rifles to the Columbus, Ohio, Arsenal. In turn, these were issued to the 5th, 6th and 8th Independent Companies of Ohio Sharpsooters." [17] These were used more for picket duty than long-range sniping due to their relatively short effective range of perhaps 300+ yards, and their reliability and high rate of fire. Late in the war a rate of 15 aimed shots per minute was possible with preloaded magazine tubes. The Union also armed many division-level sharpshooters with Spencers, especially flank companies of regiments like the Fifth Wisconsin and skirmishers in the 37th Massachusetts and 15th New Jersey. The Bucktails (13th Regiment of 42nd Pennsylvania Reserves) were issued Spencers in August 1864, to replace Sharps rifles from the Berdan contract, issued in August 1862. Pennsylvania Reserves Sergeant George Darby recalled, "At Robinson's Farm [Spotsylvania] . . . a rebel sharpshooter had located himself in a pine tree. . . whereupon two of the Bucktails were dispatched with their Spencers to do the job, and they soon brought Johnny Reb to terms by shooting him dead from his roost in the pine." [18] In late 1863, after learning about General George Custer's success on East Cavalry field at Gettysburg, Hiram Berdan sought Spencers for a new brigade of sharpshooters. This never happened, as Berdan entered convalescence and never regained command. The First Battalion of Ohio Sharpshooters successfully fought Confederate marksmen who had decimated Union wagon trains on the bank of the Tennessee River at Raccoon Mountain. In a letter to Spencer Rifle Company, Captain Gersham Barber wrote, "[we] had an opportunity to test our rifles with the rebel sharpshooters . . . [who] played havoc with our teams and drivers . . . the 18th KY, armed with the Enfield rifle . . . had no effect on the enemy . . . The first day . . . we drove them from every position on the river; we found by actual trial that our guns had longer range and greater accuracy. We seldom missed at 700 yards." [19] This instance is interesting, as the range of the Enfield generally exceeds that of the Spencer rifle. The 57th Massachusetts formed companies into sharpshooters armed initially with Springfields early in 1864, then in July with Spencer rifles purchased by the state. Two companies of the 27th Michigan also carried Spencers. Even Confederate sharpshooter Berry Benson, in McGowan's Brigade, utilized a captured Spencer rifle on March 27, 1865, at McIlwaine's Hill in a failed attempt to repulse a charge at Petersburg.

WHITWORTH RIFLE

Designed by Sir Joseph Whitworth, Britain's foremost mechanical engineer and metallurgist, c. 1854 to 1858, the Whitworth rifle was arguably the most accurate shoulder-fired rifle of its time, silencing artillery crews and officers at 1200 to 1500 yards. However, despite many anecdotal stories about kills at extreme ranges, i.e., more than 1200 to 1500 yards, many of these may have been the result of groupedfire by multiple sharpshooters firing simultaneously. It fired a .451 caliber bullet through a hexagonal bore with one turn in 20 inches, using a long 530 gr bullet with a long aspect ratio (.445 by 1.45 inches, or a length 2.5 times its diameter), giving it excellent long-range ballistic stability. With a muzzle velocity of approximately 1200 fps, at 1000 yards a bullet would hit in approximately 4 seconds with a relatively flat trajectory. Most bullets used by the Confederates were round, as evidenced by the digging of 6 hexagonal and 30 cylindrical relic bullets at the site of a Dalton, Georgia, competition by Patrick Cleburne's Sharpshooters. The unscoped Whitworth (Figure 57) had a rear ladder sight graduated to 1200 yards and a front globed sight (Figure 58) with a windage adjustment. Approximately 50 (some say 100) of the perhaps 250 Whitworths imported to the Confederacy were fitted with a Davidson telescopic sight, a 14.5-inch 4-power steel scope.

Figure 58. Whitworth rear sight graduated to 1,200 yards; front globed sight with windage adjustment.

Figure 59. Whitworth Rifle with Davidson scope (Denny Pazzini Collection).

This side-mounted scope (Figure 59) allowed enough elevation of the barrel to achieve very long-range sniping. The Whitworth accuracy far exceeded that of the Enfield, as shown in Gary Yee's graph (Figure 60), which shows 2.62 inches deviation with the Whitworth versus 8 inches with the Enfield at 1200 yards, and 4.62 inches at 1400 yards with the Enfield too dispersed to measure. The countersunk muzzle shows the hexagonal bore (Figure 61). The practical strategic effect of the Whitworth far exceeded the numbers imported. In 1862, Lee's Army of Northern Virginia received 13 Whitworth rifles, first appearing on blockade runner manifests in December 1862. General Patrick Cleburne developed sniper detachments in April 1863 using Whitworths. Shooting matches determined the recipients, and training in drill, rifle maintenance, and range estimation were stressed. His marksmen got 30 Whitworths and 16 Kerr rifles at Dalton, Georgia, before the North Georgia campaign. He said, "Mounted men were struck at distances from 700 to 1300 yards"[20] by Liddell's Brigade at Liberty Gap, Tennessee, in 1863. A June 25, 1864 ordnance report listed 32 Whitworths in Johnston's Army of Mississippi and later assigned to Stewart's corps in Army of Tennessee. On July 13, 1863, transfer of 13 scoped Whitworths from Augusta Arsenal to Charleston, South Carolina, enabled Lieutenant

Description of Rifle	Distance (Yards)	Angle of Elevation	Deviation	Remarks
Enfield	500	18.32	2.24 feet	
Whitworth		1.15	.37 "	
Enfield	800	2 45	4.20 "	
Whitworth		2.22	1.00 "	
Enfield	1100*	4.12	8.00 "	
Whitworth		3.8	2.62 "	
Enfield	1400*	..	...	Shooting so wild no diagram taken
Whitworth		5.0	4.62 "	
Whitworth	1800*	6.40	11.52 "	

*These trials were conducted using a fixed rest.

Figure 60. Chart of Whitworth versus Enfield rifle accuracy (from Gary Yee, *Sharpshooting in the Civil War*).

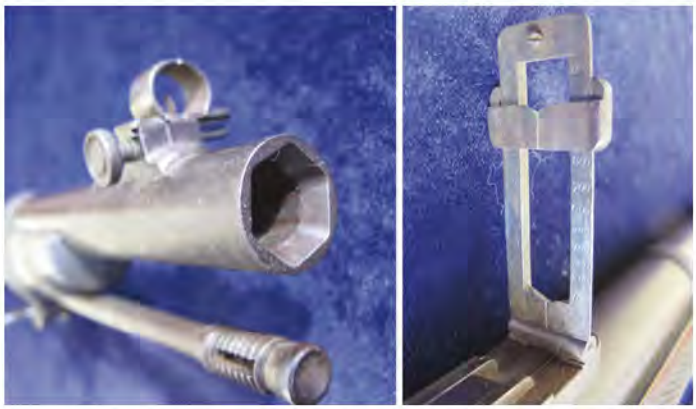

Figure 61. Whitworth countersunk muzzle with hexagonal bore; rear sight graduated to 1,200 yards.

Woodbury to protect Fort Wagner. Confederate sharpshooters, firing from long range (Figure 62), killed many artillerists and officers, such as General John Sedgwick at Spotsylvania (Figures 63 and 64) after he stated, "Don't worry boys. They couldn't hit an elephant from this distance." Both Ben Powell of McGowan's Brigade and Charles Grace, Fourth Georgia, claimed the kill, but Stuart Vogt believes that neither Powell nor Grace shot him, as Sedgwick was dismounted when killed, and Brigadier General William Morris was the only General shot while mounted that day according to Thomas Prideau in a May 1918 Confederate Veteran article.[21] Could this be the fog of memory after so many years? Longstreet's Sharpshooters decimated a wagon train at Raccoon Mountain, firing across the Tennessee River (Figure 65). In an attempt to sever the Union supply line into Chattanooga, a "small force of picked men from Gen'l Longstreet's Corps, armed with Whitworth telescopic rifles among the crags of Raccoon Mountain, overlooking a road on the other side of the Tennessee River . . . resulted in a road choked with dead and dying men and mules and overturned wagons."[22] After evacuation of Fort Wagner at Charleston, Whitworth-armed marksmen fired from Fort Sumter to Union batteries at Cummings Point on the north end of Morris Island at approximately 1200 yards, with Union sharpshooters firing back. These instances are merely representative of countless times when Whitworths made a crucial difference.

Figure 62. "A Confederate Sharpshooter" (courtesy: Don Troiani, www.historicalimagebank.com).

Figure 63. Site of General John Sedgwick's death at Spotsylvania.

Figure 64. Generals John Sedgwick and William Morris (from Maj. John Plaster *Sharpshooting in the Civil War*).

Figure 65. Longstreet's sharpshooters at Raccoon Mountain (from *The Confederate Whitworth Sharpshooter* by John Morrow).

KERR PATENT LONDON ARMOURY CO. ENFIELD RIFLE

The Kerr rifle (Figure 66), similar in external appearance to the Whitworth, was designed by James Kerr, London Armoury Company's Superintendent. This example is serial number 649 (the highest known is 800). The 37-inch, .451 caliber barrel has patented 6-groove rifling, the pitch of which is minimal at the breech but increases about half-way to one turn in 20 inches, [24] a ratchet form without angles, as the deeper part of the groove is on the side from which the bullet turns. The 530 gr bullet is cylindrical, .446 inch diameter, with up to 82 gr fine powder. The muzzle is countersunk, not unlike the Whitworth. The ramrod has a removable brass tip and is slightly cupped and slotted and knurled for use as a cleaning rod. This is useful as the rifle is easily fouled. Edward P. Thompson, Orphan Brigade, stated, "The Kerr rifle . . . could kill at [a] distance of a mile [perhaps a bit exaggerated] . . . requiring a particular powder . . . the use of ordinary powder made it necessary to swab out the barrel after every fourth or fifth shot." [25] He also described how the 10 best marksmen in a brigade match were issued Kerr rifles. The rear sight is similar to that of a standard Enfield, but graduated to 1200 yards. Josiah Gorgas' statement of February 3, 1863, (in the Official Records), includes 20 "small bore" Enfields. The papers of London-based Colin McRae indicate that the rifles bought by Huse were Kerr rifles from London Armoury Company and purchased through Sinclair, Hamilton & Company. The example in Figure 66 is so marked. Patrick Cleburne's division received 10 Kerr rifles, with 30 Whitworths, at the opening of the Atlanta campaign and 16 Kerrs at Dalton, Georgia, before the North Georgia campaign. The Kentucky Orphan Brigade obtained 11 Kerr rifles in the winter of 1864, given to Major General John Breckinridge by an English friend and presented to his old command. [26] After General Leonidas (the Bishop) Polk was killed by Fifth Indiana Artillery in Marietta, Georgia, Lieutenant George Burton's Sharpshooters killed their Captain Peter Simonson using Kerr rifles. [27] Another similar .451 caliber British match rifle, by Thomas Turner of Birmingham, was imported in small numbers, some with Turner's 5-groove rifling and some with Whitworth's hexagonal rifling. A few Nuthall, Daw, Jacob, and Lancaster rifles were also used.

Figure 66. London Armoury Co. Kerr Patent Enfield rifle (Author's Collection).

A real oddity is an apparently double rear-sighted Kerr rifle shown in the hands of a marksman named Salvin (Figure 67). Superbly accurate arms, only the huge cost (approximately $1000 US for the Whitworth rifle, including the Davidson scope, accoutrements and 1000 rounds [23]), and the effectiveness of the Confederate ports precluded importation of more Whitworth and Kerr patent rifles into the Confederacy.

LORD BURY SCOPE

Lord Bury, who edited *Rifling and Rifle Sights* for the British NRA in 1864, designed the Lord Bury Scope (Figure 68) 10 $^{3}/_{4}$-inch long (31 $^{3}/_{8}$ inches fully extended) telescope, c. 1860, which was recommended by Sir Joseph Whitworth, James Kerr, Jacob, and Daw for use with their sharpshooter rifles and used by Confederate sharpshooters. The optics were superior to the French at this time. The scope is 20-to-

Figure 67. Marksman Salvin with double rear-sighted Kerr patent rifle (Bill Adams Collection).

Figure 68. Lord Bury (image ex. Bill Adams Collection) and Lord Bury Scope (Author's Collection).

40 power with its pancratic device, patented to extend the focal length when drawn back from the ocular tube. The objective lens is 1 inch thick and there are four ocular lenses.[28] The Confederate government contracted with the noted London instrument maker Negette & Lambra for their optics. This 4-stage (3-pull) scope was made by J.H. Steward of Cornhill, London.

world." The rear sight is a single elevating leaf graduated to 900 yards. Approximately 300,000 to 400,000 Enfield rifles were imported by the Confederacy and perhaps 506,000 by the Union, many used by sharpshooters as they were clearly superior beyond 500 yards and were the most reliable rifle readily available. Captain William Dunlop (Figure 71), in McGowan's South Carolina Sharpshooters, stated, "In the target drill, the Enfield, Austrian, Belgian, Springfield and Mississippi rifles were put to the test . . . the superiority of the Enfield rifle for . . . long range from 600-900 yards, was clearly demonstrated, both as to force and accuracy of fire. The ulterior range of the Enfields proved . . . effective to a surprising degree . . . to 900 yards, while the other rifles could only be relied on at a distance of

Figure 69. P1853 Enfield Rifle, "JS/anchor" marked (Author's Collection).

ENFIELD P1853 RIFLE MUSKET

The Enfield P1853 rifle musket (Figure 69) is a 3-banded rifle, with its .577 caliber, 39-inch barrel with progressive rifling with 1 in 20 inches twist, weighing $9^1/_2$ pounds, fires a 530 gr Pritchett bullet[29] with 68 gr black powder having a muzzle velocity of 850 to 900 fps. It is marked with the "JS/anchor" mark (Figure 70) forward of the buttplate tang, now thought to refer to James Smiles, a viewer at London Armoury Company who also inspected arms for Caleb Huse. Confederate Ordnance Chief Josiah Gorgas referred to the P1853 Enfield as "the finest arm in the

Figure 70. "JS/anchor" mark on P'53 Enfield (Author's Collection).

500 yards."[30] They were often referred to in official reports as long-range rifles relative to others. On the Peninsula in 1862, Palmetto Sharpshooters fired their Enfields at "distant" Union artillery, "compelling them to change position and slacken their fire." After the fall of Port Hudson, the 49th Alabama and 15th Arkansas Sharpshooters (including "Old Thousand

Figure 71. Maj. William S. Dunlop (frontispiece, *Lee's Sharpshooters*).

Figure 72. Georgian Sharpshooter's position above Rohrbach (a.k.a. Burnside's) Bridge, Sharpsburg, VA.

agent, to the rear of the trigger guard. Similar to their short Navy contract counterparts, they were very well thought of especially by sharpshooters as they had a stouter barrel with more accurate rifling mentioned above. Their shorter profile and lighter weight made them more easily maneuverable through brush or hauled up to some perch. The two-banded Enfields rapidly became the top choice for Confederate sharpshooters. A report by Caleb Huse on February 3, 1863, shows a shipment of 9715 of them and further records indicate receipt of many more. "Every short Enfield which came into possession of any of our men was taken away and given to these men," said a Georgian in Gordon's Brigade, "but these were not enough, and some of them had the common long Enfield. Both kinds had a long range and were very effective. The short guns were given them as they were lighter and handier." Barksdale's Mississippi Sharpshooters, using their

Figure 73. P1860 Enfield "Short" Rifle, "SH/C" marked (Author's Collection).

Yards") used Enfields. The Pennsylvania Bucktails used Enfields and Springfields. Enfields were chosen by Major Eugene Blackford in January 1863 in addition to their few Whitworths when he formed battalions of sharpshooters under Robert Rodes. Charles Musser, 29th Iowa, detailed as a sharpshooter, claimed, "We have target practice every day. I have with my Enfield hit a target the size of a man at 800 yards. They will kill a man at a thousand yards if the sights are elevated properly."[31] This is certainly an exaggeration, as in modern tests at 400 yards, Enfields put 13 of 15 shots within a 72-by72-inch target, only the Whitworth being more accurate, placing 15 of 15 in the target. Many of the Georgian sharpshooters firing on Burnside's IX Corps troops crossing Rohrbach Bridge at Sharpsburg (Figure 72) used Enfield rifles. They were crucial in delaying Burnside's men until the arrival of Hill's Corps from Harpers Ferry. Numerically, these P1853 Enfields were very important in the course of the war even though their accuracy was not the pinnacle of sharpshooter arms.

Figure 74. "Under heavy fire from Barksdale's Miss. Brigade, Union troops cross the Rappahannock" (page 115, *Sharpshooting in the Civil War*).

ENFIELD P1860 "SHORT" RIFLE

The P1860 Enfield short rifle (Figure 73) was also in .577 caliber, but had a heavier, (5-groove) progressive rifling than the P1853 Enfields, with a faster one in 48-inch twist. This example's toe line shows the dual "crown/SH/C" markings of Sinclair, Hamilton & Company, the Confederate purchasing

P1853 and P1860 Enfields, were instrumental in delaying Burnside's troops crossing the Rappahannock at Fredericksburg (Figure 74). Berry Benson (Figure 75), a sharpshooter in McGowan's South Carolina Sharpshooter Brigade, used a P1860 Enfield. In a famous encounter at Deep Bottom

Figure 75. Sgt. Berry Benson, McGowan's Battalion Sharpshooters (Bill Adams Collection).

Figure 76. Whitney Long-range M1841 "Mississippi" Rifle (Author's Collection).

on August 13, 1864, near the James River on the Peninsula, Benson and two other colleagues drove off a Federal battery with their supporting infantry at a range of 500 yards as, " . . . the artillerists turned their guns on the house . . . But the sharpshooters evaded the effect of their shells by dropping into the basement while the artillerists fired, then mounting to the second story when they loaded, they let them have it again," as related by Captain William Dunlop.[32] Benson's P1860 Enfield resides in the Augusta Museum of History.

WHITNEY LONG-RANGE M1841 MISSISSIPPI RIFLE

These altered Whitney M1841 Mississippi rifles (Figure 76) are in .58 caliber percussion, having a 33-inch round barrel with 7-groove rifling with 1:78 twist, weighing 9.7 pounds. Only 600 of these long-range rifles with large adjustable rear ladder sights graduated to 1000 yards, saber bayonet lugs and short front barrel bands, were manufactured by Whitney in New Haven, Connecticut, and Robbins, Kendall & Lawrence in Windsor, Vermont. All were dated 1855, as in this example. The tip of the ramrod is cupped for use with the Minie balls used with the long-range rifles. These were carried by at least one Georgia State Militia sharpshooter unit, Captain Greenlee's Sharpshooters: "Captain Greenlee has a small company of sharpshooters (formerly Mullen's) stationed near Covington. They are pretty well armed with Mississippi rifles . . ."[33] These rifles were only moderately accurate in comparison with most of those sought after by marksmen serving as sharpshooters, despite being sighted to 1000 yards.

JACOB DOUBLE-BARRELED PERCUSSION RIFLE

The Jacob double-barreled percussion rifle (Figure 77), an unusual and innovative English rifle, was designed by the quixotic General John Jacob in 1858 to arm his special battalion of native Indian riflemen, the "Jacob Rifles." The two 24-inch barrels are in 32 bore (.524 caliber, .584 caliber to the depth of the deep 4-groove rifling), the overall length of the rifle being 40 inches and weighing $10^1/_2$ pounds. John Jacob, like Sir Joseph Whitworth, was renowned as a mathematician as well as a soldier. He placed an order for approximately 900 rifles with Swinburn & Son of London. The barrels have very deep 4-groove rifling developed by Jacob to take a long pointed bullet with bosses or lugs cast in corresponding to the rifling (Figure 78). Some projectiles were solid and some made with a copper tube filled with fulminate of mercury to make an explosive round. The rifles are fitted with a wide, flat full-length rib and are sighted optimistically to 2000 yards (although Bill Adams believes this was realistic), with three folding V-notch leaf sights to 300 yards and a 5-inch flip-up ladder sight with a sliding V-notch for the remainder. There are references to Jacob rifles being used by Confederate sharpshooters in the American Civil War. According to Garry James, Jacob projectiles have turned up purportedly at some battle sites, and there is an intriguing account by George Hughes Hepworth in *The Whip, Hoe and Sword: Or the Gulf Department in '63*

Figure 77. Swinburn & Son Jacob Rifle (Author's Collection).

Figure 78. Jacob Rifle Projectiles, explosive and solid.

(1864), which seems to describe the Jacob rifle and possibly its exploding bullets very accurately: "The rebels, too, were good shots. There was one man who was a source of great annoyance to us, and many a good fellow will testify to his existence by showing a very peculiar and ugly wound in leg or arm. He used a double-barreled shotgun, of English make, with a bore large enough to admit a ball weighing an ounce and a half. . . he disabled men standing more than $^{3}/_{4}$ mile off."[34] Garry James mentions that this is interesting in that, "it was described as 'double-barreled,' it is hitting targets at great distances and causing wounds different enough to be remarked upon by the author, and the bullets are described as producing a 'hum,' to which I can personally attest as I have heard that very sound distinctly from bullets fired in my own Jacob rifle." [35] According to Bill Adams in Connecticut, Jacob rifles were known to have been captured from Confederate sharpshooters. John Eaton Cooke, a Confederate Ordnance officer, described a Captain Darnell using one "with explosive balls" at Cold Harbor. Fed Roy reported an account of Chaplain of Berdan's Sharpshooters, Lorenzo Barber, using a double-barreled Jacob rifle with one loaded with buckshot and the other with a solid projectile. The Jacob bayonet, not thought to have been used in the Confederacy, has a 30-inch blade and an elaborate hilt with a scroll cut-out guard. The grips are checkered leather riveted to the tang as in the Enfield P1853 sword bayonet. The quillion has the unusual double holes for the two barrels. This is a most unique arm, used by only a very few sharpshooters.

CONCLUSION

I have attempted to show a number of the varied arms used by sharpshooters in the Union and Confederate forces in the War Between the States and how they were suited for the purpose of sharpshooting as it was defined in that period. We honor the courage and skill of these men today by preserving and studying the weapons they used as well as the hallowed ground on which they fought. I leave you with a quote from Major General Regis de Trobriand, Army of the Potomac, concerning the nature of sharpshooting: "Of all known kinds of hunting, that of man by man is certainly the most exciting. It is superior to all others, in being a strife between intelligences of the same nature, with equal arms and equal dangers. Thus the powers both of mind and body are put in play, and are developed with an ardor curious to study." Comforting thought, isn't it? Even more disturbing is the following observation by Vermont Lieutenant Colonel William Ripley, USSS: "Sharpshooting is the squirrel hunting of war; it is wonderful to see how self-forgetful the marks-

mangrows-withsportsmanlikeeyesheseeksoutthegrander game, andwithcoolnessandaccuracyhebringsitdown. At the moment he grows utterly indifferent to human life or human suffering, and seems intent only on cruelty and destruction; tomakeagoodshotandhithisman, bringsfor the time being a feeling of immense satisfaction." [36] But the courage in very exposed positions and the dedication of the sharpshooters in their role as force multipliers in the art of warfare must be admired.

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